



**BG-10-2014: Consolidating the economic sustainability and competitiveness of European fisheries and aquaculture sectors to reap the potential of seafood markets**

Grant agreement for: Research and Innovation action

***Grant Agreement***

Action acronym: PrimeFish

Action full title: "Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets"

Grant agreement no: 635761

**EUROPEAN COMMISSION**

Research Executive Agency (REA)

**Director**

## GRANT AGREEMENT

**NUMBER — 635761 — PrimeFish**

This **Agreement** ('the Agreement') is **between** the following parties:

**on the one part,**

*the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission')<sup>1</sup>,*

represented for the purposes of signature of this Agreement by Head of Unit, Research Executive Agency (REA), Industrial Leadership and Societal Challenges Department, Sustainable Resources for Food Security and Growth, Kerstin ROSENOW,

**and**

**on the other part,**

1. 'the coordinator':

**MATIS OHF (MATIS)**, 6709060190, established in VINLANDSLEID 12, REYKJAVIK 113, Iceland, IS92790, represented for the purposes of signing the Agreement by PLSIGN, Oddur M. GUNNARSSON

and the following other beneficiaries, if they sign their 'Accession Form' (see Annex 3 and Article 56):

2. **AALBORG UNIVERSITET (UAib)** DK9, 29102384, established in FREDRIK BAJERS VEJ 5, AALBORG 9220, Denmark, DK29102384,

3. **SP/F SYNTESA (SYN)** SPF, 3827, established in FYRI OMAN BRUGV 2, SYORUGOTA 513, Faroe Islands, FO538531,

4. **INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (INRA)**, 180070039, established in Rue De L'Universite 147, PARIS CEDEX 07 75338, France, FR57180070039,

5. **UNIVERSITE DE SAVOIE (UNIV-SAVOIE)**, 197308588, established in RUE MARCOZ 27, CHAMBERY 73011, France,

6. **VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (TTZ) EV**, VR839, established in AN DER KARLSTADT 10, BREMERHAVEN 27568, Germany, DE114708969,

7. **HASKOLI ISLANDS (UIce)**, 600169-2039, established in Sudurgata, REYKJAVIK IS 101, Iceland, IS19133,

8. **UNIVERSITA DEGLI STUDI DI PARMA (UNIPARMA)**, 137773CF00308780345, established in VIA UNIVERSITA 12, PARMA 43100, Italy, IT00308780345,

9. **UNIVERSITA DEGLI STUDI DI PAVIA (UNIPV)**, 80007270186, established in STRADA NUOVA 65, PAVIA 27100, Italy, IT00462870189,

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<sup>1</sup> Text in *italics* shows the options of the Model Grant Agreement that are applicable to this Agreement.

10. **KONTALI ANALYSE AS (Kontali)** AS, 959056951, established in INDUSTRIVEIEN 18, KRISTIANSUND N 65177, Norway, NO959056951MVA,
11. **NOFIMA AS (NOFIMA)** AS, 989278835, established in MUNINBAKKEN 9-13, TROMSO 9291, Norway, NO989278835MVA,
12. **UNIVERSITETET I TROMSOE (UTro)**, 970422528, established in HANSINE HANSENS VEG 14, TROMSO 9019, Norway, NO970422528MVA,
13. **CENTRO TECNOLOGICO DEL MAR - FUNDACION CETMAR (CETMAR)** , 2001/15, established in Eduardo Cabello s/n, VIGO 36208, Spain, ESG36885853,
14. **THE UNIVERSITY OF STIRLING (U STIRLING)**, RC000669/CHSC011159, established in , STIRLING FK9 4LA, United Kingdom, GB261483657,
15. **TRUONG DAI HOC NHA TRANG (NTU)**, established in NGUYEN DINH CHIEU STREET 2, NHA TRANG KHANH HOA -, Viet Nam, VN4200433424,
16. *Memorial University of Newfoundland (MemU)*, n/a, established in ELIZABETH AVENUE, ST JOHN S AIC 5SZ, Canada, n/a, as 'beneficiary not receiving EU funding' (see Article 9),

Unless otherwise specified, references to 'beneficiary' or 'beneficiaries' include the coordinator.

The parties referred to above have agreed to enter into the Agreement under the terms and conditions below.

By signing the Agreement or the Accession Form, the beneficiaries accept the grant and agree to implement it under their own responsibility and in accordance with the Agreement, with all the obligations and conditions it sets out.

The Agreement is composed of:

#### Terms and Conditions

- |         |   |
|---------|---|
| Annex 1 | Description of the action                             |
| Annex 2 | Estimated budget for the action                       |
| Annex 3 | Accession Forms                                       |
| Annex 4 | Model for the financial statements                    |
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# TERMS AND CONDITIONS

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## **CHAPTER 1 GENERAL**

### **ARTICLE 1 — SUBJECT OF THE AGREEMENT**

This Agreement sets out the rights and obligations and the terms and conditions applicable to the grant awarded to the beneficiaries for implementing the action set out in Chapter 2.

## **CHAPTER 2 ACTION**

### **ARTICLE 2 — ACTION TO BE IMPLEMENTED**

The grant is awarded for the action entitled '*Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets — PrimeFish*' ('action'), as described in Annex 1.

### **ARTICLE 3 — DURATION AND STARTING DATE OF THE ACTION**

The duration of the action will be **48 months** as of *the first day of the month following the date the Agreement enters into force (see Article 58)* ('starting date of the action').

### **ARTICLE 4 — ESTIMATED BUDGET AND BUDGET TRANSFERS**

#### **4.1 Estimated budget**

The '**estimated budget**' for the action is set out in Annex 2.

It contains the estimated eligible costs and the forms of costs, broken down by beneficiary and budget category (see Articles 5, 6). *It also contains the estimated costs of the beneficiaries not receiving EU funding (see Article 9).*

#### **4.2 Budget transfers**

The estimated budget breakdown indicated in Annex 2 may be adjusted by transfers of amounts between beneficiaries or between budget categories (or both). This does not require an amendment according to Article 55, if the action is implemented as described in Annex 1.

The beneficiaries may not however:

- add costs relating to subcontracts not provided for in Annex 1, unless such additional subcontracts are approved in accordance with Article 13.

## **CHAPTER 3 GRANT**

## ARTICLE 5 — GRANT AMOUNT, FORM OF GRANT, REIMBURSEMENT RATES AND FORMS OF COSTS

### 5.1 Maximum grant amount

The ‘**maximum grant amount**’ is **EUR 4,997,912.50** (four million nine hundred and ninety seven thousand nine hundred and twelve EURO and fifty eurocents).

### 5.2 Form of grant, reimbursement rates and forms of costs

The grant reimburses **100% of the action's eligible costs** (see Article 6) (‘**reimbursement of eligible costs grant**’) (see Annex 2).

The estimated eligible costs of the action are **EUR 5,275,426.25** (five million two hundred and seventy five thousand four hundred and twenty six EURO and twenty five eurocents).

Eligible costs (see Article 6) must be declared under the following forms (‘**forms of costs**’):

(a) for **direct personnel costs**:

- as actually incurred costs (‘**actual costs**’) or
- on the basis of an amount per unit calculated by the beneficiary in accordance with its usual cost accounting practices (‘**unit costs**’).

Personnel **costs for SME owners or beneficiaries that are natural persons** not receiving a salary (see Article 6.2, Points A.4 and A.5) must be declared on the basis of the amount per unit set out in Annex 2 (**unit costs**);

(b) for **direct costs for subcontracting**: as actually incurred costs (**actual costs**);

(c) *not applicable*

(d) for **other direct costs**: as actually incurred costs (**actual costs**);

(e) for **indirect costs**: on the basis of a flat-rate applied as set out in Article 6.2, Point E (‘**flat-rate costs**’);

### 5.3 Final grant amount — Calculation

The ‘**final grant amount**’ depends on the actual extent to which the action is implemented in accordance with the Agreement’s terms and conditions.

This amount is calculated by the *Agency* — when the payment of the balance is made (see Article 21.4) — in the following steps:

Step 1 – Application of the reimbursement rates to the eligible costs

Step 2 – Limit to the maximum grant amount

Step 3 – Reduction due to the no-profit rule

Step 4 – Reduction due to improper implementation or breach of other obligations

### 5.3.1 Step 1 — Application of the reimbursement rates to the eligible costs

The reimbursement rate(s) (see Article 5.2) are applied to the eligible costs (actual costs, unit costs and flat-rate costs; see Article 6) declared by the beneficiaries (see Article 20) and approved by the *Agency* (see Article 21).

### 5.3.2 Step 2 — Limit to the maximum grant amount

If the amount obtained following Step 1 is higher than the maximum grant amount set out in Article 5.1, it will be limited to the latter.

### 5.3.3 Step 3 — Reduction due to the no-profit rule

The grant must not produce a profit.

‘**Profit**’ means the surplus of the amount obtained following Steps 1 and 2 plus the action’s total receipts, over the action’s total eligible costs.

The ‘**action’s total eligible costs**’ are the consolidated total eligible costs approved by the *Agency*.

The ‘**action’s total receipts**’ are the consolidated total receipts generated during its duration (see Article 3).

The following are considered **receipts**:

- (a) income generated by the action; if the income is generated from selling equipment or other assets purchased under the Agreement, the receipt is up to the amount declared as eligible under the Agreement;
- (b) financial contributions given by third parties to the beneficiary specifically to be used for the action, and
- (c) in-kind contributions provided by third parties free of charge and specifically to be used for the action, if they have been declared as eligible costs.

The following are however not considered receipts:

- (a) income generated by exploiting the action’s results (see Article 28);
- (b) financial contributions by third parties, if they may be used to cover costs other than the eligible costs (see Article 6);
- (c) financial contributions by third parties with no obligation to repay any amount unused at the end of the period set out in Article 3.

If there is a profit, it will be deducted from the amount obtained following Steps 1 and 2.

### 5.3.4 Step 4 — Reduction due to improper implementation or breach of other obligations — Reduced grant amount — Calculation

If the grant is reduced (see Article 43), the *Agency* will calculate the reduced grant amount by deducting the amount of the reduction (calculated in proportion to the improper implementation of the action or to the seriousness of the breach of obligations in accordance with Article 43.2) from the maximum grant amount set out in Article 5.1.

The final grant amount will be the lower of the following two:

- the amount obtained following Steps 1 to 3 or
- the reduced grant amount following Step 4.

#### **5.4 Revised final grant amount — Calculation**

If — after the payment of the balance (in particular, after checks, reviews, audits or investigations; see Article 22) — the *Agency* rejects costs (see Article 42) or reduces the grant (see Article 43), it will calculate the ‘**revised final grant amount**’ for the beneficiary concerned by the findings.

This amount is calculated by the *Agency* on the basis of the findings, as follows:

- in case of **rejection of costs**: by applying the reimbursement rate to the revised eligible costs approved by the *Agency* for the beneficiary concerned;
- in case of **reduction of the grant**: by calculating the concerned beneficiary’s share in the grant amount reduced in proportion to its improper implementation of the action or to the seriousness of its breach of obligations (see Article 43.2).

In case of **rejection of costs and reduction of the grant**, the revised final grant amount for the beneficiary concerned will be the lower of the two amounts above.

## **ARTICLE 6 — ELIGIBLE AND INELIGIBLE COSTS**

### **6.1 General conditions for costs to be eligible**

‘**Eligible costs**’ are costs that meet the following criteria:

(a) for **actual costs**:

- (i) they must be actually incurred by the beneficiary;
- (ii) they must be incurred in the period set out in Article 3, with the exception of costs relating to the submission of the periodic report for the last reporting period and the final report (see Article 20);
- (iii) they must be indicated in the estimated budget set out in Annex 2;
- (iv) they must be incurred in connection with the action as described in Annex 1 and necessary for its implementation;
- (v) they must be identifiable and verifiable, in particular recorded in the beneficiary’s accounts in accordance with the accounting standards applicable in the country where the beneficiary is established and with the beneficiary’s usual cost accounting practices;

- (vi) they must comply with the applicable national law on taxes, labour and social security, and
- (vii) they must be reasonable, justified and must comply with the principle of sound financial management, in particular regarding economy and efficiency.

(b) for **unit costs**:

- (i) they must be calculated as follows:

{amounts per unit set out in Annex 2 or calculated by the beneficiary in accordance with its usual cost accounting practices (see Article 6.2, PointA)}

multiplied by

{the number of actual units};

- (ii) the number of actual units must comply with the following conditions:

- the units must be actually used or produced in the period set out in Article 3;
- the units must be necessary for implementing the action or produced by it, and
- the number of units must be identifiable and verifiable, in particular supported by records and documentation (see Article 18).

(c) for **flat-rate costs**:

- (i) they must be calculated by applying the flat-rate set out in Annex 2, and
- (ii) the costs (actual costs or unit costs) to which the flat-rate is applied must comply with the conditions for eligibility set out in this Article.

## 6.2 Specific conditions for costs to be eligible

Costs are eligible if they comply with the general conditions (see above) and the specific conditions set out below for each of the following budget categories:

- A. direct personnel costs;
- B. direct costs of subcontracting;
- C. *not applicable*;
- D. other direct costs;
- E. indirect costs;

‘Direct costs’ are costs that are directly linked to the action implementation and can therefore be attributed to it directly. They must not include any indirect costs (see Point E below).

‘Indirect costs’ are costs that are not directly linked to the action implementation and therefore cannot be attributed directly to it.



## A. Direct personnel costs

### Types of eligible personnel costs

A.1 **Personnel costs** are eligible if they are related to personnel working for the beneficiary under an employment contract (or equivalent appointing act) and assigned to the action. They must be limited to salaries (including during parental leave), social security contributions, taxes and other costs included in the remuneration, if they arise from national law or the employment contract (or equivalent appointing act).

Beneficiaries that are non-profit legal entities<sup>2</sup> may also declare as personnel costs **additional remuneration** for personnel assigned to the action (including payments on the basis of supplementary contracts regardless of their nature), if:

- (a) it is part of the beneficiary's usual remuneration practices and is paid in a consistent manner whenever the same kind of work or expertise is required;
- (b) the criteria used to calculate the supplementary payments are objective and generally applied by the beneficiary, regardless of the source of funding used.

Additional remuneration for personnel assigned to the action is eligible up to the following amount:

- (a) if the person works full time and exclusively on the action during the full year: up to EUR 8 000;
- (b) if the person works exclusively on the action but not full-time or not for the full year: up to the corresponding pro-rata amount of EUR 8 000, or
- (c) if the person does not work exclusively on the action: up to a pro-rata amount calculated as follows:
  - { {EUR 8 000
  - divided by
  - the number of annual productive hours (see below)},
  - multiplied by
  - the number of hours that the person has worked on the action during the year}.

A.2 The **costs for natural persons working under a direct contract** with the beneficiary other than an employment contract are eligible personnel costs, if:

- (a) the person works under the beneficiary's instructions and, unless otherwise agreed with the beneficiary, on the beneficiary's premises;

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<sup>2</sup> For the definition, see Article 2.1(14) of the Rules for Participation Regulation No 1290/2013: '**non-profit legal entity**' means a legal entity which by its legal form is non-profit-making or which has a legal or statutory obligation not to distribute profits to its shareholders or individual members.

- (b) the result of the work carried out belongs to the beneficiary, and
- (c) the costs are not significantly different from those for personnel performing similar tasks under an employment contract with the beneficiary.

A.3 The **costs of personnel seconded by a third party against payment** are eligible personnel costs, if the conditions in Article 11 are met.

A.4 **Costs owners** of beneficiaries that are small and medium-sized enterprises (**'SME owners'**) who are working on the action and who do not receive a salary are eligible personnel costs, if they correspond to the amount per unit set out in Annex 2 multiplied by the number of actual hours worked on the action.

A.5 **Costs of 'beneficiaries that are natural persons'** not receiving a salary are eligible personnel costs, if they correspond to the amount per unit set out in Annex 2 multiplied by the number of actual hours worked on the action.

### Calculation

Personnel costs must be calculated by the beneficiaries as follows:

{hourly rate  
multiplied by  
the number of actual hours worked on the action},  
plus  
for non-profit legal entities: additional remuneration to personnel assigned to the action under the conditions set out above (Point A.1)}.

The number of actual hours declared for a person must be identifiable and verifiable (see Article 18).

The total number of hours declared in *EU or Euratom* grants, for a person for a year, cannot be higher than the annual productive hours used for the calculations of the hourly rate:

{the number of annual productive hours for the year (see below)  
minus  
total number of hours declared by the beneficiary for that person in that year for other *EU or Euratom* grants}.

The **'hourly rate'** is one of the following:

- (a) for personnel costs declared as **actual costs**: the hourly rate is the amount calculated as follows:

{actual annual personnel costs (excluding additional remuneration) for the person  
divided by  
number of annual productive hours}.

The beneficiaries must use the annual personnel costs and the number of annual productive hours for each financial year covered by the reporting period. If a financial year is not closed

at the end of the reporting period, the beneficiaries must use the hourly rate of the last closed financial year available.

For the ‘number of annual productive hours’, the beneficiaries may choose one of the following:

- (i) 1 720 hours for persons working full time (or corresponding pro-rata for persons not working full time);
- (ii) the total number of hours worked by the person in the year for the beneficiary, calculated as follows:

{annual workable hours of the person (according to the employment contract, applicable labour agreement or national law)

plus

overtime worked

minus

absences (such as sick leave and special leave)}.

‘Annual workable hours’ means the period during which the personnel must be working, at the employer’s disposal and carrying out his/her activity or duties under the employment contract, applicable collective labour agreement or national working time legislation.

If the contract (or applicable collective labour agreement or national working time legislation) does not allow to determine the annual workable hours, this option cannot be used;

- (iii) the ‘standard number of annual hours’ generally applied by the beneficiary for its personnel in accordance with its usual cost accounting practices. This number must be at least 90% of the ‘standard annual workable hours’.

If there is no applicable reference for the standard annual workable hours, this option cannot be used.

For all options, the actual time spent on **parental leave** by a person assigned to the action may be deducted from the number of annual productive hours;

- (b) for personnel costs declared on the basis of **unit costs**: the hourly rate is one of the following:

- (i) for SME owners or beneficiaries that are natural persons: the hourly rate set out in Annex 2 (see Points A.4 and A.5 above), or
- (ii) for personnel costs declared on the basis of the beneficiary’s usual cost accounting practices: the hourly rate calculated by the beneficiary in accordance with its usual cost accounting practices, if:
  - the cost accounting practices used are applied in a consistent manner, based on objective criteria, regardless of the source of funding;

- the hourly rate is calculated using the actual personnel costs recorded in the beneficiary's accounts, excluding any ineligible cost or costs included in other budget categories.

The actual personnel costs may be adjusted by the beneficiary on the basis of budgeted or estimated elements. Those elements must be relevant for calculating the personnel costs, reasonable and correspond to objective and verifiable information, and

- the hourly rate is calculated using the number of annual productive hours (see above).

**B. Direct costs of subcontracting** (including related duties, taxes and charges such as non-deductible value added tax (VAT) paid by the beneficiary) are eligible if the conditions in Article 13 are met.

**C. Direct costs of providing financial support to third parties** *not applicable.*

**D. Other direct costs**

**D.1 Travel costs and related subsistence allowances** (including related duties, taxes and charges such as non-deductible value added tax (VAT) paid by the beneficiary) are eligible if they are in line with the beneficiary's usual practices on travel.

**D.2** *The depreciation costs of equipment, infrastructure or other assets (new or second-hand) as recorded in the beneficiary's accounts are eligible, if they were purchased in accordance with Article 10 and written off in accordance with international accounting standards and the beneficiary's usual accounting practices.*

*The costs of renting or leasing equipment, infrastructure or other assets (including related duties, taxes and charges such as non-deductible value added tax (VAT) paid by the beneficiary) are also eligible, if they do not exceed the depreciation costs of similar equipment, infrastructure or assets and do not include any financing fees.*

*The costs of equipment, infrastructure or other assets **contributed in-kind against payment** are eligible, if they do not exceed the depreciation costs of similar equipment, infrastructure or assets, do not include any financing fees and if the conditions in Article 11 are met.*

*The only portion of the costs that will be taken into account is that which corresponds to the duration of the action and rate of actual use for the purposes of the action.*

**D.3 Costs of other goods and services** (including related duties, taxes and charges such as non-deductible value added tax (VAT) paid by the beneficiary) are eligible, if they are:

- (a) purchased specifically for the action and in accordance with Article 10 or
- (b) contributed in kind against payment and in accordance with Article 11.

Such goods and services include, for instance, consumables and supplies, dissemination (including open access), protection of results, certificates on the financial statements (if they are required by the Agreement), certificates on the methodology, translations and publications.

D.4 *The capitalised and operating costs of ‘large research infrastructure’<sup>3</sup> directly used for the action are eligible, if:*

- (a) the value of the large research infrastructure represents at least 75% of the total fixed assets (at historical value in its last closed balance sheet before the date of the signature of the Agreement or as determined on the basis of the rental and leasing costs of the research infrastructure<sup>4</sup>);*
- (b) the beneficiary’s methodology for declaring the costs for large research infrastructure has been positively assessed by the Commission (‘ex-ante assessment’);*
- (c) the beneficiary declares as direct eligible costs only the portion which corresponds to the duration of the action and the rate of actual use for the purposes of the action, and*
- (d) they comply with the conditions as further detailed in the Horizon 2020 Grant Manual.*

## **E. Indirect costs**

**Indirect costs** are eligible if they are declared on the basis of the flat-rate of 25% of the eligible direct costs (see Article 5.2 and Points A to D above), from which are excluded:

- (a) costs of subcontracting and
- (b) costs of in-kind contributions provided by third parties which are not used on the beneficiary’s premises.
- (c) *not applicable.*

<sup>3</sup> ‘**Large research infrastructure**’ means research infrastructure of a total value of at least EUR 20 million, for a beneficiary, calculated as the sum of historical asset values of each individual research infrastructure of that beneficiary, as they appear in its last closed balance sheet before the date of the signature of the Agreement or as determined on the basis of the rental and leasing costs of the research infrastructure.

<sup>4</sup> For the definition, see Article 2(6) of Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) (OJ L 347, 20.12.2013 p.104)-(**Horizon 2020 Framework Programme Regulation No 1291/2013**): ‘**Research infrastructure**’ are facilities, resources and services that are used by the research communities to conduct research and foster innovation in their fields. Where relevant, they may be used beyond research, e.g. for education or public services. They include: major scientific equipment (or sets of instruments); knowledge-based resources such as collections, archives or scientific data; e-infrastructures such as data and computing systems and communication networks; and any other infrastructure of a unique nature essential to achieve excellence in research and innovation. Such infrastructures may be ‘single-sited’, ‘virtual’ or ‘distributed’.

Beneficiaries receiving an operating grant<sup>5</sup> financed by the EU or Euratom budget cannot declare indirect costs for the period covered by the operating grant.

### 6.3 Conditions for costs of linked third parties to be eligible

*not applicable*

### 6.4 Conditions for in-kind contributions provided by third parties free of charge to be eligible

**In-kind contributions provided free of charge** are eligible direct costs (for the beneficiary), if the costs incurred by the third party fulfil — *mutatis mutandis* — the general and specific conditions for eligibility set out in this Article (Article 6.1 and 6.2) and Article 12.

### 6.5 Ineligible costs

‘**Ineligible costs**’ are:

- (a) costs that do not comply with the conditions set out above (Article 6.1 to 6.4), in particular:
  - (i) costs related to return on capital;
  - (ii) debt and debt service charges;
  - (iii) provisions for future losses or debts;
  - (iv) interest owed;
  - (v) doubtful debts;
  - (vi) currency exchange losses;
  - (vii) bank costs charged by the beneficiary’s bank for transfers from the *Agency*;
  - (viii) excessive or reckless expenditure;
  - (ix) deductible VAT;
  - (x) costs incurred during suspension of the implementation of the action (see Article 49);
- (b) costs declared under another EU or Euratom grant (including grants awarded by a Member State and financed by the EU or Euratom budget and grants awarded by bodies other than the *Agency* for the purpose of implementing the EU or Euratom budget); in particular, indirect costs if the beneficiary is already receiving an operating grant financed by the EU or Euratom budget in the same period.

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<sup>5</sup> For the definition, see Article 121(1)(b) of Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002 (OJ L 218, 26.10.2012, p.1) (‘**Financial Regulation No 966/2012**’): ‘**operating grant**’ means direct financial contribution, by way of donation, from the budget in order to finance the functioning of a body which pursues an aim of general EU interest or has an objective forming part of and supporting an EU policy.

## **6.6 Consequences of declaration of ineligible costs**

Declared costs that are ineligible will be rejected (see Article 42).

This may also lead to any of the other measures described in Chapter 6.

## **CHAPTER 4 RIGHTS AND OBLIGATIONS OF THE PARTIES**

### **SECTION 1 RIGHTS AND OBLIGATIONS RELATED TO IMPLEMENTING THE ACTION**

#### **ARTICLE 7 — GENERAL OBLIGATION TO PROPERLY IMPLEMENT THE ACTION**

##### **7.1 General obligation to properly implement the action**

The beneficiaries must implement the action as described in Annex 1 and in compliance with the provisions of the Agreement and all legal obligations under applicable EU, international and national law.

##### **7.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

#### **ARTICLE 8 — RESOURCES TO IMPLEMENT THE ACTION**

The beneficiaries must have the appropriate resources to implement the action.

If it is necessary to implement the action, the beneficiaries may:

- purchase goods, works and services (see Article 10);
- use in-kind contributions provided by third parties against payment (see Article 11);
- use in-kind contributions provided by third parties free of charge (see Article 12);
- call upon subcontractors to implement action tasks described in Annex 1 (see Article 13);
- call upon linked third parties to implement action tasks described in Annex 1 (see Article 14).

In these cases, the beneficiaries retain sole responsibility towards the *Agency* and the other beneficiaries for implementing the action.

## **ARTICLE 9 — IMPLEMENTATION OF ACTION TASKS BY BENEFICIARIES NOT RECEIVING EU FUNDING**

### **9.1 Rules for the implementation of action tasks by beneficiaries not receiving EU funding**

*Beneficiaries not receiving EU funding must implement the action tasks attributed to them in Annex 1 according to Article 7.1.*

*Their costs are estimated in Annex 2 but:*

- *will not be reimbursed and*
- *will not be taken into account for the calculation of the grant (see Articles 5.2, 5.3 and 5.4, and 21).*

*Chapter 3, Articles 10 to 15, 18.1.2, 20.3(b), 20.4(b), 20.6, 21, 26.4, 28.1, 28.2, 30.3, 31.5, 40, 42, 43, 44, 47 and 48 do not apply to these beneficiaries.*

*They will not be subject to financial checks, reviews and audits under Article 22.*

*Beneficiaries not receiving EU funding may provide in-kind contributions to another beneficiary. In this case, they will be considered as a third party for the purpose of Articles 11 and 12.*

### **9.2 Consequences of non-compliance**

*If a beneficiary not receiving EU funding breaches any of its obligations under this Article, its participation of the Agreement may be terminated (see Article 50).*

*Such breaches may also lead to any of the other measures described in Chapter 6 that are applicable to it.*

## **ARTICLE 10 — PURCHASE OF GOODS, WORKS OR SERVICES**

### **10.1 Rules for purchasing goods, works or services**

10.1.1 If necessary to implement the action, the beneficiaries may purchase goods, works or services.

The beneficiaries must make such purchases ensuring the best value for money or, if appropriate, the lowest price. In doing so, they must avoid any conflict of interests (see Article 35).

The beneficiaries must ensure that the Commission *and the Agency*, the European Court of Auditors (ECA) and the European Anti-fraud Office (OLAF) can exercise their rights under Articles 22 and 23 also towards their contractors.



10.1.2 Beneficiaries that are ‘contracting authorities’ within the meaning of Directive 2004/18/EC<sup>6</sup> or ‘contracting entities’ within the meaning of Directive 2004/17/EC<sup>7</sup> must comply with the applicable national law on public procurement.

## **10.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under Article 10.1.1, the costs related to the contract concerned will be ineligible (see Article 6) and will be rejected (see Article 42).

If a beneficiary breaches any of its obligations under Article 10.1.2, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 11 — USE OF IN-KIND CONTRIBUTIONS PROVIDED BY THIRD PARTIES AGAINST PAYMENT**

### **11.1 Rules for the use of in-kind contributions against payment**

If necessary to implement the action, the beneficiaries may use in-kind contributions provided by third parties against payment.

The beneficiaries may declare costs related to the payment of in-kind contributions as eligible (see Article 6.1 and 6.2), up to the third parties’ costs for the seconded persons, contributed equipment, infrastructure or other assets or other contributed goods and services.

The third parties and their contributions must be set out in Annex 1. The *Agency* may however approve in-kind contributions not set out in Annex 1 without amendment (see Article 55), if:

- they are specifically justified in the periodic technical report and
- their use does not entail changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

The beneficiaries must ensure that the Commission *and the Agency*, the European Court of Auditors (ECA) and the European Anti-fraud Office (OLAF) can exercise their rights under Articles 22 and 23 also towards the third parties.

### **11.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the costs related to the payment of the in-kind contribution will be ineligible (see Article 6) and will be rejected (see Article 42).

Such breaches may also lead to any of the other measures described in Chapter 6.

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<sup>6</sup> Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public work contracts, public supply contracts and public service contracts (OJ L 134, 30.04.2004, p. 114).

<sup>7</sup> Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors (OJ L 134, 30.04.2004, p. 1).

## **ARTICLE 12 — USE OF IN-KIND CONTRIBUTIONS PROVIDED BY THIRD PARTIES FREE OF CHARGE**

### **12.1 Rules for the use of in-kind contributions free of charge**

If necessary to implement the action, the beneficiaries may use in-kind contributions provided by third parties free of charge.

The beneficiaries may declare costs incurred by the third parties for the seconded persons, contributed equipment, infrastructure or other assets or other contributed goods and services as eligible in accordance with Article 6.4.

The third parties and their contributions must be set out in Annex 1. The *Agency* may however approve in-kind contributions not set out in Annex 1 without amendment (see Article 55), if:

- they are specifically justified in the periodic technical report and
- their use does not entail changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

The beneficiaries must ensure that the Commission *and the Agency*, the European Court of Auditors (ECA) and the European Anti-fraud Office (OLAF) can exercise their rights under Articles 22 and 23 also towards the third parties.

### **12.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the costs incurred by the third parties related to the in-kind contribution will be ineligible (see Article 6) and will be rejected (see Article 42).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 13 — IMPLEMENTATION OF ACTION TASKS BY SUBCONTRACTORS**

### **13.1 Rules for subcontracting action tasks**

13.1.1 If necessary to implement the action, the beneficiaries may award subcontracts covering the implementation of certain action tasks described in Annex 1.

Subcontracting may cover only a limited part of the action.

The beneficiaries must award the subcontracts ensuring the best value for money or, if appropriate, the lowest price. In doing so, they must avoid any conflict of interests (see Article 35).

The tasks to be implemented and the estimated cost for each subcontract must be set out in Annex 1 and the total estimated costs of subcontracting per beneficiary must be set out in Annex 2. The *Agency* may however approve subcontracts not set out in Annex 1 and 2 without amendment (see Article 55), if:

- they are specifically justified in the periodic technical report and
- they do not entail changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

The beneficiaries must ensure that the Commission *and the Agency*, the European Court of Auditors (ECA) and the European Anti-fraud Office (OLAF) can exercise their rights under Articles 22 and 23 also towards their subcontractors.

13.1.2 The beneficiaries must ensure that their obligations under Articles 35, 36, 38 and 46 also apply to the subcontractors.

Beneficiaries that are ‘contracting authorities’ within the meaning of Directive 2004/18/EC or ‘contracting entities’ within the meaning of Directive 2004/17/EC must comply with the applicable national law on public procurement.

### **13.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under Article 13.1.1, the costs related to the subcontract concerned will be ineligible (see Article 6) and will be rejected (see Article 42).

If a beneficiary breaches any of its obligations under Article 13.1.2, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 14 — IMPLEMENTATION OF ACTION TASKS BY LINKED THIRD PARTIES**

### **14.1 Rules for calling upon linked third parties to implement part of the action**

*not applicable*

### **14.2 Consequences of non-compliance**

*not applicable*

## **ARTICLE 15 — FINANCIAL SUPPORT TO THIRD PARTIES**

### **15.1 Rules for providing financial support to third parties**

*not applicable*

### **15.2 Financial support in the form of prizes**

*not applicable*

### **15.3 Consequences of non-compliance**

*not applicable*

## **ARTICLE 16 — PROVISION OF TRANS-NATIONAL OR VIRTUAL ACCESS TO RESEARCH INFRASTRUCTURE**

### **16.1 Rules for providing trans-national access to research infrastructure**

*not applicable*

## **16.2 Rules for providing virtual access to research infrastructure**

*not applicable*

## **16.3 Consequences of non-compliance**

*not applicable*

## **SECTION 2 RIGHTS AND OBLIGATIONS RELATED TO THE GRANT ADMINISTRATION**

### **ARTICLE 17 — GENERAL OBLIGATION TO INFORM**

#### **17.1 Obligation to provide information upon request**

The beneficiaries must provide — during implementation of the action or afterwards — any information requested in order to verify proper implementation of the action and compliance with the obligations under the Agreement (see Article 41.2).

#### **17.2 Obligation to keep information up to date and to inform about events and circumstances likely to affect the Agreement**

Each beneficiary must keep information stored in the 'Beneficiary Register' (in the electronic exchange system; see Article 52) up to date, in particular, its name, address, legal representatives, legal form and organisation type.

Each beneficiary must immediately inform the coordinator — which must immediately inform the *Agency* and the other beneficiaries — of any of the following:

- (a) **events** which are likely to affect significantly or delay the implementation of the action or the *EU's* financial interests, in particular:
  - (i) changes in its legal, financial, technical, organisational or ownership situation
- (b) **circumstances** affecting:
  - (i) the decision to award the grant or
  - (ii) compliance with requirements under the Agreement.

#### **17.3 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## ARTICLE 18 — KEEPING RECORDS — SUPPORTING DOCUMENTATION

### 18.1 Obligation to keep records and other supporting documentation

The beneficiaries must — for a period of *five* years after the payment of the balance — keep records and other supporting documentation in order to prove the proper implementation of the action and the costs they declare as eligible.

They must make them available upon request (see Article 17) or in the context of checks, reviews, audits or investigations (see Article 22).

If there are on-going checks, reviews, audits, investigations, litigation or other pursuits of claims under the Agreement (including the extension of findings; see Articles 22), the beneficiaries must keep the records and other supporting documentation until the end of these procedures.

The beneficiaries must keep the original documents. Digital and digitalised documents are considered originals if they are authorised by the applicable national law. The *Agency* may accept non-original documents if it considers that they offer a comparable level of assurance.

#### 18.1.1 Records and other supporting documentation on the scientific and technical implementation

The beneficiaries must keep records and other supporting documentation on scientific and technical implementation of the action in line with the accepted standards in the respective field.

#### 18.1.2 Records and other documentation to support the costs declared

The beneficiaries must keep the records and documentation supporting the costs declared, in particular the following:

- (a) for **actual costs**: adequate records and other supporting documentation to prove the costs declared, such as contracts, subcontracts, invoices and accounting records. In addition, the beneficiaries' usual cost accounting practices and internal control procedures must enable direct reconciliation between the amounts declared, the amounts recorded in their accounts and the amounts stated in the supporting documentation;
- (b) for **unit costs**: adequate records and other supporting documentation to prove the number of units declared. Beneficiaries do not need to identify the actual eligible costs covered or to keep or provide supporting documentation (such as accounting statements) to prove the amount per unit.

In addition, **for direct personnel costs declared as unit costs calculated in accordance with the beneficiary's usual cost accounting practices**, the beneficiaries must keep adequate records and documentation to prove that the cost accounting practices used comply with the conditions set out in Article 6.2, Point A.

The beneficiaries may submit to the *Agency*, for approval, a certificate (drawn up in accordance with Annex 6) stating that their usual cost accounting practices comply with these conditions ('**certificate on the methodology**'). If the certificate is approved, costs declared in line with this methodology will not be challenged subsequently, unless the beneficiaries have concealed information for the purpose of the approval.

- (c) for **flat-rate costs**: adequate records and other supporting documentation to prove the eligibility of the costs to which the flat-rate is applied. The beneficiaries do not need to identify the costs covered or provide supporting documentation (such as accounting statements) to prove the amount declared at a flat-rate.

In addition, for **personnel costs** (declared as actual costs or on the basis of unit costs), the beneficiaries must keep **time records** for the number of hours declared. The time records must be in writing and approved by the persons working on the action and their supervisors, at least monthly. In the absence of reliable time records of the hours worked on the action, the *Agency* may accept alternative evidence supporting the number of hours declared, if it considers that it offers an adequate level of assurance.

As an exception, for **persons working exclusively on the action**, there is no need to keep time records, if the beneficiary signs a **declaration** confirming that the persons concerned have worked exclusively on the action.

## 18.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, costs insufficiently substantiated will be ineligible (see Article 6) and will be rejected (see Article 42), and the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## ARTICLE 19 — SUBMISSION OF DELIVERABLES

### 19.1 Obligation to submit deliverables

The coordinator must submit the ‘**deliverables**’ identified in Annex 1, in accordance with the timing and conditions set out in it.

### 19.2 Consequences of non-compliance

If the coordinator breaches any of its obligations under this Article, the *Agency* may apply any of the measures described in Chapter 6.

## ARTICLE 20 — REPORTING — PAYMENT REQUESTS

### 20.1 General obligation to submit reports

The coordinator must submit to the *Agency* (see Article 52) technical and financial reports, including requests for payment.

The reports must be drawn up using the forms and templates provided by the *Agency* in the electronic exchange system (see Article 52).

### 20.2 Reporting periods

The action is divided into the following ‘**reporting periods**’:

- RP1: from month 1 to month 18
- RP2: *from month 19 to month 36*
- RP3: *from month 37 to the last month of the project*

### 20.3 Periodic reports — Requests for interim payments

The coordinator must submit a periodic report within 60 days following the end of each reporting period.

The **periodic report** must include the following:

(a) a **‘periodic technical report’** containing:

- (i) an **explanation of the work carried out** by the beneficiaries;
- (ii) an **overview of the progress** towards the objectives of the action, including milestones and deliverables identified in Annex 1.

This report must include explanations justifying the differences between work expected to be carried out in accordance with Annex 1 and that actually carried out.

The report must also detail the exploitation and dissemination of the results and — if required in Annex 1 — an updated **‘plan for the exploitation and dissemination of the results’**;

- (iii) a **summary** for publication by the *Agency*;
- (iv) the answers to the **‘questionnaire’**, covering issues related to the action implementation and the economic and societal impact, notably in the context of the Horizon 2020 key performance indicators and the Horizon 2020 monitoring requirements;

(b) a **‘periodic financial report’** containing:

- (i) an **‘individual financial statement’** (see Annex 4) from each beneficiary, for the reporting period concerned.

The individual financial statement must detail the eligible costs (actual costs, unit costs and flat-rate costs; see Article 6) for each budget category (see Annex 2).

The beneficiaries must declare all eligible costs, even if — for actual costs, unit costs and flat-rate costs — they exceed the amounts indicated in the estimated budget (see Annex 2). Amounts which are not declared in the individual financial statement will not be taken into account by the *Agency*.

If an individual financial statement is not submitted for a reporting period, it may be included in the periodic financial report for the next reporting period.

The individual financial statements of the last reporting period must also detail the **receipts of the action** (see Article 5.3.3).

Each beneficiary must **certify** that:

- the information provided is full, reliable and true;

- the costs declared are eligible (see Article 6);
  - the costs can be substantiated by adequate records and supporting documentation (see Article 18) that will be produced upon request (see Article 17) or in the context of checks, reviews, audits and investigations (see Article 22), and
  - for the last reporting period: that all the receipts have been declared (see Article 5.3.3);
- (ii) an **explanation of the use of resources** and the information on subcontracting (see Article 13) and in-kind contributions provided by third parties (see Articles 11 and 12) from each beneficiary, for the reporting period concerned;
- (iii) *not applicable*;
- (iv) a ‘**periodic summary financial statement**’ (see Annex 4), created automatically by the electronic exchange system, consolidating the individual financial statements for the reporting period concerned and including — except for the last reporting period — the **request for interim payment**.

#### **20.4 Final report — Request for payment of the balance**

In addition to the periodic report for the last reporting period, the coordinator must submit the final report within 60 days following the end of the last reporting period.

The **final report** must include the following:

- (a) a ‘**final technical report**’ with a **summary** for publication containing:
- (i) an overview of the results and their exploitation and dissemination;
  - (ii) the conclusions on the action, and
  - (iii) the socio-economic impact of the action;
- (b) a ‘**final financial report**’ containing:
- (i) a ‘**final summary financial statement**’ (see Annex 4), created automatically by the electronic exchange system, consolidating the individual financial statements for all reporting periods and including the **request for payment of the balance** and
  - (ii) a ‘**certificate on the financial statements**’ (drawn up in accordance with Annex 5) for each beneficiary, if it requests a total contribution of EUR 325 000 or more, as reimbursement of actual costs and unit costs calculated on the basis of its usual cost accounting practices (see Article 5.2 and Article 6.2, Point A).

#### **20.5 Information on cumulative expenditure incurred**

*not applicable*



## 20.6 Currency for financial statements and conversion into euro

Financial statements must be drafted in euro.

Beneficiaries with accounting established in a currency other than the euro must convert costs incurred in another currency into euro at the average of the daily exchange rates published in the C series of the *Official Journal of the European Union*, calculated over the corresponding reporting period.

If no daily euro exchange rate is published in the *Official Journal of the European Union* for the currency in question, it must be converted at the average of the monthly accounting rates published on the Commission's website, calculated over the corresponding reporting period.

Beneficiaries with accounting established in euro must convert costs incurred in another currency into euro according to their usual accounting practices.

## 20.7 Language of reports

All reports (technical and financial reports, including financial statements) must be submitted in the language of the Agreement.

## 20.8 Consequences of non-compliance — Suspension of the payment deadline — Termination

If the reports submitted do not comply with this Article, the *Agency* may suspend the payment deadline (see Article 47) and apply any of the other measures described in Chapter 6.

If the coordinator breaches its obligation to submit the reports and if it fails to comply with this obligation within 30 days following a written reminder sent by the *Agency*, the Agreement may be terminated (see Article 50).

## ARTICLE 21 — PAYMENTS AND PAYMENT ARRANGEMENTS

### 21.1 Payments to be made

The following payments will be made to the coordinator:

- one **pre-financing payment**;
- one or more **interim payments**, on the basis of the request(s) for interim payment (see Article 20), and
- one **payment of the balance**, on the basis of the request for payment of the balance (see Article 20).

### 21.2 Pre-financing payment — Amount — Amount retained for the Guarantee Fund

The aim of the pre-financing is to provide the beneficiaries with a float.

It remains the property of the *EU* until the payment of the balance.

The amount of the pre-financing payment will be EUR **1,665,970.83** (one million six hundred and sixty five thousand nine hundred and seventy EURO and eighty three eurocents).

The *Agency* will — except if Article 48 applies — make the pre-financing payment to the coordinator within 30 days, either from the entry into force of the Agreement (see Article 58) or from 10 days before the starting date of the action (see Article 3), whichever is the latest.

An amount of EUR **249,895.63** (two hundred and forty nine thousand eight hundred and ninety five EURO and sixty three eurocents), corresponding to the 5% of the maximum grant amount (see Article 5.1), is retained by the *Agency* from the pre-financing payment and transferred into the ‘**Guarantee Fund**’.

### **21.3 Interim payments — Amount — Calculation**

Interim payments reimburse the eligible costs incurred for the implementation of the action during the corresponding reporting periods.

The *Agency* will pay to the coordinator the amount due as interim payment within 90 days from receiving the periodic report (see Article 20.3), except if Articles 47 or 48 apply.

Payment is subject to the approval of the periodic report. Its approval does not imply recognition of the compliance, authenticity, completeness or correctness of its content.

The **amount due as interim payment** is calculated by the *Agency* in the following steps:

Step 1 – Application of the reimbursement rates

Step 2 – Limit to 90% of the maximum grant amount

#### **21.3.1 Step 1 — Application of the reimbursement rates**

The reimbursement rate(s) (see Article 5.2) are applied to the eligible costs (actual costs, unit costs and flat-rate costs ; see Article 6) declared by the beneficiaries (see Article 20) and approved by the *Agency* (see above) for the concerned reporting period.

#### **21.3.2 Step 2 — Limit to 90% of the maximum grant amount**

The total amount of pre-financing and interim payments must not exceed 90% of the maximum grant amount set out in Article 5.1. The maximum amount for the interim payment will be calculated as follows:

{90% of the maximum grant amount (see Article 5.1)

minus

{pre-financing and previous interim payments}}.

### **21.4 Payment of the balance — Amount — Calculation — Release of the amount retained for the Guarantee Fund**

The payment of the balance reimburses the remaining part of the eligible costs incurred by the beneficiaries for the implementation of the action.

If the total amount of earlier payments is greater than the final grant amount (see Article 5.3), the payment of the balance takes the form of a recovery (see Article 44).

If the total amount of earlier payments is lower than the final grant amount, the *Agency* will pay the balance within 90 days from receiving the final report (see Article 20.4), except if Articles 47 or 48 apply.

Payment is subject to the approval of the final report. Its approval does not imply recognition of the compliance, authenticity, completeness or correctness of its content.

The **amount due as the balance** is calculated by the *Agency* by deducting the total amount of pre-financing and interim payments (if any) already made, from the final grant amount determined in accordance with Article 5.3:

{final grant amount (see Article 5.3)  
minus  
{pre-financing and interim payments (if any) made}}.

At the payment of the balance, the amount retained for the Guarantee Fund (see above) will be released and:

- if the balance is positive: the amount released will be paid in full to the coordinator together with the amount due as the balance;
- if the balance is negative (payment of the balance taking the form of recovery): it will be deducted from the amount released (see Article 44.1.2). If the resulting amount:
  - is positive, it will be paid to the coordinator
  - is negative, it will be recovered.

The amount to be paid may however be offset — without the beneficiary's consent — against any other amount owed to a beneficiary by the *Commission* or an executive agency (from the EU or Euratom budget), up to the maximum EU contribution indicated, for that beneficiary, in the estimated budget (see Annex 2).

### **21.5 Notification of amounts due**

When making payments, the *Agency* will formally notify to the coordinator the amount due, specifying whether it concerns an interim payment or the payment of the balance.

For the payment of the balance, the notification will also specify the final grant amount.

In the case of reduction of the grant or recovery of undue amounts, the notification will be preceded by the contradictory procedure set out in Articles 43 and 44.

### **21.6 Currency for payments**

The *Agency* will make all payments in euro.

### **21.7 Payments to the coordinator — Distribution to the beneficiaries**

Payments will be made to the coordinator.

Payments to the coordinator will discharge the *Agency* from its payment obligation.

The coordinator must distribute the payments between the beneficiaries without unjustified delay.

Pre-financing may however be distributed only:

- (a) if the minimum number of beneficiaries set out in the call for proposals has acceded to the Agreement (see Article 56) and
- (b) to beneficiaries that have acceded to the Agreement (see Article 56).

### **21.8 Bank account for payments**

All payments will be made to the following bank account:

Name of bank: ARION BANK  
Address of branch: BORGARTUN 19 REYKJAVIK, Iceland  
Full name of the account holder: MATIS OHF  
Full account number (including bank codes):  
IBAN code: IS330334387101766709060190

### **21.9 Costs of payment transfers**

The cost of the payment transfers is borne as follows:

- the *Agency* bears the cost of transfers charged by its bank;
- the beneficiary bears the cost of transfers charged by its bank;
- the party causing a repetition of a transfer bears all costs of the repeated transfer.

### **21.10 Date of payment**

Payments by the *Agency* are considered to have been carried out on the date when they are debited to its account.

### **21.11 Consequences of non-compliance**

21.11.1 If the *Agency* does not pay within the payment deadlines (see above), the beneficiaries are entitled to **late-payment interest** at the rate applied by the European Central Bank (ECB) for its main refinancing operations in euros ('reference rate'), plus three and a half points. The reference rate is the rate in force on the first day of the month in which the payment deadline expires, as published in the C series of the *Official Journal of the European Union*.

If the late-payment interest is lower than or equal to EUR 200, it will be paid to the coordinator only upon request submitted within two months of receiving the late payment.

Late-payment interest is not due if all beneficiaries are EU Member States (including regional and local government authorities or other public bodies acting on behalf of a Member State for the purpose of this Agreement).

Suspension of the payment deadline or payments (see Articles 47 and 48) will not be considered as late payment.

Late-payment interest covers the period running from the day following the due date for payment (see above), up to and including the date of payment.

Late-payment interest is not considered for the purposes of calculating the final grant amount.

21.11.2 If the coordinator breaches any of its obligations under this Article, the grant may be reduced (see Article 43) and the Agreement or the participation of the coordinator may be terminated (see Article 50).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 22 — CHECKS, REVIEWS, AUDITS AND INVESTIGATIONS — EXTENSION OF FINDINGS**

### **22.1 Checks, reviews and audits by the Commission *and the Agency***

#### **22.1.1 Right to carry out checks**

The Commission *or the Agency* will — during the implementation of the action or afterwards — check the proper implementation of the action and compliance with the obligations under the Agreement, including assessing deliverables and reports.

For this purpose the Commission *or the Agency* may be assisted by external persons or bodies.

The Commission *or the Agency* may also request additional information in accordance with Article 17. The Commission *or the Agency* may request beneficiaries to provide such information to it directly.

Information provided must be accurate, precise and complete and in the format requested, including electronic format.

#### **22.1.2 Right to carry out reviews**

The Commission *or the Agency* may — during the implementation of the action or afterwards — carry out reviews on the proper implementation of the action (including assessment of deliverables and reports), compliance with the obligations under the Agreement and continued scientific or technological relevance of the action.

Reviews may be started **up to two years after the payment of the balance**. They will be formally notified to the coordinator or beneficiary concerned and will be considered to have started on the date of the formal notification.

If the review is carried out on a third party (see Articles 10 to 16), the beneficiary concerned must inform the third party.

The Commission *or the Agency* may carry out reviews directly (using its own staff) or indirectly (using external persons or bodies appointed to do so). It will inform the coordinator or beneficiary concerned of the identity of the external persons or bodies. They have the right to object to the appointment on grounds of commercial confidentiality.

The coordinator or beneficiary concerned must provide — within the deadline requested — any information and data in addition to deliverables and reports already submitted (including information

on the use of resources). The Commission *or the Agency* may request beneficiaries to provide such information to it directly.

The coordinator or beneficiary concerned may be requested to participate in meetings, including with external experts.

For **on-the-spot** reviews, the beneficiaries must allow access to their sites and premises, including to external persons or bodies, and must ensure that information requested is readily available.

Information provided must be accurate, precise and complete and in the format requested, including electronic format.

On the basis of the review findings, a '**review report**' will be drawn up.

The Commission *or the Agency* will formally notify the review report to the coordinator or beneficiary concerned, which has 30 days to formally notify observations ('**contradictory review procedure**').

Reviews (including review reports) are in the language of the Agreement.

### **22.1.3 Right to carry out audits**

The Commission *or the Agency* may — during the implementation of the action or afterwards — carry out audits on the proper implementation of the action and compliance with the obligations under the Agreement.

Audits may be started **up to two years after the payment of the balance**. They will be formally notified to the coordinator or beneficiary concerned and will be considered to have started on the date of the formal notification.

If the audit is carried out on a third party (see Articles 10 to 16), the beneficiary concerned must inform the third party.

The Commission *or the Agency* may carry out audits directly (using its own staff) or indirectly (using external persons or bodies appointed to do so). It will inform the coordinator or beneficiary concerned of the identity of the external persons or bodies. They have the right to object to the appointment on grounds of commercial confidentiality.

The coordinator or beneficiary concerned must provide — within the deadline requested — any information (including complete accounts, individual salary statements or other personal data) to verify compliance with the Agreement. The Commission *or the Agency* may request beneficiaries to provide such information to it directly.

For **on-the-spot** audits, the beneficiaries must allow access to their sites and premises, including to external persons or bodies, and must ensure that information requested is readily available.

Information provided must be accurate, precise and complete and in the format requested, including electronic format.

On the basis of the audit findings, a '**draft audit report**' will be drawn up.

The Commission *or the Agency* will formally notify the draft audit report to the coordinator or beneficiary concerned, which has 30 days to formally notify observations (**‘contradictory audit procedure’**). This period may be extended by the Commission *or the Agency* in justified cases.

The **‘final audit report’** will take into account observations by the coordinator or beneficiary concerned. The report will be formally notified to it.

Audits (including audit reports) are in the language of the Agreement.

The Commission *or the Agency* may also access the beneficiaries’ statutory records for the periodical assessment of unit costs or flat-rate amounts.

## **22.2 Investigations by the European Anti-Fraud Office (OLAF)**

Under Regulations No 883/2013<sup>15</sup> and No 2185/96<sup>16</sup> (and in accordance with their provisions and procedures), the European Anti-Fraud Office (OLAF) may — at any moment during implementation of the action or afterwards — carry out investigations, including on-the-spot checks and inspections, to establish whether, concerning the action funded under the Agreement, there has been fraud, corruption or any other illegal activity affecting the financial interests of the EU.

## **22.3 Checks and audits by the European Court of Auditors (ECA)**

Under Article 287 of the Treaty on the Functioning of the European Union (TFEU) and *Article 161 of the Financial Regulation No 966/2012*<sup>17</sup>, the European Court of Auditors (ECA) may — at any moment during implementation of the action or afterwards — carry out audits.

The ECA has the right of access for the purpose of checks and audits.

## **22.4 Checks, reviews, audits and investigations for international organisations**

*not applicable*

## **22.5 Consequences of findings in checks, reviews, audits and investigations —Extension of findings**

### **22.5.1 Findings in this grant**

Findings in checks, reviews, audits or investigations carried out in the context of this grant may lead to the rejection of ineligible costs (see Article 42), reduction of the grant (see Article 43), recovery of undue amounts (see Article 44) or to any of the other measures described in Chapter 6.

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<sup>15</sup> Regulation (EU, Euratom) No 883/2013 of the European Parliament and of the Council of 11 September 2013 concerning investigations conducted by the European Anti-Fraud Office (OLAF) and repealing Regulation (EC) No 1073/1999 of the European Parliament and of the Council and Council Regulation (Euratom) No 1074/1999 (OJ L 248, 18.09.2013, p. 1).

<sup>16</sup> Council Regulation (Euratom, EC) No 2185/1996 of 11 November 1996 concerning on-the-spot checks and inspections carried out by the Commission in order to protect the European Communities’ financial interests against fraud and other irregularities (OJ L 292, 15.11.1996, p. 2).

<sup>17</sup> Regulation (EU, EURATOM) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, EURATOM) No 1605/2002 (OJ L 298, 26.10.2012, p. 1).

Rejection of costs or reduction of the grant after the payment of the balance will lead to a revised final grant amount (see Article 5.4).

Findings in checks, reviews, audits or investigations may lead to a request for amendment for the modification of Annex 1 (see Article 55).

Checks, reviews, audits or investigations that find systemic or recurrent errors, irregularities, fraud or breach of obligations may also lead to consequences in other EU or Euratom grants awarded under similar conditions (**‘extension of findings from this grant to other grants’**).

Moreover, findings arising from an OLAF investigation may lead to criminal prosecution under national law.

### 22.5.2 Findings in other grants

The Commission *or the Agency* may extend findings from other grants to this grant (**‘extension of findings from other grants to this grant’**), if:

- (a) the beneficiary concerned is found, in other EU or Euratom grants awarded under similar conditions, to have committed systemic or recurrent errors, irregularities, fraud or breach of obligations that have a material impact on this grant and
- (b) those findings are formally notified to the beneficiary concerned — together with the list of grants affected by the findings — no later than two years after the payment of the balance of this grant.

The extension of findings may lead to the rejection of costs (see Article 42), reduction of the grant (see Article 43), recovery of undue amounts (see Article 44), suspension of payments (see Article 48), suspension of the action implementation (see Article 49) or termination (see Article 50).

### 22.5.3 Procedure

The Commission *or the Agency* will formally notify the beneficiary concerned the systemic or recurrent errors, together with the list of grants affected by the findings.

22.5.3.1 If the findings concern **eligibility of costs**: the formal notification will include:

- (a) an invitation to submit observations on the list of grants affected by the findings;
- (b) the request to submit **revised financial statements** for all grants affected;
- (c) the **correction rate for extrapolation** established by the Commission *or the Agency* on the basis of the systemic or recurrent errors, to calculate the amounts to be rejected if the beneficiary concerned:
  - (i) considers that the submission of revised financial statements is not possible or practicable or
  - (ii) does not submit revised financial statements.



The beneficiary concerned has 90 days from receiving notification to submit observations, revised financial statements or to propose a duly substantiated **alternative correction method**. This period may be extended by the Commission *or the Agency* in justified cases.

The Commission *or the Agency* will determine the amounts to be rejected on the basis of the revised financial statements, subject to their approval.

If the Commission *or the Agency* does not receive any observations or revised financial statements, does not accept the observations or the proposed alternative correction method or does not approve the revised financial statements, it will formally notify the beneficiary concerned the application of the initially notified correction rate for extrapolation.

If the Commission *or the Agency* accepts the alternative correction method proposed by the beneficiary concerned, it will formally notify the application of the accepted alternative correction method.

22.5.3.2 If the findings concern **improper implementation** or a **breach of another obligation**: the formal notification will include:

- (a) an invitation to submit observations on the list of grants affected by the findings and
- (b) the flat-rate the Commission *or the Agency* intends to apply according to the principle of proportionality.

The beneficiary concerned has 90 days from receiving notification to submit observations or to propose a duly substantiated alternative flat-rate.

If the Commission *or the Agency* does not receive any observations or does not accept the observations or the proposed alternative flat-rate, it will formally notify the beneficiary concerned the application of the initially notified flat-rate.

If the Commission *or the Agency* accepts the alternative flat-rate proposed by the beneficiary concerned, it will formally notify the application of the accepted alternative flat-rate.

## **22.6 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, any insufficiently substantiated costs will be ineligible (see Article 6) and will be rejected (see Article 42).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 23 — EVALUATION OF THE IMPACT OF THE ACTION**

### **23.1 Right to evaluate the impact of the action**

The Commission *or the Agency* may carry out interim and final evaluations of the impact of the action measured against the objective of the *EU* programme.

Evaluations may be started during implementation of the action and up to *five* years after the payment of the balance. The evaluation is considered to start on the date of the formal notification to the coordinator or beneficiaries.

The Commission *or the Agency* may make these evaluations directly (using its own staff) or indirectly (using external bodies or persons it has authorised to do so).

The coordinator or beneficiaries must provide any information relevant to evaluate the impact of the action, including information in electronic format.

### **23.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the Commission *or the Agency* may apply the measures described in Chapter 6.

## **SECTION 3 RIGHTS AND OBLIGATIONS RELATED TO BACKGROUND AND RESULTS**

### **SUBSECTION 1 GENERAL**

#### **ARTICLE 23a — MANAGEMENT OF INTELLECTUAL PROPERTY**

##### **23a.1 Obligation to take measures to implement the Commission Recommendation on the management of intellectual property in knowledge transfer activities**

Beneficiaries that are universities or other public research organisations must take measures to implement the principles set out in Points 1 and 2 of the Code of Practice annexed to the Commission Recommendation on the management of intellectual property in knowledge transfer activities<sup>18</sup>.

This does not change the obligations set out in Subsections 2 and 3 of this Section.

The beneficiaries must ensure that researchers and third parties involved in the action are aware of them.

##### **23a.2 Consequences of non-compliance**

If a beneficiary breaches its obligations under this Article, the *Agency* may apply any of the measures described in Chapter 6.

### **SUBSECTION 2 RIGHTS AND OBLIGATIONS RELATED TO BACKGROUND**

#### **ARTICLE 24 — AGREEMENT ON BACKGROUND**

The beneficiaries must identify and agree (in writing) on the background for the action (**‘agreement on background’**).

**‘Background’** means any data, know-how or information — whatever its form or nature (tangible or intangible), including any rights such as intellectual property rights — that:

- (a) is held by the beneficiaries before they acceded to the Agreement, and

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<sup>18</sup> Commission Recommendation C (2008) 1329 of 10.4.2008 on the management of intellectual property in knowledge transfer activities and the Code of Practice for universities and other public research institutions attached to this recommendation.

(b) is needed to implement the action or exploit the results.

## **ARTICLE 25 — ACCESS RIGHTS TO BACKGROUND**

### **25.1 Exercise of access rights — Waiving of access rights — No sub-licensing**

To exercise access rights, this must first be requested in writing (**‘request for access’**).

**‘Access rights’** means rights to use results or background under the terms and conditions laid down in this Agreement.

Waivers of access rights are not valid unless in writing.

Unless agreed otherwise, access rights do not include the right to sub-license.

### **25.2 Access rights for other beneficiaries, for implementing their own tasks under the action**

The beneficiaries must give each other access — on a royalty-free basis — to background needed to implement their own tasks under the action, unless the beneficiary that holds the background has — before acceding to the Agreement —:

- (a) informed the other beneficiaries that access to its background is subject to legal restrictions or limits, including those imposed by the rights of third parties (including personnel), or
- (b) agreed with the other beneficiaries that access would not be on a royalty-free basis.

### **25.3 Access rights for other beneficiaries, for exploiting their own results**

The beneficiaries must give each other access — under fair and reasonable conditions — to background needed for exploiting their own results, unless the beneficiary that holds the background has — before acceding to the Agreement — informed the other beneficiaries that access to its background is subject to legal restrictions or limits, including those imposed by the rights of third parties (including personnel).

**‘Fair and reasonable conditions’** means appropriate conditions, including possible financial terms or royalty-free conditions, taking into account the specific circumstances of the request for access, for example the actual or potential value of the results or background to which access is requested and/or the scope, duration or other characteristics of the exploitation envisaged.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out in Article 3.

### **25.4 Access rights for affiliated entities**

Unless otherwise agreed in the consortium agreement, access to background must also be given — under fair and reasonable conditions (see above; Article 25.3) and unless it is subject to legal restrictions or limits, including those imposed by the rights of third parties (including personnel) —

to affiliated entities<sup>19</sup> established in an EU Member State or ‘**associated country**’<sup>20</sup>, if this is needed to exploit the results generated by the beneficiaries to which they are affiliated.

Unless agreed otherwise (see above; Article 25.1), the affiliated entity concerned must make the request directly to the beneficiary that holds the background.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out in Article 3.

### **25.5 Access rights for third parties**

*not applicable*

### **25.6 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **SUBSECTION 3 RIGHTS AND OBLIGATIONS RELATED TO RESULTS**

### **ARTICLE 26 — OWNERSHIP OF RESULTS**

#### **26.1 Ownership by the beneficiary that generates the results**

Results are owned by the beneficiary that generates them.

‘**Results**’ means any (tangible or intangible) output of the action such as data, knowledge or information — whatever its form or nature, whether it can be protected or not — that is generated in the action, as well as any rights attached to it, including intellectual property rights.

#### **26.2 Joint ownership by several beneficiaries**

Two or more beneficiaries own results jointly if:

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<sup>19</sup> <sup>19</sup> For the definition, see Article 2.1(2) of the Rules for Participation Regulation No 1290/2013: ‘**affiliated entity**’ means any legal entity that is under the direct or indirect control of a participant, or under the same direct or indirect control as the participant, or that is directly or indirectly controlling a participant.

‘Control’ may take any of the following forms:

- (a) the direct or indirect holding of more than 50% of the nominal value of the issued share capital in the legal entity concerned, or of a majority of the voting rights of the shareholders or associates of that entity;
- (b) the direct or indirect holding, in fact or in law, of decision-making powers in the legal entity concerned.

However the following relationships between legal entities shall not in themselves be deemed to constitute controlling relationships:

- (a) the same public investment corporation, institutional investor or venture-capital company has a direct or indirect holding of more than 50% of the nominal value of the issued share capital or a majority of voting rights of the shareholders or associates;
- (b) the legal entities concerned are owned or supervised by the same public body.

<sup>20</sup> For the definition, see Article 2.1(3) of the Rules for Participation Regulation No 1290/2013: ‘**associated country**’ means a third country which is party to an international agreement with the Union, as identified in Article 7 of Horizon 2020 Framework Programme Regulation No 1291/2013. Article 7 sets out the conditions for association of non-EU countries to Horizon 2020.

- (a) they have jointly generated them and
- (b) it is not possible to:
  - (i) establish the respective contribution of each beneficiary, or
  - (ii) separate them for the purpose of applying for, obtaining or maintaining their protection (see Article 27).

The joint owners must agree (in writing) on the allocation and terms of exercise of their joint ownership (**‘joint ownership agreement’**), to ensure compliance with their obligations under this Agreement.

Unless otherwise agreed in the joint ownership agreement, each joint owner may grant non-exclusive licences to third parties to exploit jointly-owned results (without any right to sub-license), if the other joint owners are given:

- (a) at least 45 days advance notice and
- (b) fair and reasonable compensation.

Once the results have been generated, joint owners may agree (in writing) to apply another regime than joint ownership (such as, for instance, transfer to a single owner (see Article 30) with access rights for the others).

### **26.3 Rights of third parties (including personnel)**

If third parties (including personnel) may claim rights to the results, the beneficiary concerned must ensure that it complies with its obligations under the Agreement.

If a third party generates results, the beneficiary concerned must obtain all necessary rights (transfer, licences or other) from the third party, in order to be able to respect its obligations as if those results were generated by the beneficiary itself.

If obtaining the rights is impossible, the beneficiary must refrain from using the third party to generate the results.

### **26.4 Agency ownership, to protect results**

26.4.1 *The Agency* may — with the consent of the beneficiary concerned — assume ownership of results to protect them, if a beneficiary intends — up to four years after the period set out in Article 3 — to disseminate its results without protecting them, except in any of the following cases:

- (a) the lack of protection is because protecting the results is not possible, reasonable or justified (given the circumstances);
- (b) the lack of protection is because there is a lack of potential for commercial or industrial exploitation, or
- (c) the beneficiary intends to transfer the results to another beneficiary or third party established in an EU Member State or associated country, which will protect them.

Before the results are disseminated and unless any of the cases above under Points (a), (b) or (c) applies, the beneficiary must formally notify the *Agency* and at the same time inform it of any reasons for refusing consent. The beneficiary may refuse consent only if it can show that its legitimate interests would suffer significant harm.

If the *Agency* decides to assume ownership, it will formally notify the beneficiary concerned within 45 days of receiving notification.

No dissemination relating to these results may before the end of this period or, if the *Agency* takes a positive decision, until it has taken the necessary steps to protect the results.

26.4.2 *The Agency* may — with the consent of the beneficiary concerned — assume ownership of results to protect them, if a beneficiary intends — up to four years after the period set out in Article 3 — to stop protecting them or not to seek an extension of protection, except in any of the following cases:

- (a) the protection is stopped because of a lack of potential for commercial or industrial exploitation;
- (b) an extension would not be justified given the circumstances.

A beneficiary that intends to stop protecting results or not seek an extension must — unless any of the cases above under Points (a) or (b) applies — formally notify the *Agency* at least 60 days before the protection lapses or its extension is no longer possible and at the same time inform it of any reasons for refusing consent. The beneficiary may refuse consent only if it can show that its legitimate interests would suffer significant harm.

If the *Agency* decides to assume ownership, it will formally notify the beneficiary concerned within 45 days of receiving notification.

## **26.5 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to the any of the other measures described in Chapter 6.

## **ARTICLE 27 — PROTECTION OF RESULTS — VISIBILITY OF EU FUNDING**

### **27.1 General obligation to protect the results**

Each beneficiary must examine the possibility of protecting its results and must adequately protect them — for an appropriate period and with appropriate territorial coverage — if:

- (a) the results can reasonably be expected to be commercially or industrially exploited and
- (b) protecting them is possible, reasonable and justified (given the circumstances).

When deciding on protection, the beneficiary must consider its own legitimate interests and the legitimate interests (especially commercial) of the other beneficiaries.

## 27.2 Agency ownership, to protect the results

If a beneficiary intends not to protect its results, to stop protecting them or not seek an extension of protection, *The Agency* may — under certain conditions (see Article 26.4) — assume ownership to ensure their (continued) protection.

## 27.3 Information on EU funding

Applications for protection of results (including patent applications) filed by or on behalf of a beneficiary must — unless the *Agency* requests or agrees otherwise or unless it is impossible — include the following:

“The project leading to this application has received funding from the *European Union’s Horizon 2020 research and innovation programme* under grant agreement No 635761”.

## 27.4 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such a breach may also lead to any of the other measures described in Chapter 6.

# ARTICLE 28 — EXPLOITATION OF RESULTS

## 28.1 General obligation to exploit the results

Each beneficiary must — up to four years after the period set out in Article 3 — take measures aiming to ensure ‘**exploitation**’ of its results (either directly or indirectly, in particular through transfer or licensing; see Article 30) by:

- (a) using them in further research activities (outside the action);
- (b) developing, creating or marketing a product or process;
- (c) creating and providing a service, or
- (d) using them in standardisation activities.

This does not change the security obligations in Article 37, which still apply.

## 28.2 Results that could contribute to European or international standards — Information on EU funding

If results are incorporated in a standard, the beneficiary concerned must — unless the *Agency* requests or agrees otherwise or unless it is impossible — ask the standardisation body to include the following statement in (information related to) the standard:

“Results incorporated in this standard received funding from the *European Union’s Horizon 2020 research and innovation programme* under grant agreement No 635761”.

### **28.3 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced in accordance with Article 43.

Such a breach may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 29 — DISSEMINATION OF RESULTS — OPEN ACCESS — VISIBILITY OF EU FUNDING**

### **29.1 General obligation to disseminate results**

Unless it goes against their legitimate interests, each beneficiary must — as soon as possible — ‘**disseminate**’ its results by disclosing them to the public by appropriate means (other than those resulting from protecting or exploiting the results), including in scientific publications (in any medium).

This does not change the obligation to protect results in Article 27, the confidentiality obligations in Article 36, the security obligations in Article 37 or the obligations to protect personal data in Article 39, all of which still apply.

A beneficiary that intends to disseminate its results must give advance notice to the other beneficiaries of — unless agreed otherwise — at least 45 days, together with sufficient information on the results it will disseminate.

Any other beneficiary may object within — unless agreed otherwise — 30 days of receiving notification, if it can show that its legitimate interests in relation to the results or background would be significantly harmed. In such cases, the dissemination may not take place unless appropriate steps are taken to safeguard these legitimate interests.

If a beneficiary intends not to protect its results, it may — under certain conditions (see Article 26.4.1) — need to formally notify the *Agency* before dissemination takes place.

### **29.2 Open access to scientific publications**

Each beneficiary must ensure open access (free of charge online access for any user) to all peer-reviewed scientific publications relating to its results.

In particular, it must:

- (a) as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications;

Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.

- (b) ensure open access to the deposited publication — via the repository — at the latest:
  - (i) on publication, if an electronic version is available for free via the publisher, or



- (ii) within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.
- (c) ensure open access — via the repository — to the bibliographic metadata that identify the deposited publication.

The bibliographic metadata must be in a standard format and must include all of the following:

- the terms "*European Union (EU)*" and "*Horizon 2020*";
- the name of the action, acronym and grant number;
- the publication date, and length of embargo period if applicable, and
- a persistent identifier.

### **29.3 Open access to research data**

*not applicable*

### **29.4 Information on EU funding — Obligation and right to use the EU emblem**

Unless the *Agency* requests or agrees otherwise or unless it is impossible, any dissemination of results (in any form, including electronic) must:

- (a) display the EU emblem and
- (b) include the following text:

“This project has received funding from the *European Union’s Horizon 2020 research and innovation programme* under grant agreement No 635761”.

When displayed together with another logo, the EU emblem must have appropriate prominence.

For the purposes of their obligations under this Article, the beneficiaries may use the EU emblem without first obtaining approval from the *Agency*.

This does not however give them the right to exclusive use.

Moreover, they may not appropriate the EU emblem or any similar trademark or logo, either by registration or by any other means.

### **29.5 Disclaimer excluding *Agency* responsibility**

Any dissemination of results must indicate that it reflects only the author's view and that the *Agency* is not responsible for any use that may be made of the information it contains.

### **29.6 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such a breach may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 30 — TRANSFER AND LICENSING OF RESULTS**

### **30.1 Transfer of ownership**

Each beneficiary may transfer ownership of its results.

It must however ensure that its obligations under Articles 26.2, 26.4, 27, 28, 29, 30 and 31 also apply to the new owner and that this owner has the obligation to pass them on in any subsequent transfer.

This does not change the security obligations in Article 37, which still apply.

Unless agreed otherwise (in writing) for specifically-identified third parties or unless impossible under applicable EU and national laws on mergers and acquisitions, a beneficiary that intends to transfer ownership of results must give at least 45 days advance notice to the other beneficiaries that still have (or still may request) access rights to the results. This notification must include sufficient information on the new owner to enable any beneficiary concerned to assess the effects on its access rights.

Unless agreed otherwise (in writing), any other beneficiary may object within 30 days of receiving notification, if it can show that the transfer would adversely affect its access rights. In this case, the transfer may not take place until agreement has been reached between the beneficiaries concerned.

### **30.2 Granting licenses**

Each beneficiary may grant licences to its results (or otherwise give the right to exploit them), if:

- (a) this does not impede the rights under Article 31 and
- (b) *not applicable*.

In addition to Points (a) and (b), exclusive licences for results may be granted only if all the other beneficiaries concerned have waived their access rights (see Article 31.1).

This does not change the dissemination obligations in Article 29 or security obligations in Article 37, which still apply.

### **30.3 Agency right to object to transfers or licensing**

*The Agency may — up to four years after the period set out in Article 3 — object to a transfer of ownership or the exclusive licensing of results, if:*

- (a) *it is to a third party established in a non-EU country not associated with Horizon 2020 and*
- (b) *the Agency considers that the transfer or licence is not in line with EU interests regarding competitiveness or is inconsistent with ethical principles or security considerations.*

*A beneficiary that intends to transfer ownership or grant an exclusive licence must formally notify the Agency before the intended transfer or licensing takes place and:*

- *identify the specific results concerned;*

- *describe in detail the new owner or licensee and the planned or potential exploitation of the results, and*
- *include a reasoned assessment of the likely impact of the transfer or licence on EU competitiveness and its consistency with ethical principles and security considerations.*

*The Agency may request additional information.*

*If the Agency decides to object to a transfer or exclusive licence, it must formally notify the beneficiary concerned within 60 days of receiving notification (or any additional information it has requested).*

*No transfer or licensing may take place in the following cases:*

- *pending the Agency decision, within the period set out above;*
- *if the Agency objects;*
- *until the conditions are complied with, if the Agency objection comes with conditions.*

### **30.4 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such a breach may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 31 — ACCESS RIGHTS TO RESULTS**

### **31.1 Exercise of access rights — Waiving of access rights — No sub-licensing**

The conditions set out in Article 25.1 apply.

The obligations set out in this Article do not change the security obligations in Article 37, which still apply.

### **31.2 Access rights for other beneficiaries, for implementing their own tasks under the action**

The beneficiaries must give each other access — on a royalty-free basis — to results needed for implementing their own tasks under the action.

### **31.3 Access rights for other beneficiaries, for exploiting their own results**

The beneficiaries must give each other — under fair and reasonable conditions (see Article 25.3) — access to results needed for exploiting their own results.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out in Article 3.

### **31.4 Access rights of affiliated entities**

Unless agreed otherwise in the consortium agreement, access to results must also be given — under fair and reasonable conditions (Article 25.3) — to affiliated entities established in an EU Member

State or associated country, if this is needed for those entities to exploit the results generated by the beneficiaries to which they are affiliated.

Unless agreed otherwise (see above; Article 31.1), the affiliated entity concerned must make any such request directly to the beneficiary that owns the results.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out in Article 3.

### **31.5 Access rights for the EU institutions, bodies, offices or agencies and EU Member States**

*The beneficiaries must give access to their results — on a royalty-free basis — to EU institutions, bodies, offices or agencies, for developing, implementing or monitoring EU policies or programmes.*

*Such access rights are limited to non-commercial and non-competitive use.*

*This does not change the right to use any material, document or information received from the beneficiaries for communication and publicising activities (see Article 38.2).*

### **31.6 Access rights for third parties**

*not applicable*

### **31.7 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **SECTION 4 OTHER RIGHTS AND OBLIGATIONS**

### **ARTICLE 32 — RECRUITMENT AND WORKING CONDITIONS FOR RESEARCHERS**

#### **32.1 Obligation to take measures to implement the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers**

The beneficiaries must take all measures to implement the principles set out in the Commission Recommendation on the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers<sup>22</sup>, in particular regarding:

- working conditions;
- transparent recruitment processes based on merit, and
- career development.

The beneficiaries must ensure that researchers and third parties involved in the action are aware of them.

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<sup>22</sup> Commission recommendation (EC) No 251/2005 of 11 March 2005 on the European Charter for Researchers and on a Code of Conduct for the Recruitment of Researchers (OJ L 75, 22.03.2005, p. 67).

## **32.2 Consequences of non-compliance**

If a beneficiary breaches its obligations under this Article, the *Agency* may apply any of the measures described in Chapter 6.

## **ARTICLE 33 — GENDER EQUALITY**

### **33.1 Obligation to aim for gender equality**

The beneficiaries must take all measures to promote equal opportunities between men and women in the implementation of the action. They must aim, to the extent possible, for a gender balance at all levels of personnel assigned to the action, including at supervisory and managerial level.

### **33.2 Consequences of non-compliance**

If a beneficiary breaches its obligations under this Article, the *Agency* may apply any of the measures described in Chapter 6.

## **ARTICLE 34 — ETHICS**

### **34.1 General obligation to comply with ethical principles**

The beneficiaries must carry out the action in compliance with:

- (a) ethical principles (including the highest standards of research integrity — as set out, for instance, in the European Code of Conduct for Research Integrity<sup>23</sup> — and including, in particular, avoiding fabrication, falsification, plagiarism or other research misconduct) and
- (b) applicable international, EU and national law.

Funding will not be granted for activities carried out outside the EU if they are prohibited in all Member States.

The beneficiaries must ensure that the activities under the action have an exclusive focus on civil applications.

The beneficiaries must ensure that the activities under the action do not:

- (a) aim at human cloning for reproductive purposes;
- (b) intend to modify the genetic heritage of human beings which could make such changes heritable (with the exception of research relating to cancer treatment of the gonads, which may be financed), or
- (c) intend to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer.

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<sup>23</sup> The European Code of Conduct for Research Integrity of ALLEA (All European Academies) and ESF (European Science Foundation) of March 2011.

[http://www.esf.org/fileadmin/Public\\_documents/Publications/Code\\_Conduct\\_ResearchIntegrity.pdf](http://www.esf.org/fileadmin/Public_documents/Publications/Code_Conduct_ResearchIntegrity.pdf)

### 34.2 Activities raising ethical issues

Activities raising ethical issues must comply with the ‘**ethics requirements**’ set out in Annex 1.

Before the beginning of an activity raising an ethical issue, the coordinator must submit (see Article 52) to the *Agency* copy of:

- (a) any ethics committee opinion required under national law and
- (b) any notification or authorisation for activities raising ethical issues required under national law.

If these documents are not in English, the coordinator must also submit an English summary of the submitted opinions, notifications and authorisations (containing, if available, the conclusions of the committee or authority concerned).

If these documents are specifically requested for the action, the request must contain an explicit reference to the action title. The coordinator must submit a declaration by each beneficiary concerned that all the submitted documents cover the action tasks.

### 34.3 Activities involving human embryos or human embryonic stem cells

*not applicable*

### 34.4 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43) and the Agreement or participation of the beneficiary may be terminated (see Article 50).

Such breaches may also lead to any of the other measures described in Chapter 6.

## ARTICLE 35 — CONFLICT OF INTERESTS

### 35.1 Obligation to avoid a conflict of interests

The beneficiaries must take all measures to prevent any situation where the impartial and objective implementation of the action is compromised for reasons involving economic interest, political or national affinity, family or emotional ties or any other shared interest (‘**conflict of interests**’).

They must formally notify to the *Agency* without delay any situation constituting or likely to lead to a conflict of interests and immediately take all the necessary steps to rectify this situation.

The *Agency* may verify that the measures taken are appropriate and may require additional measures to be taken by a specified deadline.

### 35.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43) and the Agreement or participation of the beneficiary may be terminated (see Article 50).

Such breaches may also lead to any of the other measures described in Chapter 6.

## ARTICLE 36 — CONFIDENTIALITY

### 36.1 General obligation to maintain confidentiality

During implementation of the action and for four years after the period set out in Article 3, the parties must keep confidential any data, documents or other material (in any form) that is identified as confidential at the time it is disclosed (**‘confidential information’**).

If a beneficiary requests, the *Agency* may agree to keep such information confidential for an additional period beyond the initial four years.

If information has been identified as confidential only orally, it will be considered to be confidential only if this is confirmed in writing within 15 days of the oral disclosure.

Unless otherwise agreed between the parties, they may use confidential information only to implement the Agreement.

The beneficiaries may disclose confidential information to their personnel or third parties involved in the action only if they:

- (a) need to know to implement the Agreement and
- (b) are bound by an obligation of confidentiality.

This does not change the security obligations in Article 37, which still apply.

The *Agency* may disclose confidential information to its staff, other EU institutions and bodies or third parties, if:

- (a) this is necessary to implement the Agreement or safeguard the *EU*'s financial interests and
- (b) the recipients of the information are bound by an obligation of confidentiality.

Under the conditions set out in Article 4 of the Rules for participation Regulation No 1290/2013<sup>24</sup>, the Commission must moreover make available information on the results to other EU institutions, bodies, offices or agencies as well as Member States or associated countries.

The confidentiality obligations no longer apply if:

- (a) the disclosing party agrees to release the other party;
- (b) the information was already known by the recipient or is given to him without obligation of confidentiality by a third party that was not bound by any obligation of confidentiality;
- (c) the recipient proves that the information was developed without the use of confidential information;
- (d) the information becomes generally and publicly available, without breaching any confidentiality obligation, or

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<sup>24</sup> Regulation (EU) No 1290/2013 of the European Parliament and of the Council of 11 December 2013 laying down the rules for participation and dissemination in "Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)" (OJ L 347, 20.12.2013 p.81).

(e) the disclosure of the information is required by EU or national law.

## **36.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 37 — SECURITY-RELATED OBLIGATIONS**

### **37.1 Activities raising security issues**

*not applicable*

### **37.2 Classified deliverables**

*not applicable*

### **37.3 Activities involving dual-use goods or dangerous materials and substances**

*not applicable*

### **37.4 Consequences of non-compliance**

*not applicable*

## **ARTICLE 38 — PROMOTING THE ACTION — VISIBILITY OF EU FUNDING**

### **38.1 Communication activities by beneficiaries**

#### **38.1.1 General obligation to promote the action and its results**

The beneficiaries must promote the action and its results, by providing targeted information to multiple audiences (including the media and the public) in a strategic and effective manner.

This does not change the dissemination obligations in Article 29, the confidentiality obligations in Article 36 or the security obligations in Article 37, all of which still apply.

Before engaging in a communication activity expected to have a major media impact, the beneficiaries must inform the *Agency* (see Article 52).

#### **38.1.2 Information on EU funding — Obligation and right to use the EU emblem**

Unless the *Agency* requests or agrees otherwise or unless it is impossible, any communication activity related to the action (including in electronic form, via social media, etc.) and any infrastructure funded by the grant must:

- (a) display the EU emblem and
- (b) include the following text:



“This project has received funding from the *European Union’s Horizon 2020 research and innovation programme* under grant agreement No 635761”.

When displayed together with another logo, the EU emblem must have appropriate prominence.

For the purposes of their obligations under this Article, the beneficiaries may use the EU emblem without first obtaining approval from the *Agency*.

This does not, however, give them the right to exclusive use.

Moreover, they may not appropriate the EU emblem or any similar trademark or logo, either by registration or by any other means.

### **38.1.3 Disclaimer excluding *Agency* responsibility**

Any communication activity related to the action must indicate that it reflects only the author's view and that the *Agency* is not responsible for any use that may be made of the information it contains.

## **38.2 Communication activities by the *Agency***

### **38.2.1 Right to use beneficiaries’ materials, documents or information**

The *Agency* may use, for its communication and publicising activities, information relating to the action, documents notably summaries for publication and public deliverables as well as any other material, such as pictures or audio-visual material that it receives from any beneficiary (including in electronic form).

This does not change the confidentiality obligations in Article 36 and the security obligations in Article 37, all of which still apply.

However, if the *Agency’s* use of these materials, documents or information would risk compromising legitimate interests, the beneficiary concerned may request the *Agency* not to use it (see Article 52).

The right to use a beneficiary’s materials, documents and information includes:

- (a) **use for its own purposes** (in particular, making them available to persons working for the *Agency* or any other EU institution, body, office or agency or body or institutions in EU Member States; and copying or reproducing them in whole or in part, in unlimited numbers);
- (b) **distribution to the public** (in particular, publication as hard copies and in electronic or digital format, publication on the internet, as a downloadable or non-downloadable file, broadcasting by any channel, public display or presentation, communicating through press information services, or inclusion in widely accessible databases or indexes);
- (c) **editing or redrafting** for communication and publicising activities (including shortening, summarising, inserting other elements (such as meta-data, legends, other graphic, visual, audio or text elements), extracting parts (e.g. audio or video files), dividing into parts, use in a compilation);
- (d) **translation**;

- (e) giving **access in response to individual requests** under Regulation No 1049/2001<sup>25</sup>, without the right to reproduce or exploit;
- (f) **storage** in paper, electronic or other form;
- (g) **archiving**, in line with applicable document-management rules, and
- (h) the right to authorise **third parties** to act on its behalf or sub-license the modes of use set out in Points (b),(c),(d) and (f) to third parties if needed for the communication and publicising activities of the *Agency*.

If the right of use is subject to rights of a third party (including personnel of the beneficiary), the beneficiary must ensure that it complies with its obligations under this Agreement (in particular, by obtaining the necessary approval from the third parties concerned).

Where applicable (and if provided by the beneficiaries), the *Agency* will insert the following information:

“© – [year] – [name of the copyright owner]. All rights reserved. Licensed to the *Agency* under conditions.”

### 38.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## ARTICLE 39 — PROCESSING OF PERSONAL DATA

### 39.1 Processing of personal data by the *Agency*

Any personal data under the Agreement will be processed by the *Agency* under Regulation No 45/2001<sup>26</sup> and according to the ‘notifications of the processing operations’ to the Data Protection Officer (DPO) of the *Agency* (publicly accessible in the DPO register).

Such data will be processed by the ‘**data controller**’ of the *Agency* for the purposes of implementing, managing and monitoring the Agreement (including checks, reviews, audits and investigations; see Article 22).

The persons whose personal data are processed have the right to access and correct their own personal data. For this purpose, they must send any queries about the processing of their personal data to the data controller, via the contact point indicated in the ‘service specific privacy statement (SSPS)’ on the *Agency’s* websites.

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<sup>25</sup> Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents, OJ L 145, 31.5.2001, p. 43.

<sup>26</sup> Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data (OJ L 8, 12.01.2001, p. 1).

They also have the right to have recourse at any time to the European Data Protection Supervisor (EDPS).

### **39.2 Processing of personal data by the beneficiaries**

The beneficiaries must process personal data under the Agreement in compliance with applicable EU and national law on data protection (including authorisations or notification requirements).

The beneficiaries may grant their personnel access only to data that is strictly necessary for implementing, managing and monitoring the Agreement.

The beneficiaries must inform the personnel whose personal data are collected and processed by the *Agency*. For this purpose, they must provide them with the service specific privacy statement (SSPS) (see above), before transmitting their data to the *Agency*.

### **39.3 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under Article 39.2, the *Agency* may apply any of the measures described in Chapter 6.

## **ARTICLE 40 — ASSIGNMENTS OF CLAIMS FOR PAYMENT AGAINST THE *AGENCY***

The beneficiaries may not assign any of their claims for payment against the *Agency* to any third party, except if approved by the *Agency* on the basis of a reasoned, written request by the coordinator (on behalf of the beneficiary concerned).

If the *Agency* has not accepted the assignment or the terms of it are not observed, the assignment will have no effect on it.

In no circumstances will an assignment release the beneficiaries from their obligations towards the *Agency*.

## **CHAPTER 5 DIVISION OF BENEFICIARIES' ROLES AND RESPONSIBILITIES**

### **ARTICLE 41 — DIVISION OF BENEFICIARIES' ROLES AND RESPONSIBILITIES**

#### **41.1 Roles and responsibilities towards the *Agency***

The beneficiaries have full responsibility for implementing the action and complying with the Agreement.

The beneficiaries are jointly and severally liable for the **technical implementation** of the action as described in Annex 1. If a beneficiary fails to implement its part of the action, the other beneficiaries become responsible for implementing this part (without being entitled to any additional EU funding for doing so), unless the *Agency* expressly relieves them of this obligation.

The **financial responsibility** of each beneficiary is governed by Articles 44, 45 and 46.

#### **41.2 Internal division of roles and responsibilities**

The internal roles and responsibilities of the beneficiaries are divided as follows:

(a) Each **beneficiary** must:

- (i) keep information stored in the Beneficiary Register (in the electronic exchange system) up to date (see Article 17);
- (ii) inform the coordinator immediately of any events or circumstances likely to affect significantly or delay the implementation of the action (see Article 17);
- (iii) submit to the coordinator in good time:
  - individual financial statements for itself and, if required, certificates on the financial statements (see Article 20);
  - the data needed to draw up the technical reports (see Article 20);
  - ethics committee opinions and notifications or authorisations for activities raising ethical issues (see Article 34);
  - any other documents or information required by the *Agency* under the Agreement, unless the Agreement requires the beneficiary to submit this information directly to the *Agency*.

(b) The **coordinator** must:

- (i) monitor that the action is implemented properly (see Article 7);
- (ii) act as the intermediary for all communications between the beneficiaries and the *Agency* (in particular, providing the *Agency* with the information described in Article 17), unless the Agreement specifies otherwise;
- (iii) request and review any documents or information required by the *Agency* and verify their completeness and correctness before passing them on to the *Agency*;
- (iv) submit the deliverables and reports to the *Agency* (see Articles 19 and 20);
- (v) ensure that all payments are made to the other beneficiaries without unjustified delay (see Article 21);
- (vi) inform the *Agency* of the amounts paid to each beneficiary, when required under the Agreement (see Articles 44 and 50) or requested by the *Agency*.

The coordinator may not delegate the above-mentioned tasks to any other beneficiary or subcontract them to any third party.

### **41.3 Internal arrangements between beneficiaries — Consortium agreement**

*The beneficiaries must have internal arrangements regarding their operation and co-ordination to ensure that the action is implemented properly. These internal arrangements must be set out in a written 'consortium agreement' between the beneficiaries, which may cover:*

- *internal organisation of the consortium;*
- *management of access to the electronic exchange system;*
- *distribution of EU funding;*
- *additional rules on rights and obligations related to background and results (including whether access rights remain or not, if a beneficiary is in breach of its obligations) (see Section 3);*
- *settlement of internal disputes;*
- *liability, indemnification and confidentiality arrangements between the beneficiaries.*

*The consortium agreement must not contain any provision contrary to the Agreement.*

#### **41.4 Relationship with complementary beneficiaries — Collaboration agreement**

*not applicable*

#### **41.5 Relationship with partners of a joint action — Coordination agreement**

*not applicable*

## **CHAPTER 6 REJECTION OF COSTS — REDUCTION OF THE GRANT — RECOVERY — PENALTIES — DAMAGES — SUSPENSION — TERMINATION — FORCE MAJEURE**

### **SECTION 1 REJECTION OF COSTS — REDUCTION OF THE GRANT — RECOVERY — PENALTIES**

#### **ARTICLE 42 — REJECTION OF INELIGIBLE COSTS**

##### **42.1 Conditions**

42.1.1 The *Agency* will — at the time of an **interim payment, at the payment of the balance or afterwards** — reject any costs which are ineligible (see Article 6), in particular following checks, reviews, audits or investigations (see Article 22).

42.1.2 The rejection may also be based on the **extension of findings from other grants to this grant**, under the conditions set out in Article 22.5.2.

##### **42.2 Ineligible costs to be rejected — Calculation — Procedure**

Ineligible costs will be rejected in full.

If the *Agency* rejects costs **without reduction of the grant** (see Article 43) or **recovery of undue amounts** (see Article 44), it will formally notify the coordinator or beneficiary concerned the rejection of costs, the amounts and the reasons why (if applicable, together with the notification of amounts due; see Article 21.5). The coordinator or beneficiary concerned may — within 30 days of receiving notification — formally notify the *Agency* of its disagreement and the reasons why.

If the *Agency* rejects costs **with reduction of the grant or recovery of undue amounts**, it will formally notify the rejection in the ‘**pre-information letter**’ on reduction or recovery set out in Articles 43 and 44.

### 42.3 Effects

If the *Agency* rejects costs at the time of an **interim payment or the payment of the balance**, it will deduct them from the total eligible costs declared, for the action, in the periodic or final summary financial statement as set out in Articles 21.3 or 21.4 statement (see Articles 20.3 and 20.4). It will then calculate the interim payment or payment of the balance.

If the *Agency* — **after an interim payment but before the payment of the balance** — rejects costs declared in a periodic summary financial statement, it will deduct them from the total eligible costs declared, for the action, in the next periodic summary financial statement or in the final summary financial statement. It will then calculate the interim payment or payment of the balance as set out in Articles 21.3 or 21.4.

If the *Agency* rejects costs **after the payment of the balance**, it will deduct the amount rejected from the total eligible costs declared, by the beneficiary, in the final summary financial statement. It will then calculate the revised final grant amount as set out in Article 5.4.

## ARTICLE 43 — REDUCTION OF THE GRANT

### 43.1 Conditions

43.1.1 The *Agency* may — **at the payment of the balance or afterwards** — reduce the maximum grant amount (see Article 5.1), if the action has not been implemented properly as described in Annex 1 or another obligation under the Agreement has been breached.

43.1.2 The *Agency* may also reduce the maximum grant amount on the basis of the **extension of findings from other grants to this grant**, under the conditions set out in Article 22.5.2.

### 43.2 Amount to be reduced — Calculation — Procedure

The amount of the reduction will be proportionate to the improper implementation of the action or to the seriousness of the breach.

Before reduction of the grant, the *Agency* will formally notify a ‘**pre-information letter**’ to the coordinator or beneficiary concerned:

- informing it of its intention to reduce the grant, the amount it intends to reduce and the reasons why and
- inviting it to submit observations within 30 days of receiving notification

If the *Agency* does not receive any observations or decides to pursue reduction despite the observations it has received, it will formally notify **confirmation** of the reduction (if applicable, together with the notification of amounts due; see Article 21).

### 43.3 Effects

If the *Agency* reduces the grant at the time of **the payment of the balance**, it will calculate the reduced grant amount for the action and then determine the amount due as payment of the balance (see Articles 5.3.4 and 21.4).

If the *Agency* reduces the grant **after the payment of the balance**, it will calculate the revised final grant amount for the beneficiary concerned (see Article 5.4). If the revised final grant amount for the beneficiary concerned is lower than its share of the final grant amount, the *Agency* will recover the difference (see Article 44).

## ARTICLE 44 — RECOVERY OF UNDUE AMOUNTS

### 44.1 Amount to be recovered — Calculation — Procedure

The *Agency* will — after **termination of the participation of a beneficiary, at the payment of the balance or afterwards** — recover any amount that was paid but is not due under the Agreement.

Each beneficiary's financial responsibility in case of recovery is limited to its own debt, except for the amount retained for the Guarantee Fund (see Article 21.4).

#### 44.1.1 Recovery after termination of a beneficiary's participation

If recovery takes place after termination of a beneficiary's participation (including the coordinator), the *Agency* will recover the undue amount from the beneficiary concerned by formally notifying it a debit note (see Article 50.2 and 50.3). This note will specify the amount to be recovered, the terms and the date for payment.

If payment is not made by the date specified in the debit note, the *Agency* will **recover** the amount:

- (a) by '**offsetting**' it — without the beneficiary's consent — against any amounts owed to the beneficiary concerned by the *Commission or an executive agency (from the EU or Euratom budget)*.

In exceptional circumstances, to safeguard the *EU's* financial interests, the *Agency* may offset before the payment date specified in the debit note;

- (b) *not applicable, and/or*

- (c) by **taking legal action** or by **adopting an enforceable decision** under Article 299 of the Treaty on the Functioning of the EU (TFEU) (see Article 57).

If payment is not made by the date specified in the debit note, the amount to be recovered (see above) will be increased by **late-payment interest** at the rate set out in Article 21.11, from the day following the payment date in the debit note, up to and including the date the *Agency* receives full payment of the amount.

Partial payments will be first credited against expenses, charges and late-payment interest and then against the principal.

Bank charges incurred in the recovery process will be borne by the beneficiary, unless Directive 2007/64/EC<sup>27</sup> applies.

#### 44.1.2 Recovery at payment of the balance

If the payment of the balance takes the form of a recovery (see Article 21.4), the *Agency* will formally notify a ‘**pre-information letter**’ to the coordinator:

- informing it of its intention to recover, the amount due as the balance and the reasons why;
- specifying that it intends to deduct the amount to be recovered from the amount retained for the Guarantee Fund;
- requesting the coordinator to submit a report on the distribution of payments to the beneficiaries within 30 days of receiving notification, and
- inviting the coordinator to submit observations within 30 days of receiving notification.

If no observations are submitted or the *Agency* decides to pursue recovery despite the observations it has received, it will **confirm recovery** (together with the notification of amounts due; see Article 21.5) and:

- pay the difference between the amount to be recovered and the amount retained for the Guarantee Fund, **if the difference is positive** or
- formally notify to the coordinator a **debit note** for the difference between the amount to be recovered and the amount retained for the Guarantee Fund, **if the difference is negative**. This note will also specify the terms and the date for payment.

If the coordinator does not repay the *Agency* by the date in the debit note and has not submitted the report on the distribution of payments: the *Agency* will **recover** the amount set out in the debit note from the coordinator (see below).

If the coordinator does not repay the *Agency* by the date in the debit note, but has submitted the report on the distribution of payments: the *Agency* will:

- (a) identify the beneficiaries for which the amount calculated as follows is negative:

$\left\{ \left\{ \left\{ \text{beneficiary's costs declared in the final summary financial statement and approved by the } \right. \right. \right.$   
*Agency* multiplied by the reimbursement rate set out in Article 5.2 for the beneficiary concerned}

divided by

the EU contribution for the action calculated according to Article 5.3.1 }

multiplied by

the final grant amount (see Article 5.3)},

<sup>27</sup> Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the internal market amending Directives 97/7/EC, 2002/65/EC, 2005/60/EC and 2006/48/EC and repealing Directive 97/5/EC (OJ L 319, 05.12.2007, p. 1).



minus

{pre-financing and interim payments received by the beneficiary}}.

- (b) formally notify to each beneficiary identified according to point (a) a **debit note** specifying the terms and date for payment. The amount of the debit note is calculated as follows:

{ {amount calculated according to point (a) for the beneficiary concerned

divided by

the sum of the amounts calculated according to point (a) for all the beneficiaries identified according to point (a);

multiplied by

the amount set out in the debit note formally notified to the coordinator}.

If payment is not made by the date specified in the debit note, the *Agency* will **recover** the amount:

- (a) by **offsetting** it — without the beneficiary's consent — against any amounts owed to the beneficiary concerned by the *Commission or an executive agency (from the EU or Euratom budget)*.

In exceptional circumstances, to safeguard the the *EU's* financial interests, the *Agency* may offset before the payment date specified in the debit note;

- (b) by **drawing on the Guarantee Fund**. The *Agency* will formally notify the beneficiary concerned the debit note on behalf of the Guarantee Fund and recover the amount:

(i) *not applicable*,

(ii) by **taking legal action** or by **adopting an enforceable decision** under Article 299 of the Treaty on the Functioning of the EU (TFEU) (see Article 57).

If payment is not made by the date in the debit note, the amount to be recovered (see above) will be increased by **late-payment interest** at the rate set out in Article 21.11, from the day following the payment date in the debit note, up to and including the date the *Agency* receives full payment of the amount.

Partial payments will be first credited against expenses, charges and late-payment interest and then against the principal.

Bank charges incurred in the recovery process will be borne by the beneficiary, unless Directive 2007/64/EC applies.

#### 44.1.3 Recovery of amounts after payment of the balance

If, for a beneficiary, the revised final grant amount (see Article 5.4) is lower than its share of the final grant amount, it must repay the difference to the *Agency*.

The beneficiary's share of the final grant amount is calculated as follows:

{ {beneficiary's costs declared in the final summary financial statement and approved by the *Agency* multiplied by the reimbursement rate set out in Article 5.2 for the beneficiary concerned}

divided by

the EU contribution for the action calculated according to Article 5.3.1 }

multiplied by

the final grant amount (see Article 5.3) }.

If the coordinator has not distributed amounts received (see Article 21.7), the Commission will also recover these amounts.

The *Agency* will formally notify a **pre-information letter** to the beneficiary concerned:

- informing it of its intention to recover, the due amount and the reasons why and
- inviting it to submit observations within 30 days of receiving notification.

If no observations are submitted or the *Agency* decides to pursue recovery despite the observations it has received, it will **confirm** the amount to be recovered and formally notify to the beneficiary concerned a **debit note**. This note will also specify the terms and the date for payment.

If payment is not made by the date specified in the debit note, the *Agency* will **recover** the amount:

- (a) by **offsetting** it — without the beneficiary's consent — against any amounts owed to the beneficiary concerned by the *Commission or an executive agency (from the EU or Euratom budget)*.

In exceptional circumstances, to safeguard the *EU's* financial interests, the *Agency* may offset before the payment date specified in the debit note;

- (b) by **drawing on the Guarantee Fund**. The *Agency* will formally notify the beneficiary concerned the debit note on behalf of the Guarantee Fund and recover the amount:

(i) *not applicable*

(ii) by **taking legal action** or by **adopting an enforceable decision** under Article 299 of the Treaty on the Functioning of the EU (TFEU) (see Article 57).

If payment is not made by the date in the debit note, the amount to be recovered (see above) will be increased by **late-payment interest** at the rate set out in Article 21.11, from the day following the date for payment in the debit note, up to and including the date the *Agency* receives full payment of the amount.

Partial payments will be first credited against expenses, charges and late-payment interest and then against the principal.

Bank charges incurred in the recovery process will be borne by the beneficiary, unless Directive 2007/64/EC applies.

## ARTICLE 45 — ADMINISTRATIVE AND FINANCIAL PENALTIES

### 45.1 Conditions

Under Articles 109 and 131(4) of the Financial Regulation No 966/2012, the *Agency* may impose **administrative** and **financial penalties** if a beneficiary:

- (a) has committed substantial errors, irregularities or fraud or is in serious breach of its obligations under the Agreement or
- (b) has made false declarations about information required under the Agreement or for the submission of the proposal (or has not supplied such information).

Each beneficiary is responsible for paying the financial penalties imposed on it.

Under Article 109(3) of the Financial Regulation No 966/2012, the *Agency* may — under certain conditions and limits — publish decisions imposing administrative or financial penalties.

### 45.2 Duration — Amount of penalty — Calculation

**Administrative penalties** exclude the beneficiary from all contracts and grants financed from the EU or Euratom budget for a maximum of five years from the date the infringement is established by the *Agency*.

If the beneficiary commits another infringement within five years of the date the first infringement is established, the *Agency* may extend the exclusion period up to 10 years.

**Financial penalties** will be between 2% and 10% of the maximum EU contribution indicated, for the beneficiary concerned, in the estimated budget (see Annex 2).

If the beneficiary commits another infringement within five years of the date the first infringement is established, the *Agency* may increase the rate of financial penalties to between 4% and 20%.

### 45.3 Procedure

Before applying a penalty, the *Agency* will formally notify the beneficiary concerned:

- informing it of its intention to impose a penalty, its duration or amount and the reasons why and
- inviting it to submit observations within 30 days.

If the *Agency* does not receive any observations or decides to impose the penalty despite of observations it has received, it will formally notify **confirmation** of the penalty to the beneficiary concerned and — in case of financial penalties — deduct the penalty from the payment of the balance or formally notify a **debit note**, specifying the amount to be recovered, the terms and the date for payment.

If payment is not made by the date specified in the debit note, the *Agency* may **recover** the amount:

- (a) by **offsetting** it — without the beneficiary's consent — against any amounts owed to the beneficiary concerned by the *Commission or an executive agency (from the EU or Euratom budget)*.

In exceptional circumstances, to safeguard the *EU's* financial interests, the *Agency* may offset before the payment date specified in the debit note;

- (b) by **taking legal action** or by **adopting an enforceable decision** under Article 299 of the Treaty on the Functioning of the EU (TFEU) (see Article 57).

If payment is not made by the date in the debit note, the amount to be recovered (see above) will be increased by **late-payment interest** at the rate set out in Article 21.11, from the day following the payment date in the debit note, up to and including the date the *Agency* receives full payment of the amount.

Partial payments will be first credited against expenses, charges and late-payment interest and then against the principal.

Bank charges incurred in the recovery process will be borne by the beneficiary, unless Directive 2007/64/EC applies.

## **SECTION 2 LIABILITY FOR DAMAGES**

### **ARTICLE 46 — LIABILITY FOR DAMAGES**

#### **46.1 Liability of the *Agency***

The *Agency* cannot be held liable for any damage caused to the beneficiaries or to third parties as a consequence of implementing the Agreement, including for gross negligence.

The *Agency* cannot be held liable for any damage caused by any of the beneficiaries or third parties involved in the action, as a consequence on implementing the Agreement.

#### **46.2 Liability of the beneficiaries**

##### **46.2.1 Conditions**

Except in case of force majeure (see Article 51), the beneficiaries must compensate the *Agency* for any damage it sustains as a result of the implementation of the action or because the action was not implemented in full compliance with the Agreement.

Each beneficiary is responsible for paying the damages claimed from it.

##### **46.2.2 Amount of damages - Calculation**

The amount the *Agency* can claim from a beneficiary will correspond to the damage caused by that beneficiary.

##### **46.2.3 Procedure**

Before claiming damages, the *Agency* will formally notify the beneficiary concerned:

- informing it of its intention to claim damages, the amount and the reasons why and
- inviting it to submit observations within 30 days.

If the *Agency* does not receive any observations or decides to claim damages despite the observations it has received, it will formally notify **confirmation** of the claim for damages and a **debit note**, specifying the amount to be recovered, the terms and the date for payment.

If payment is not made by the date specified in the debit note, the *Agency* may **recover** the amount:

- (a) by **offsetting** it — without the beneficiary's consent — against any amounts owed to the beneficiary concerned by the *Commission or an executive agency (from the EU or Euratom budget)*.

In exceptional circumstances, to safeguard the *EU's* financial interests, the *Agency* may offset before the payment date specified in the debit note;

- (b) by **taking legal action** or by **adopting an enforceable decision** under Article 299 of the Treaty on the Functioning of the EU (TFEU) (see Article 57).

If payment is not made by the date in the debit note, the amount to be recovered (see above) will be increased by **late-payment interest** at the rate set out in Article 21.11, from the day following the payment date in the debit note, up to and including the date the *Agency* receives full payment of the amount.

Partial payments will be first credited against expenses, charges and late-payment interest and then against the principal.

Bank charges incurred in the recovery process will be borne by the beneficiary, unless Directive 2007/64/EC applies.

### **SECTION 3 SUSPENSION AND TERMINATION**

#### **ARTICLE 47 — SUSPENSION OF PAYMENT DEADLINE**

##### **47.1 Conditions**

The *Agency* may — at any moment — suspend the payment deadline (see Article 21.2 to 21.4) if a request for payment (see Article 20) cannot be approved because:

- (a) it does not comply with the provisions of the Agreement (see Article 20);
- (b) the technical reports or financial reports have not been submitted or are not complete or additional information is needed, or
- (c) there is doubt about the eligibility of the costs declared in the financial statements and additional checks, reviews, audits or investigations are necessary.

##### **47.2 Procedure**

The *Agency* will formally notify the coordinator of the suspension and the reasons why.

The suspension will **take effect** the day notification is sent by the *Agency* (see Article 52).

If the conditions for suspending the payment deadline are no longer met, the suspension will be **lifted** — and the remaining period will resume.

If the suspension exceeds two months, the coordinator may request the *Agency* if the suspension will continue.

If the payment deadline has been suspended due to the non-compliance of the technical or financial reports (see Article 20) and the revised report or statement is not submitted or was submitted but is also rejected, the *Agency* may also terminate the Agreement or the participation of the beneficiary (see Article 50.3.1(l)).

## ARTICLE 48 — SUSPENSION OF PAYMENTS

### 48.1 Conditions

The *Agency* may — at any moment — suspend, in whole or in part, the pre-financing payment and interim payments for one or more beneficiaries or the payment of the balance for all beneficiaries, if a beneficiary:

- (a) has committed or is suspected of having committed substantial errors, irregularities, fraud or serious breach of obligations in the award procedure or under this Agreement or
- (b) has committed — in other EU or Euratom grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (**extension of findings from other grants to this grant**; see Article 22.5.2).

### 48.2 Procedure

Before suspending payments, the *Agency* will formally notify the coordinator:

- informing it of its intention to suspend payments and the reasons why and
- inviting it to submit observations within 30 days of receiving notification.

If the *Agency* does not receive observations or decides to pursue the procedure despite the observations it has received, it will formally notify **confirmation** of the suspension. Otherwise, it will formally notify that the suspension procedure is not continued.

The suspension will **take effect** the day the confirmation notification is sent by the *Agency*.

If the conditions for resuming payments are met, the suspension will be **lifted**. The Commission will formally notify the coordinator.

During the suspension, the periodic report(s) (see Article 20.3) must not contain any individual financial statements from the beneficiary concerned. When the *Agency* resumes payments, the coordinator may include them in the next periodic report.

The beneficiaries may suspend implementation of the action (see Article 49.1) or terminate the Agreement or the participation of the beneficiary concerned (see Article 50.1 and 50.2).

## ARTICLE 49 — SUSPENSION OF THE ACTION IMPLEMENTATION

### 49.1 Suspension of the action implementation, by the beneficiaries

#### 49.1.1 Conditions

The beneficiaries may suspend implementation of the action or any part of it, if exceptional circumstances — in particular *force majeure* (see Article 51) — make implementation impossible or excessively difficult.

#### 49.1.2 Procedure

The coordinator must immediately formally notify to the *Agency* the suspension (see Article 52), stating:

- the reasons why and
- the expected date of resumption.

The suspension will **take effect** the day this notification is received by the *Agency*.

Once circumstances allow for implementation to resume, the coordinator must immediately formally notify the *Agency* and request an **amendment** of the Agreement to set the date on which the action will be resumed, extend the duration of the action and make other changes necessary to adapt the action to the new situation (see Article 55) — unless the Agreement or the participation of a beneficiary has been terminated (see Article 50).

The suspension will be **lifted** with effect from the resumption date set out in the amendment. This date may be before the date on which the amendment enters into force.

Costs incurred during suspension of the action implementation are not eligible (see Article 6).

### 49.2 Suspension of the action implementation, by the *Agency*

#### 49.2.1 Conditions

The *Agency* may suspend implementation of the action or any part of it:

- (a) if a beneficiary has committed or is suspected of having committed substantial errors, irregularities, fraud or serious breach of obligations in the award procedure or under this Agreement;
- (b) if a beneficiary has committed — in other EU or Euratom grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (**extension of findings from other grants to this grant**; see Article 22.5.2), or
- (c) if the action is suspected of having lost its scientific or technological relevance.

#### 49.2.2 Procedure

Before suspending implementation of the action, the *Agency* will formally notify the coordinator:

- informing it of its intention to suspend the implementation and the reasons why and
- inviting it to submit observations within 30 days of receiving notification.

If the *Agency* does not receive observations or decides to pursue the procedure despite the observations it has received, it will formally notify **confirmation** of the suspension. Otherwise, it will formally notify that the procedure is not continued.

The suspension will **take effect** five days after confirmation notification is received by the coordinator (or on a later date specified in the notification).

It will be **lifted** if the conditions for resuming implementation of the action are met.

The coordinator will be formally notified of the lifting and the Agreement will be **amended** to set the date on which the action will be resumed, extend the duration of the action and make other changes necessary to adapt the action to the new situation (see Article 55) — unless the Agreement has already been terminated (see Article 50).

The suspension will be lifted with effect from the resumption date set out in the amendment. This date may be before the date on which the amendment enters into force.

Costs incurred during suspension are not eligible (see Article 6).

The beneficiaries may not claim damages due to suspension by the *Agency* (see Article 46).

Suspension of the action implementation does not affect the *Agency's* right to terminate the Agreement or participation of a beneficiary (see Article 50), reduce the grant or recover amounts unduly paid (see Articles 43 and 44).

## **ARTICLE 50 — TERMINATION OF THE AGREEMENT OR OF PARTICIPATION FOR ONE OR MORE BENEFICIARIES**

### **50.1 Termination of the Agreement by the beneficiaries**

#### **50.1.1 Conditions and procedure**

The beneficiaries may terminate the Agreement.

The coordinator must formally notify termination to the *Agency* (see Article 52), stating:

- the reasons why and
- the date the termination will take effect. This date must be after the notification.

If no reasons are given or if the *Agency* considers the reasons do not justify termination, the Agreement will be considered to have been '**terminated improperly**'.

The termination will **take effect** on the day specified in the notification.

#### **50.1.2 Effects**

The coordinator must — within 60 days from when termination takes effect — submit:



- (i) a periodic report (for the open reporting period until termination; see Article 20.3) and
- (ii) the final report (see Article 20.4).

If the *Agency* does not receive the reports within the deadline (see above), only costs which are included in an approved periodic report will be taken into account.

The *Agency* will **calculate** the final grant amount (see Article 5.3) and the balance (see Article 21.4) on the basis of the reports submitted. Only costs incurred until termination are eligible (see Article 6). Costs relating to contracts due for execution only after termination are not eligible.

Improper termination may lead to a reduction of the grant (see Article 43).

After termination, the beneficiaries' obligations (in particular Articles 20, 22, 23, Section 3 of Chapter 4, 36, 37, 38 and 40) continue to apply.

## **50.2 Termination of participation for one or more beneficiaries, by the beneficiaries**

### **50.2.1 Conditions and procedure**

The participation of one or more beneficiaries may be terminated by the coordinator, on request of the beneficiary concerned or on behalf of the other beneficiaries.

The coordinator must formally notify termination to the *Agency* (see Article 52) and inform the beneficiary concerned.

If the coordinator's participation is terminated without its agreement, the formal notification must be done by another beneficiary (acting on behalf of the other beneficiaries).

The notification must include:

- the reasons why;
- the opinion of the beneficiary concerned (or proof that this opinion has been requested in writing);
- the date the termination takes effect. This date must be after the notification, and
- a request for amendment (see Article 55), with a proposal for reallocation of the tasks and the estimated budget of the beneficiary concerned (see Annexes 1 and 2) and, if necessary, the addition of one or more new beneficiaries (see Article 56). If termination takes effect after the period set out in Article 3, no request for amendment must be included unless the beneficiary concerned is the coordinator. In this case, the request for amendment must propose a new coordinator.

If this information is not given or if the *Agency* considers that the reasons do not justify termination, the participation will be considered to have been **terminated improperly**.

The termination will **take effect** on the day specified in the notification.

### **50.2.2 Effects**

The coordinator must — within 30 days from when termination takes effect — submit:

- (i) a report on the distribution of payments to the beneficiary concerned and
- (ii) if termination takes effect during the period set out in Article 3, a ‘**termination report**’ from the beneficiary concerned, for the open reporting period until termination, containing an overview of the progress of the work, an overview of the use of resources, the individual financial statement and, if applicable, the certificate on the financial statement (see Article 20.3 and 20.4).

The information in the termination report must also be included in the periodic report for the next reporting period (see Article 20.3).

If the request for amendment is rejected by the *Agency*, because it calls into question the decision awarding the grant or breaches the principle of equal treatment of applicants the Agreement may be terminated according to Article 50.3.1(c).

If the request for amendment is accepted by the *Agency*, the Agreement is **amended** to introduce the necessary changes (see Article 55).

The *Agency* will **calculate** — on the basis of the periodic reports, the termination report and the report on the distribution of payments — if the (pre-financing and interim) payments received by the beneficiary concerned exceed the beneficiary’s EU contribution (calculated by applying the reimbursement rate(s) to the eligible costs declared by the beneficiary and approved by the *Agency*). Only costs incurred by the beneficiary concerned until termination takes effect are eligible (see Article 6). Costs relating to contracts due for execution only after termination are not eligible.

- If the payments received **exceed the amounts due**:
  - if termination takes effect during the period set out in Article 3 and the request for amendment is accepted, the beneficiary concerned must repay to the coordinator the amount unduly received. The *Agency* will formally notify the amount unduly received and request the beneficiary concerned to repay it to the coordinator within 30 days of receiving notification. If it does not repay the coordinator, the *Agency* will draw upon the Guarantee Fund to pay the coordinator and then notify a **debit note** on behalf of the Guarantee Fund to the beneficiary concerned (see Article 44);
  - in all other cases (in particular if termination takes effect after the period set out in Article 3), the *Agency* will formally notify a **debit note** to the beneficiary concerned. If payment is not made by the date in the debit note, the Guarantee Fund will pay to the *Agency* the amount due and the *Agency* will notify a debit note on behalf of the Guarantee Fund to the beneficiary concerned (see Article 44);
  - if the beneficiary concerned is the former coordinator, it must repay the new coordinator according to the procedure above, unless:
    - termination is after an interim payment and
    - the former coordinator has not distributed amounts received as pre-financing or interim payments (see Article 21.7).

In this case, the *Agency* will formally notify a **debit note** to the former coordinator. If payment is not made by the date in the debit note, the Guarantee Fund will pay to the *Agency* the amount due. The *Agency* will then pay the new coordinator and notify a debit note on behalf of the Guarantee Fund to the former coordinator (see Article 44).

- If the payments received **do not exceed the amounts due**: amounts owed to the beneficiary concerned will be included in the next interim or final payment.

If the *Agency* does not receive the termination report within the deadline (see above), only costs included in an approved periodic report will be taken into account.

If the *Agency* does not receive the report on the distribution of payments within the deadline (see above), it will consider that:

- the coordinator did not distribute any payment to the beneficiary concerned and that
- the beneficiary concerned must not repay any amount to the coordinator.

Improper termination may lead to a reduction of the grant (see Article 43) or termination of the Agreement (see Article 50).

After termination, the concerned beneficiary's obligations (in particular Articles 20, 22, 23, Section 3 of Chapter 4, 36, 37, 38 and 40) continue to apply.

### **50.3 Termination of the Agreement or participation for one or more beneficiaries, by the *Agency***

#### **50.3.1 Conditions**

The *Agency* may terminate the Agreement or the participation of one or more beneficiaries, if:

- (a) one or more beneficiaries do not accede to the Agreement (see Article 56);
- (b) a change to their legal, financial, technical, organisational or ownership situation is likely to substantially affect or delay the implementation of the action or calls into question the decision to award the grant;
- (c) following termination of participation for one or more beneficiaries (see above), the necessary changes to the Agreement would call into question the decision awarding the grant or breach the principle of equal treatment of applicants (see Article 55);
- (d) implementation of the action is prevented by force majeure (see Article 51) or suspended by the coordinator (see Article 49.1) and either:
  - (i) resumption is impossible, or
  - (ii) the necessary changes to the Agreement would call into question the decision awarding the grant or breach the principle of equal treatment of applicants;

- (e) a beneficiary is declared bankrupt, being wound up, having its affairs administered by the courts, has entered into an arrangement with creditors, has suspended business activities, or is subject to any other similar proceedings or procedures under national law;
- (f) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has been found guilty of professional misconduct, proven by any means;
- (g) a beneficiary does not comply with the applicable national law on taxes and social security;
- (h) the action has lost scientific or technological relevance;
- (i) *not applicable*;
- (j) *not applicable*;
- (k) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed fraud, corruption, or is involved in a criminal organisation, money laundering or any other illegal activity affecting the *EU's* financial interests;
- (l) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has — in the award procedure or under the Agreement — committed:
  - (i) substantial errors, irregularities, fraud or
  - (ii) serious breach of obligations, including improper implementation of the action, submission of false information, failure to provide required information, breach of ethical principles;
- (m) a beneficiary has committed — in other EU or Euratom grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (**'extension of findings from other grants to this grant'**).

### 50.3.2 Procedure

Before terminating the Agreement or participation of one or more beneficiaries, the *Agency* will formally notify the coordinator:

- informing it of its intention to terminate and the reasons why and
- inviting it, within 30 days of receiving notification, to submit observations and — in case of Point (l.ii) above — to inform the *Agency* of the measures to ensure compliance with the obligations under the Agreement.

If the *Agency* does not receive observations or decides to pursue the procedure despite the observations it has received, it will formally notify to the coordinator **confirmation** of the termination and the date it will take effect. Otherwise, it will formally notify that the procedure is not continued.

The termination will **take effect**:

- for terminations under Points (b), (c), (e), (g), (h), (j), and (l.ii) above: on the day specified in the notification (see above);

- for terminations under Points (a), (d), (f), (i), (k), (l.i) and (m) above: on the day after notification is received by the coordinator.

### 50.3.3 Effects

#### (a) for **termination of the Agreement**:

The coordinator must — within 60 days from when termination takes effect — submit:

- (i) a periodic report (for the last open reporting period until termination; see Article 20.3) and
- (ii) a final report (see Article 20.4).

If the Agreement is terminated for breach of the obligation to submit the reports (see Articles 20.8 and 50.3.1(l)), the coordinator may not submit any reports after termination.

If the *Agency* does not receive the reports within the deadline (see above), only costs which are included in an approved periodic report will be taken into account.

The *Agency* will **calculate** the final grant amount (see Article 5.3) and the balance (see Article 21.4) on the basis of the reports submitted. Only costs incurred until termination takes effect are eligible (see Article 6). Costs relating to contracts due for execution only after termination are not eligible.

This does not affect the *Agency's* right to reduce the grant (see Article 43) or to impose administrative and financial penalties (Article 45).

The beneficiaries may not claim damages due to termination by the *Agency* (see Article 46).

After termination, the beneficiaries' obligations (in particular Articles 20, 22, 23, Section 3 of Chapter 4, 36, 37, 38 and 40) continue to apply.

#### (b) for **termination of the participation of one or more beneficiaries**:

The coordinator must — within 60 days from when termination takes effect — submit:

- (i) a report on the distribution of payments to the beneficiary concerned;
- (ii) a request for amendment (see Article 55), with a proposal for reallocation of the tasks and estimated budget of the beneficiary concerned (see Annexes 1 and 2) and, if necessary, the addition of one or more new beneficiaries (see Article 56). If termination is notified after the period set out in Article 3, no request for amendment must be submitted unless the beneficiary concerned is the coordinator. In this case the request for amendment must propose a new coordinator, and
- (iii) if termination takes effect during the period set out in Article 3, a **termination report** from the beneficiary concerned, for the open reporting period until termination, containing an overview of the progress of the work, an overview of the use of resources,

the individual financial statement and, if applicable, the certificate on the financial statement (see Article 20).

The information in the termination report must also be included in the periodic report for the next reporting period (see Article 20.3).

If the request for amendment is rejected by the *Agency* because it calls into question the decision awarding the grant or breaches the principle of equal treatment of applicants, the Agreement may be terminated according to Article 50.3.1(c).

If the request for amendment is accepted by the *Agency*, the Agreement is **amended** to introduce the necessary changes (see Article 55).

The *Agency* will **calculate** — on the basis of the periodic reports, the termination report and the report on the distribution of payments — if the (pre-financing and interim) payments received by the beneficiary concerned exceed the beneficiary's EU contribution (calculated by applying the reimbursement rate(s) to the eligible costs declared by the beneficiary and approved by the *Agency*). Only costs incurred by the beneficiary concerned until termination takes effect are eligible (see Article 6). Costs relating to contracts due for execution only after termination are not eligible.

- If the payments received **exceed the amounts due**:
  - if termination takes effect during the period set out in Article 3 and the request for amendment is accepted, the beneficiary concerned must repay to the coordinator the amount unduly received. The *Agency* will formally notify the amount unduly received and request the beneficiary concerned to repay it to the coordinator within 30 days of receiving notification. If it does not repay the coordinator, the *Agency* will draw upon the Guarantee Fund to pay the coordinator and then notify a debit note on behalf of the Guarantee Fund to the beneficiary concerned (see Article 44);
  - in all other cases, in particular if termination takes effect after the period set out in Article 3, the *Agency* will formally notify a **debit note** to the beneficiary concerned. If payment is not made by the date in the debit note, the Guarantee Fund will pay to the *Agency* the amount due and the *Agency* will notify a debit note on behalf of the Guarantee Fund to the beneficiary concerned (see Article 44);
  - if the beneficiary concerned is the former coordinator, it must repay the new coordinator the amount unduly received, unless:
    - termination takes effect after an interim payment and
    - the former coordinator has not distributed amounts received as pre-financing or interim payments (see Article 21.7)

In this case, the *Agency* will formally notify a **debit note** to the former coordinator. If payment is not made by the date in the debit note, the Guarantee Fund will pay to the *Agency* the amount due. The *Agency* will then pay the new coordinator and

notify a debit note on behalf of the Guarantee Fund to the former coordinator (see Article 44).

- If the payments received **do not exceed the amounts due**: amounts owed to the beneficiary concerned will be included in the next interim or final payment.

If the *Agency* does not receive the termination report within the deadline (see above), only costs included in an approved periodic report will be taken into account.

If the *Agency* does not receive the report on the distribution of payments within the deadline (see above), it will consider that:

- the coordinator did not distribute any payment to the beneficiary concerned, and that
- the beneficiary concerned must not repay any amount to the coordinator.

After termination, the concerned beneficiary's obligations (in particular Articles 20, 22, 23, Section 3 of Chapter 4, 36, 37, 38 and 40) continue to apply.

## **SECTION 4 FORCE MAJEURE**

### **ARTICLE 51 — FORCE MAJEURE**

#### **51.1 Force majeure**

'Force majeure' means any situation or event that:

- prevents either party from fulfilling their obligations under the Agreement,
- was unforeseeable, exceptional situation and beyond the parties' control,
- was not due to error or negligence on their part (or on the part of third parties involved in the action), and
- proves to be inevitable in spite of exercising all due diligence.

The following cannot be invoked as force majeure:

- any default of a service, defect in equipment or material or delays in making them available, unless they stem directly from a relevant case of force majeure,
- labour disputes or strikes, or
- financial difficulties.

Any situation constituting force majeure must be formally notified to the other party without delay, stating the nature, likely duration and foreseeable effects.

The parties must immediately take all the necessary steps to limit any damage due to force majeure and do their best to resume implementation of the action as soon as possible.

The party prevented by force majeure from fulfilling its obligations under the Agreement cannot be considered in breach of them.

## **CHAPTER 7 FINAL PROVISIONS**

### **ARTICLE 52 — COMMUNICATION BETWEEN THE PARTIES**

#### **52.1 Form and means of communication**

Communication under the Agreement (information, requests, submissions, ‘formal notifications’, etc.) must:

- be made in writing and
- bear the number of the Agreement.

**Until the payment of the balance:** all communication must be made through the electronic exchange system and using the forms and templates provided there.

**After the payment of the balance:** formal notifications must be made by registered post with proof of delivery (‘formal notification on paper’).

Communications in the electronic exchange system must be made by persons authorised according to the ‘Terms and Conditions of Use of the electronic exchange system’. For naming the authorised persons, each beneficiary must have designated to the *Agency* — before the signature of this Agreement — a ‘Legal Entity Appointed Representative (LEAR)’. The role and tasks of the LEAR are stipulated in his/her appointment letter (see Terms and Conditions of Use of the electronic exchange system).

If the electronic exchange system is temporarily unavailable, instructions will be given on the *Agency's* websites.

#### **52.2 Date of communication**

**Communications** are considered to have been made when they are sent by the sending party (i.e. on the date and time they are sent through the electronic exchange system).

**Formal notifications** through the **electronic** exchange system are considered to have been made when they are received by the receiving party (i.e. on the date and time of acceptance by the receiving party, as indicated by the time stamp). A formal notification that has not been accepted within 10 days after sending is considered to have been accepted.

Formal notifications **on paper** sent by **registered post** with proof of delivery (only after the payment of the balance) are considered to have been made on either:

- the delivery date registered by the postal service or
- the deadline for collection at the post office.

If the electronic exchange system is temporarily unavailable, the sending party cannot be considered in breach of its obligation to send a communication within a specified deadline.



### **52.3 Addresses for communication**

The **electronic** exchange system must be accessed via the following URL:

<https://ec.europa.eu/research/participants/portal/desktop/en/projects/>

The *Agency* will formally notify the coordinator and beneficiaries in advance any changes to this URL.

**Formal notifications on paper** (only after the payment of the balance) addressed **to the Agency** must be sent to the following address:

*Research Executive Agency (REA)  
Sustainable Resources for Food Security and Growth  
COV 2 - B2 Single Entry point  
B-1049 Brussels Belgium*

Formal notifications on paper (only after the payment of the balance) addressed **to the beneficiaries** must be sent to their legal address as specified in the Beneficiary Register (in the electronic exchange system).

## **ARTICLE 53 — INTERPRETATION OF THE AGREEMENT**

### **53.1 Precedence of the Terms and Conditions over the Annexes**

The provisions in the Terms and Conditions of the Agreement take precedence over its Annexes.

The provisions in Annex 2 take precedence over Annex 1.

### **53.2 Privileges and immunities**

*not applicable*

## **ARTICLE 54 — CALCULATION OF PERIODS, DATES AND DEADLINES**

In accordance with Regulation No 1182/71<sup>28</sup>, periods expressed in days, months or years are calculated from the moment the triggering event occurs.

The day during which that event occurs is not considered as falling within the period.

## **ARTICLE 55 — AMENDMENTS TO THE AGREEMENT**

### **55.1 Conditions**

The Agreement may be amended, unless the amendment entails changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

Amendments may be requested by any of the parties.

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<sup>28</sup> Regulation (EEC, Euratom) No 1182/71 of the Council of 3 June 1971 determining the rules applicable to periods, dates and time-limits (OJ L 124, 8.6.1971, p. 1).

## 55.2 Procedure

The party requesting an amendment must submit a request for amendment signed in the electronic exchange system (see Article 52).

The coordinator submits and receives requests for amendment on behalf of the beneficiaries (see Annex 3).

If a change of coordinator is requested without its agreement, the submission must be done by another beneficiary (acting on behalf of the other beneficiaries).

The request for amendment must include:

- the reasons why;
- the appropriate supporting documents;
- for a change of coordinator without its agreement: the opinion of the coordinator (or proof that this opinion has been requested in writing).

The *Agency* may request additional information.

If the party receiving the request agrees, it must sign the amendment in the electronic exchange system within 45 days of receiving notification (or any additional information the *Agency* has requested). If it does not agree, it must formally notify its disagreement within the same deadline. The deadline may be extended, if necessary for the assessment of the request. If no notification is received within the deadline, the request is considered to have been rejected.

An amendment **enters into force** on the day of the signature of the receiving party.

An amendment **takes effect** on the date agreed by the parties or, in the absence of such an agreement, on the date on which the amendment enters into force.

## ARTICLE 56 — ACCESSION TO THE AGREEMENT

### 56.1 Accession of the beneficiaries mentioned in the Preamble

The other beneficiaries must accede to the Agreement by signing the Accession Form (see Annex 3) in the electronic exchange system (see Article 52), within 30 days after its entry into force (see Article 58).

They will assume the rights and obligations under the Agreement with effect from the date of its entry into force (see Article 58).

If a beneficiary does not accede to the Agreement within the above deadline, the coordinator must — within 30 days — request an amendment to make any changes necessary to ensure proper implementation of the action. This does not affect the *Agency's* right to terminate the Agreement (see Article 50).

### 56.2 Addition of new beneficiaries

In justified cases, the beneficiaries may request the addition of a new beneficiary.

For this purpose, the coordinator must submit a request for amendment in accordance with Article 55. It must include an Accession Form (see Annex 3) signed by the new beneficiary in the electronic exchange system (see Article 52).

New beneficiaries must assume the rights and obligations under the Agreement with effect from the date of their accession specified in the Accession Form (see Annex 3).

## **ARTICLE 57 — APPLICABLE LAW AND SETTLEMENT OF DISPUTES**

### **57.1 Applicable law**

The Agreement is governed by the applicable EU law, supplemented if necessary by the law of Belgium.

### **57.2 Dispute settlement**

If a dispute concerning the interpretation, application or validity of the Agreement cannot be settled amicably, the General Court — or, on appeal, the Court of Justice of the European Union — has sole jurisdiction. Such actions must be brought under Article 272 of the Treaty on the Functioning of the EU (TFEU).

*As an exception, if such a dispute is between the Agency and MATIS OHF, SP/F SYNTESA, HASKOLI ISLANDS, KONTALI ANALYSE AS, NOFIMA AS, UNIVERSITETET I TROMSOE, TRUONG DAI HOC NHA TRANG, Memorial University of Newfoundland, the competent Belgian courts have sole jurisdiction.*

If a dispute concerns offsetting or an enforceable decision under Article 299 TFEU (see Articles 44, 45 and 46), the beneficiaries must bring action before the General Court — or, on appeal, the Court of Justice of the European Union — under Article 263 TFEU.

**ARTICLE 58 — ENTRY INTO FORCE OF THE AGREEMENT**

The Agreement will enter into force on the day of signature by the *Agency* or the coordinator, depending on which is later.

**SIGNATURES**

For the coordinator

For the *Agency*



**European Commission**

Research Executive Agency (REA)

Sustainable Resources for Food Security and Growth



**ANNEX 1 (part A)**

**Research and Innovation action**

**NUMBER — 635761 — PrimeFish**

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# 1.1. The project summary

Project Number <sup>1</sup>	635761	Project Acronym <sup>2</sup>	PrimeFish
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**One form per project**

**General information**

Project title <sup>3</sup>	Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets
Starting date <sup>4</sup>	The first day of the month after the signature by the Commission
Duration in months <sup>5</sup>	48
Call (part) identifier <sup>6</sup>	H2020-BG-2014-2
Topic	BG-10-2014 Consolidating the economic sustainability and competitiveness of European fisheries and aquaculture sectors to reap the potential of seafood markets
Fixed EC Keywords	Aquaculture economics, Certification of seafood products, Fisheries economics, Aquaculture marketing, Socio-economics (Fishery and aquaculture), Seafood markets
Free keywords	Competitiveness, economic performance, supply chain, supply & demand, decision support systems, consumer behaviour & preferences, market trends, labels & health claims, successful novel fish products

**Abstract <sup>7</sup>**

The overall aim of PrimeFish is to improve the economic sustainability of European fisheries and aquaculture sectors. PrimeFish will gather data from individual production companies, industry and sales organisations, consumers and public sources. The data will be related to the competitiveness and economic performance of companies in the sector; this includes data on price development, supply chain relations, markets, consumer behaviour and successful product innovation. The large industry reference group will facilitate access to data on specific case studies. A data repository will be created, and PrimeFish will join the H2020 Open Research Data Pilot to ensure future open access to the data. The effectiveness of demand stimulation through health, label and certification claims will be evaluated and compared with actual consumer behaviour. PrimeFish will assess the non-market value associated with aquaculture and captured fisheries as well as the effectiveness of regulatory systems and thereby provide the basis for improved societal decision making in the future. The collected data will be used to verify models and develop prediction algorithms that will be implemented into a computerized decision support system (PrimeDSS). The PrimeDSS, together with the underlying data, models, algorithms, assumptions and accompanying user instructions will form the PrimeFish Decision Support Framework (PrimeDSF). The lead users, typically fishermen, aquaculture producers and production companies, will be able to use the PrimeDSF to improve understanding of the functioning of their markets and in setting strategic plans for future production and innovation which in turn will strengthen the long term viability of the European fisheries and aquaculture sectors. This will also benefit consumers, leading to more diversified European seafood products, enhanced added value, novel products and improved information on origin, certification and health claims.

## 1.2. List of Beneficiaries

Project Number <sup>1</sup>	635761	Project Acronym <sup>2</sup>	PrimeFish
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### List of Beneficiaries

No	Name	Short name	Country	Project entry month <sup>8</sup>	Project exit month
1	MATIS OHF	MATIS	Iceland	1	48
2	AALBORG UNIVERSITET	UAib	Denmark	1	48
3	SP/F SYNTESA	SYN	Faroe Islands	1	48
4	INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE	INRA	France	1	48
5	UNIVERSITE DE SAVOIE	UNIV-SAVOIE	France	1	48
6	VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V.	TTZ	Germany	1	48
7	HASKOLI ISLANDS	UIce	Iceland	1	48
8	UNIVERSITA DEGLI STUDI DI PARMA	UNIPARMA	Italy	1	48
9	UNIVERSITA DEGLI STUDI DI PAVIA	UNIPV	Italy	1	48
10	KONTALI ANALYSE AS	Kontali	Norway	1	48
11	NOFIMA AS	NOFIMA	Norway	1	48
12	UNIVERSITETET I TROMSOE	UTro	Norway	1	48
13	CENTRO TECNOLOGICO DEL MAR - FUNDACION CETMAR	CETMAR	Spain	1	48
14	THE UNIVERSITY OF STIRLING	U STIRLING	United Kingdom	1	48
15	TRUONG DAI HOC NHA TRANG	NTU	Viet Nam	1	48
16	Memorial University of Newfoundland	MemU	Canada	1	48



## 1.3. Workplan Tables - Detailed implementation

### 1.3.1. WT1 List of work packages

WP Number <sup>9</sup>	WP Title	Lead beneficiary <sup>10</sup>	Person-months <sup>11</sup>	Start month <sup>12</sup>	End month <sup>13</sup>
WP1	Method selection, configuration and harmonisation	11 - NOFIMA	31.50	1	44
WP2	Economic performance and prices	10 - Kontali	67.40	2	44
WP3	Supply Chain Relations and regulation	14 - U STIRLING	102.40	2	44
WP4	Products, consumers and seafood market trends	5 - UNIV-SAVOIE	95.50	2	44
WP5	Development of robust simulation and prediction models	7 - UIce	54.50	6	46
WP6	Development of PrimeDSF	3 - SYN	58.00	6	46
WP7	Creating Shared Value	13 - CETMAR	76.30	1	48
WP8	Project Management	1 - MATIS	55.50	1	48
<b>Total</b>			541.10		

### 1.3.2. WT2 list of deliverables

Deliverable Number <sup>14</sup>	Deliverable Title	WP number <sup>9</sup>	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D1.1	Guidelines for data collection methods, data names and types, and granularity	WP1	11 - NOFIMA	Report	Public	6
D1.2	PrimeFish Data Management Plan	WP1	11 - NOFIMA	Report	Public	6
D1.3	Guidelines for data analysis methods with link to collected data types	WP1	11 - NOFIMA	Report	Public	12
D1.4	PrimeDSF methods compendium, including sample data, test runs, and comparative analysis	WP1	7 - UIce	Report	Public	36
D1.5	Scientific review paper “Methods for evaluating competitiveness in seafood sectors”	WP1	11 - NOFIMA	Report	Public	44
D1.6	Ethical Clearance	WP1	1 - MATIS	Report	Public	2
D2.1	Report on the development of prices & volumes in the European fishery & aquaculture market	WP2	10 - Kontali	Report	Public	12
D2.2	Report on the economic performance of selected European and Canadian fisheries	WP2	7 - UIce	Report	Public	18
D2.3	Report on the economic performance of selected European and Vietnamese farmed species	WP2	10 - Kontali	Report	Public	21
D2.4	Report on “boom and bust” cycles for selected European fisheries and aquaculture species	WP2	9 - UNIPV	Report	Public	24
D2.5	Manuscript to a peer-reviewed journal on “boom-and-bust” cycles in European seafood markets	WP2	8 - UNIPARMA	Report	Public	40

<b>Deliverable Number</b> <sup>14</sup>	<b>Deliverable Title</b>	<b>WP number</b> <sup>9</sup>	<b>Lead beneficiary</b>	<b>Type</b> <sup>15</sup>	<b>Dissemination level</b> <sup>16</sup>	<b>Due Date (in months)</b> <sup>17</sup>
D2.6	Manuscript to a peer-reviewed journal on the economic performance of European seafood producers	WP2	7 - UIce	Report	Public	44
D3.1	Report on description of value chains and input-output structure.	WP3	14 - U STIRLING	Report	Public	24
D3.2	Report on market institutional analysis and implications for competitiveness.	WP3	2 - UA1b	Report	Public	26
D3.3	Report on costs & benefits of compliance with voluntary market-based labelling & certification schemes.	WP3	14 - U STIRLING	Report	Public	30
D3.4	Report on evaluation of industry dynamics, opportunities and threats to industry.	WP3	14 - U STIRLING	Report	Public	34
D3.5	Report on population assessment and valuation of non-market effects of aquaculture and capture fisheries activities.	WP3	12 - UTro	Report	Public	36
D3.6	Manuscript to a peer-reviewed journal seafood industry dynamics and competitiveness	WP3	14 - U STIRLING	Report	Public	42
D3.7	Manuscript to a peer-reviewed journal on non-market values in fisheries and aquaculture	WP3	12 - UTro	Report	Public	44
D4.1	Industry study cases report: a collection of marketing successes and failures in the world based on clever product innovations and/or marketing activities	WP4	10 - Kontali	Report	Public	16
D4.2	Qualitative research report: analysis	WP4	1 - MATIS	Report	Public	20

<b>Deliverable Number</b> <sup>14</sup>	<b>Deliverable Title</b>	<b>WP number</b> <sup>9</sup>	<b>Lead beneficiary</b>	<b>Type</b> <sup>15</sup>	<b>Dissemination level</b> <sup>16</sup>	<b>Due Date (in months)</b> <sup>17</sup>
	interviews aimed mainly at identifying the main positive and negative drivers of fish/seafood consumption (for the chosen species)					
D4.3	Report on the development of fish consumption and demand in France and Finland	WP4	4 - INRA	Report	Public	24
D4.4	Report on the impacts of increased fish consumption on economic, health and environmental attributes	WP4	4 - INRA	Report	Public	26
D4.5	Report on frequencies of consumer purchases	WP4	7 - UIce	Report	Public	24
D4.6	Report on social awareness, attempts to stimulate fish consumption and negative press.	WP4	5 - UNIV-SAVOIE	Report	Public	30
D4.7	Choice modelling report on innovative features and the consumers' willingness to pay	WP4	8 - UNIPARMA	Report	Public	30
D4.8	Manuscript to a peer-reviewed journal on frequencies and consumer patterns	WP4	5 - UNIV-SAVOIE	Report	Public	42
D4.9	Manuscript to a peer-reviewed journal on the effects of health and environmental factors on fish consumption.	WP4	4 - INRA	Report	Public	44
D5.1	FACI	WP5	7 - UIce	Demonstrator	Confidential, only for members of the consortium (including the Commission Services)	30
D5.2	"Boom-and-bust" model	WP5	8 - UNIPARMA	Demonstrator	Confidential, only for members of the consortium	36

<b>Deliverable Number</b> <sup>14</sup>	<b>Deliverable Title</b>	<b>WP number</b> <sup>9</sup>	<b>Lead beneficiary</b>	<b>Type</b> <sup>15</sup>	<b>Dissemination level</b> <sup>16</sup>	<b>Due Date (in months)</b> <sup>17</sup>
					(including the Commission Services)	
D5.3	Strategic positioning model	WP5	1 - MATIS	Demonstrator	Confidential, only for members of the consortium (including the Commission Services)	40
D5.4	Demand analysis model	WP5	9 - UNIPV	Demonstrator	Confidential, only for members of the consortium (including the Commission Services)	36
D5.5	Innovation and price analysis	WP5	7 - UIce	Demonstrator	Confidential, only for members of the consortium (including the Commission Services)	36
D5.6	Scientific review paper	WP5	8 - UNIPARMA	Report	Public	46
D6.1	PrimeDSF (documentation)	WP6	3 - SYN	Report	Confidential, only for members of the consortium (including the Commission Services)	36
D6.2	Software specifications for the prototype PrimeDSS	WP6	11 - NOFIMA	Demonstrator	Confidential, only for members of the consortium (including the Commission Services)	24
D6.3	Prime DSS (software)	WP6	3 - SYN	Demonstrator	Confidential, only for members of the consortium (including the Commission Services)	40
D6.4	Evaluation of added value	WP6	14 - U STIRLING	Report	Public	44
D6.5	IPR strategy	WP6	3 - SYN	Report	Public	46
D7.1	PrimeFish Website	WP7	13 - CETMAR	Websites, patents filling, etc.	Public	1

<b>Deliverable Number</b> <sup>14</sup>	<b>Deliverable Title</b>	<b>WP number</b> <sup>9</sup>	<b>Lead beneficiary</b>	<b>Type</b> <sup>15</sup>	<b>Dissemination level</b> <sup>16</sup>	<b>Due Date (in months)</b> <sup>17</sup>
D7.2	Communication plan	WP7	13 - CETMAR	Report	Public	4
D7.3	Dissemination Annual Report I	WP7	13 - CETMAR	Report	Public	12
D7.4	Dissemination Annual Report II	WP7	13 - CETMAR	Report	Public	24
D7.5	Dissemination Annual Report III	WP7	13 - CETMAR	Report	Public	36
D7.6	Strategy for communication plan beyond project lifetime	WP7	6 - TTZ	Report	Public	45
D7.7	Training package: all material for training	WP7	6 - TTZ	Report	Public	46
D7.8	Creating Shared Value for the European Seafood Market	WP7	3 - SYN	Report	Public	47
D8.1	1st Annual summary report	WP8	1 - MATIS	Report	Confidential, only for members of the consortium (including the Commission Services)	14
D8.2	2nd Annual summary report	WP8	1 - MATIS	Report	Confidential, only for members of the consortium (including the Commission Services)	26
D8.3	3rd Annual summary report	WP8	1 - MATIS	Report	Confidential, only for members of the consortium (including the Commission Services)	38

### 1.3.3. WT3 Work package descriptions

<b>Work package number</b> <sup>9</sup>	WP1	<b>Lead beneficiary</b> <sup>10</sup>	11 - NOFIMA
<b>Work package title</b>	Method selection, configuration and harmonisation		
<b>Start month</b>	1	<b>End month</b>	44

#### Objectives

- To select, configure, extend and harmonise the use of the various methodologies involved in assessing the competitiveness of the aquaculture and fisheries sectors. This includes data collection methods and procedures, and data analysis methods.
- To develop and extend the methodology to analyse competitiveness in seafood sectors to cover specific species (fished and farmed) and for peer comparison by individual companies.
- To collect feedback from the respective method users; to evaluate the relevance, scope and suitability of the respective methods and to produce a comparative overview, both as part of the PrimeFish Decision Support Framework (PrimeDSF) and as a scientific publication in a peer-refereed journal
- To develop a Data Management Plan and connect PrimeFish to the H2020 Open Research Data Pilot.

#### Description of work and role of partners

**WP1 - Method selection, configuration and harmonisation** [Months: 1-44]  
**NOFIMA**, MATIS, SYN, INRA, UNIV-SAVOIE, UIce, UNIPARMA, UNIPV, Kontali, UTro, U STIRLING, NTU, MemU

In PrimeFish WP2, WP3 and WP4 a substantial amount of diverse data will be collected and analysed. WP1 selects, specifies, configures, harmonizes and where needed extends the various methods to be used in WP2-WP4. This is needed to ensure consistency, a uniform approach and comparable results. Harmonisation and some degree of standardisation is needed in the data collection phase of WP2-WP4 for the following reasons. Firstly, to ensure that necessary and sufficient data for the whole project and for all relevant analyses is collected for each case. Secondly, that the data is named and interpreted in the same way in each case. Thirdly, that the data has comparable level of detail / granularity. Fourthly, that the data is made available to the scientists in a uniform way. For similar reasons, harmonisation and some degree of standardisation is also needed for the analytical methods to be used in WP2-WP4 to ensure consistency of method selection and application.

Task 1.1: Selecting data collection sources and methods, developing specification for data repository. Lead: Nofima; contribution from MATIS, SYN, UIce, UNIV-SAVOIE Kontali and U STIRLING,  
 Data collection starts with identifying what type of data we need for our models and applications on a general level. The next step is to identify and classify potential data sources, both for aggregate data and for individual company data. In addition to publicly available data, PrimeFish has a large industry reference group who all have committed to delivering relevant data. For each data source the data extraction method must be identified; typically this is either standardised electronic communication (SQL queries, XML, other forms of Electronic Data Interchange (EDI)), electronic forms (spreadsheets), manual record search (reports of various types, including company annual reports), on-site observation and interviews, or similar. Harmonisation must be done on data element level, to ensure consistent naming, content and granularity of that which is collected; this is achieved by generating explicit meta-data descriptions where the structure and content of the data (field names, field types, keys and dependencies) is described in detail. Finally a specification of the PrimeFish data repository must be developed; to ensure that the collected data is available across WPs and partners in the project, and also (where relevant) after the project has finished. The data repository will be maintained and made available by Nofima for the duration of the project and also for a minimum of 3 years after the project has finished; Nofima is already maintaining other similar data repositories.

Task 1.2: Creating a Data Management Plan under the H2020 Open Research Data Pilot  
 Lead: Nofima; contribution from MATIS, SYN, UIce, UNIV-SAVOIE , Kontali and U STIRLING,  
 PrimeFish will participate in the H2020 Open Research Data Pilot, and this entails three requirements. Firstly, the collected research data should deposited in data repository; the details of this step is indicated above, Secondly, the project will have to take measures to enable third parties to access, mine, exploit, reproduce and disseminate this research data. Finally, a Data Management Plan (DMP) has to be developed detailing what kind of data the project is expected to generate, whether and how it will be exploited or made accessible for verification and reuse, and how it will be curated

and preserved. The two last steps are the main content of this task, and the DMP will outline the degree, means and timing of data access for third parties.

Task 1.3: Selecting, configuring and extending the data analysis methods.

Lead: Nofima; contribution from Kontali, INRA, UNIV-SAVOIE , UIce, UNIPARMA, UNIPV, UTro, U STIRLING, NTU and MemU.

Task 1.3.1 Selecting, configuring and extending methods relating to economic performance and prices. Lead: UPar. One of the main objectives of this project is to analyse competitiveness in various seafood sectors. The main methods used for this purpose are based on the World Economic Forum applied in their annual Global Competitiveness Reports (and also in the Fisheries Competitiveness Index). In addition we will employ stochastic and non-stochastic techniques to estimate and decompose productivity changes. For the analysis of the “boom and bust” cycles, PrimeFish will utilise a number of econometric methods, including the FSDA toolbox. While these methods are well known, they need to be configured to the task at hand, given the data available in the project.

Task 1.3.2 Selecting, configuring and extending methods relating to supply chain relationships.

Lead: U STIRLING.

In WP3 data will be collected from public and private sources as well as through interviews and surveys. Care must be taken to harmonise questionnaires, the way in which the interviews are conducted and surveys organised and the methods used for analysing the results. Whereas the supply chain has a special focus on the commercial aspects of the activities, mainly expressed by value added, a more holistic view of the marine sector must also take into account positive and/or negative non-market values. The methods used for these purposes can be divided into revealed preferences methods and stated preferences methods. The former methods utilize activity in the market to derive values for non-market effects and the latter rely on asking people directly to find such values.

Task 1.3.3 Selecting, configuring and extending methods relating to products, consumer preferences and market trends.

Lead: UNIV-SAVOIE. In WP4 micro-economic models will be used to analyse the responsiveness of consumer demand to changes in prices and income, and the effects increased fish consumption will have on health, environment and economic factors. The methods used must be harmonised across regions and species. The qualitative and quantitative studies undertaken to gather further knowledge on consumer preferences and behaviour consist of in-depth interviews and surveys. Care must be taken to harmonise questionnaires, the way in which the interviews are conducted and surveys organised and the methods used for analysing the results and to obtain ethical approvals for collection of personal data. The GNPD-Mintel database will be used in a comprehensive and systematic manner on successful and unsuccessful launches of innovative seafood products in European markets.

Task 1.4 Method testing, evaluation and comparison. Lead: UIce; contribution from SYN, UNIPARMA, UNIPAV, Kontal, Nofima, UTro, U STIRLING, NTU and MemU.

The actual data collection and the method application happen in WP2-WP5. WP1 is responsible for producing guidelines for consistent application of methods across the project, and also for collecting and collating usage reports from the different sectors, cases and method users. WP1 will conclude with respect to relevance and applicability of the various methods, highlight strengths and weaknesses, and provide recommendations for what methods to use under what circumstances. These conclusions and recommendations will be detailed in the methods compendium part of the PrimeDSF, and will also form basis for a scientific review paper in a peer refereed journal.

#### Participation per Partner

Partner number and short name	WP1 effort
1 - MATIS	1.00
3 - SYN	2.00
4 - INRA	1.00
5 - UNIV-SAVOIE	1.00
7 - UIce	2.10
8 - UNIPARMA	1.50
9 - UNIPV	2.00
10 - Kontali	2.00



Partner number and short name	WP1 effort
11 - NOFIMA	9.40
12 - UTro	1.50
14 - U STIRLING	4.00
15 - NTU	2.00
16 - MemU	2.00
<b>Total</b>	31.50

**List of deliverables**

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D1.1	Guidelines for data collection methods, data names and types, and granularity	11 - NOFIMA	Report	Public	6
D1.2	PrimeFish Data Management Plan	11 - NOFIMA	Report	Public	6
D1.3	Guidelines for data analysis methods with link to collected data types	11 - NOFIMA	Report	Public	12
D1.4	PrimeDSF methods compendium, including sample data, test runs, and comparative analysis	7 - UIce	Report	Public	36
D1.5	Scientific review paper “Methods for evaluating competitiveness in seafood sectors”	11 - NOFIMA	Report	Public	44
D1.6	Ethical Clearance	1 - MATIS	Report	Public	2

**Description of deliverables**

The WP will deliver guidelines on data collection and analysis, ethical approval for collection of personal data, data management plan, PrimeDSF method compendium and a scientific review paper.

D1.1 : Guidelines for data collection methods, data names and types, and granularity [6]  
 The deliverable is a report which will serve as guidelines for data collection methods data names and types, granularity for WPs 2, 3 and 4

D1.2 : PrimeFish Data Management Plan [6]  
 PrimeFish will participate in the H2020 Open Research Data Pilot, and this entails three requirements. Firstly, the collected research data should be deposited in data repository. Secondly, the project will have to take measures

to enable third parties to access, mine, exploit, reproduce and disseminate this research data. Finally, a Data Management Plan (DMP) has to be developed.

D1.3 : Guidelines for data analysis methods with link to collected data types [12]

Selecting, configuring and extending methods relating to economic performance and prices, to supply chain relationships and to products, consumer preferences and market trends.

D1.4 : PrimeDSF methods compendium, including sample data, test runs, and comparative analysis [36]

The actual data collection and the method application happen in WP2-WP5. WP1 is responsible for producing guidelines for consistent application of methods across the project, and also for collecting and collating usage reports from the different sectors, cases and method users.

D1.5 : Scientific review paper “Methods for evaluating competitiveness in seafood sectors” [44]

The conclusions and recommendations from Task 1.4 will be detailed in the methods compendium part of the PrimeDSF, and will also form basis for a scientific review paper in a peer refereed journal.

D1.6 : Ethical Clearance [2]

The deliverable is ethical clearance for the planned interviews and survey questionnaires

### Schedule of relevant Milestones

Milestone number <sup>18</sup>	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
MS1	Identification of the type of data needed and granularity	11 - NOFIMA	1	The milestone will be a workshop within the kick-up meeting. The means of verification will be the distribution of workshop minutes and conclusions.
MS4	Harmonised data collection methods; data collection starts	11 - NOFIMA	2	The milestone marks the completion of data harmonisation and start of data collection. Means of verification: Workshop minutes and conclusions distributed
MS6	Interview and survey questionnaire for use in WP 2, WP3 and WP4 harmonised and completed	1 - MATIS	6	Protocol produced and distributed to relevant partners
MS7	Framework for FACI identified	7 - UIce	6	Protocol produced and distributed to relevant partners.
MS8	Harmonised data analysis methods available; data analysis starts	11 - NOFIMA	6	Workshop minutes and conclusions distributed

<b>Work package number</b> <sup>9</sup>	WP2	<b>Lead beneficiary</b> <sup>10</sup>	10 - Kontali
<b>Work package title</b>	Economic performance and prices		
<b>Start month</b>	2	<b>End month</b>	44

**Objectives**

The overall objective of WP2 is to analyse the economic performance of primary producers in the European fisheries and aquaculture sectors and analyse the historical development of prices and quantities especially focussing on the “boom-and-bust” cycles observed in these sectors. The specific objectives are to:

- Compare the economic performance of selected European pelagic (herring) fisheries.
- Compare the economic performance of selected European demersal (cod) fisheries to the performance of the Eastern Canadian demersal (cod) fisheries.
- Compare the economic performance of selected species farmed in Europe (sea bass/sea bream, salmon and freshwater trout) to pangasius farmed in Vietnam.
- Study the behaviour of seafood prices in general and the development of market prices for the selected species, cod, herring, salmon, trout, sea bass/ sea bream as well as shell fish, focusing especially on the factors characterising the observed “boom and bust” cycles.

**Description of work and role of partners**

**WP2 - Economic performance and prices** [Months: 2-44]  
**Kontali, UAlb, SYN, TTZ, UIce, UNIPARMA, UNIPV, NOFIMA, CETMAR, U STIRLING, NTU, MemU**  
 WP2 will focus on the economic performance of primary production units (capture fisheries and aquaculture) using sector and firm level data. The sectoral analysis will be undertaken using microeconomic models which make it possible to decompose changes in productivity into technical change and scale effects. The firm level analysis will be undertaken using both parametric and non-parametric methods. The former refers to stochastic frontier models that take into account the multi-input and multi-output nature of the production process of capture fisheries and aquaculture. The latter refers to data envelopment analysis (DEA) which is also widely used for analysing complex processes. Both models make it possible to decompose changes in productivity into changes in the efficiency of individual production units, technical change and scale effects using the Malmquist decomposition. Further decomposition may also be possible depending on the nature and quality of the data at hand.

The historical analysis of the development of prices and quantities will be undertaken using time-series analysis and other appropriate econometric techniques, including the Matlab toolbox FSDA. Special attention will be paid to investigate the effects macro-economic factors have had on boom-and-bust cycles and price transmission and market integration.

Task 2.1 Economic performance of selected individual sectors Lead partner: Kontali; contribution from UAlb, SYN, TTZ, UIce, UNIPARMA, UNIPV, NOFIMA, CETMAR, U STIRLING, NTU and MemU.

Using the methodology outlined above, the development of productivity in selected capture fisheries sectors and farmed species will be analysed and decomposed. This analysis will throw light on the productivity differences between European producers and their competitors in Canada (cod) and Vietnam (pangasius), as well as between individual European producers, and the factors that affect productivity development. In addition to this, in-depth interviews will be conducted with key players with the aim to analyse in more detail important elements that may shape productivity development and the potential for growth. These include factors such as variation in fishery fleet characteristics (technological and others), aquaculture site availability, biological qualities as related e.g to broodstock, juveniles and fish feed.

Task 2.1.1 Demersal (cod) fisheries. Lead: UIce. Production sector data from Iceland, Norway, Spain and the UK will be used to study the productivity of the industrial demersal (cod) fisheries in those countries and compare that to the performance of the corresponding fisheries in Eastern Canada.

Task 2.1.2 North Atlantic pelagics (herring). Lead: UAlb. Production sector data from Denmark, Iceland, the Faroe Islands, Norway, Germany and the UK will be used to study the productivity of the pelagic (herring) fleets in those countries.

Task 2.1.3 Freshwater trout. Lead: UNIPV. Production sector data from Italy, Spain, UK and Denmark such as Accounts Statistics for Aquaculture from Danmark Statitisk will be studied in particular. Also, the ongoing dumping complains towards the Turkish trout producers, will provide accessible insight with respect to the competition with imported seafood goods.

Task 2.1.4 Atlantic salmon. Lead: Kontali. Production sector as well as company specific Kontali in-house data, open sources and data from specific data sampling from Faroe Islands, Scotland and Norway will be studied in particular.

Task 2.1.5 Sea-bass and Sea-bream. Lead: Kontali. Production sector, Kontali in-house data and company specific data from Greece, Italy and Spain will be studied in particular and compared with that of sea-bass and sea-bream sectors from Turkey and farmed Pangasius from Vietnam.

Task 2.2 European seafood market. Lead: Kontali; contribution from UA1b, UIce, UPARMA, UNIPV and U STIRLING. Using data obtained from public sources (governmental bodies, Eurostat, EUMOFA, FEAP, GlobeFish/FAO etc.), and in-house data from Kontali, the history of and the current European seafood market in general both for the fisheries and aquaculture sectors (prices and volume) will be described and analysed.

Task 2.3 Identifying and characterising “boom and bust” cycles. Lead partner: UNIPARMA with contribution UIce, UNIPV, Kontali, NTU and MemU.

Task 2.3.1. “Boom and bust” cycles. Lead: UNIPARMA. Based on the same data outlined earlier (Task 2.1) together with supplementary both quantitative and qualitative data about and directly from, individual European companies, industry associations and sales organizations (IRG) and public sources (e.g. Eurostat and Trademap), the occurrence and critical factors for “boom and bust” cycles will be described. Also, factors potentially protecting against such cycles will be studied. The latter will among others be investigated through studies of sectors having moved more or less away from a history of such cycles i.e. through a comparative study of the Mediterranean bass & bream and the Norwegian Atlantic salmon sector. Further boom and bust cycles within the European pelagic (herring) sector will be studied in detail. Also, the occurrence and patterns for boom and bust within external competitors’ i.e. Canadian cod and pangasius farmed in Vietnam will be investigated.

Task 2.3.2 Impact of macro-economic effects on “boom-and-bust” cycles. Lead: NTU. Various macro-economic factors, such as household income, market prices, production volume, tariff and non-tariff barriers and exchange rates, can affect the occurrence and development of boom-and-bust cycles. In this task, general pattern of the market development and price behaviour will be described and advanced econometric models such as demand system models and discrete choice demand models will be applied to investigate the market mechanism and the evolution of the boom- and- bust cycles.

Task 2.3.3 Price transmission and market integration. Lead: UNIPV. Price co-integration analysis will be employed to analyse price transmission and market integration between species, among markets and along the value chains (i.e., between farming and processing sectors).

The results of Task 2.3 will be used as main input materials to develop simulation models in WP5.

#### Participation per Partner

Partner number and short name	WP2 effort
2 - UA1b	8.00
3 - SYN	3.40
6 - TTZ	3.00
7 - UIce	6.00
8 - UNIPARMA	6.00
9 - UNIPV	5.00
10 - Kontali	9.00
11 - NOFIMA	2.00
13 - CETMAR	5.00
14 - U STIRLING	3.00
15 - NTU	10.00
16 - MemU	7.00
<b>Total</b>	<b>67.40</b>

List of deliverables

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D2.1	Report on the development of prices & volumes in the European fishery & aquaculture market	10 - Kontali	Report	Public	12
D2.2	Report on the economic performance of selected European and Canadian fisheries	7 - UIce	Report	Public	18
D2.3	Report on the economic performance of selected European and Vietnamese farmed species	10 - Kontali	Report	Public	21
D2.4	Report on “boom and bust” cycles for selected European fisheries and aquaculture species	9 - UNIPV	Report	Public	24
D2.5	Manuscript to a peer-reviewed journal on “boom-and-bust” cycles in European seafood markets	8 - UNIPARMA	Report	Public	40
D2.6	Manuscript to a peer-reviewed journal on the economic performance of European seafood producers	7 - UIce	Report	Public	44

Description of deliverables

The WP will deliver reports that will cover: • the development of prices and volumes for fish, shell fish and aquaculture products in Europe • the performance of selected European and Canadian fisheries • economic performance of selected European and Vietnamese farmed species • “boom and bust” cycles for selected European fisheries and farmed species The WP will also deliver manuscripts for scientific journals on "boom and bust" cycles in European seafood markets and on the economic performance of selected European seafood producers

D2.1 : Report on the development of prices & volumes in the European fishery & aquaculture market [12]

Using data obtained from public sources and in-house data from Kontali, the history of and the current European seafood market in general both for the fisheries and aquaculture sectors (prices and volume) will be described and analysed.

D2.2 : Report on the economic performance of selected European and Canadian fisheries [18]

Using the methodology outlined in WP2 under description of work, the development of productivity in selected capture fisheries sectors and farmed species will be analysed and decomposed. This analysis will throw light on the productivity differences between European producers and their competitors in Canada

D2.3 : Report on the economic performance of selected European and Vietnamese farmed species [21]

Using the methodology outlined in WP2 under description of work, the development of productivity in selected capture fisheries sectors and farmed species will be analysed and decomposed. This analysis will throw light on the productivity differences between European producers and their competitors in Vietnam (pangasius)

D2.4 : Report on “boom and bust” cycles for selected European fisheries and aquaculture species [24]

Occurrence and critical factors for “boom and bust” cycles will be described. Also, factors will be studied that potentially protect against such cycles.

D2.5 : Manuscript to a peer-reviewed journal on “boom-and-bust” cycles in European seafood markets [40]

A manuscript to a peer-reviewed journal on “boom-and-bust” cycles in European seafood markets will be delivered based on the results from task 2.3

D2.6 : Manuscript to a peer-reviewed journal on the economic performance of European seafood producers [44]

A manuscript will be delivered to a peer-reviewed journal on the economic performance of European seafood producers based on results from tasks 2.1 and 2.2.

#### Schedule of relevant Milestones

Milestone number <sup>18</sup>	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
MS4	Harmonised data collection methods; data collection starts	11 - NOFIMA	2	The milestone marks the completion of data harmonisation and start of data collection. Means of verification: Workshop minutes and conclusions distributed
MS6	Interview and survey questionnaire for use in WP 2, WP3 and WP4 harmonised and completed	1 - MATIS	6	Protocol produced and distributed to relevant partners
MS8	Harmonised data analysis methods available; data analysis starts	11 - NOFIMA	6	Workshop minutes and conclusions distributed
MS14	Data for boom and bust price cycles collected	8 - UNIPARMA	14	Boom and bust data available for analysis
MS16	Analysis of economic performance of selected European and Canadian fisheries completed	7 - UIce	18	Distribution of report on analysis of economic performance of selected European and Canadian fisheries.
MS17	Analysis of economic performance of selected European and Vietnamese	10 - Kontali	21	Distribution of report on analysis of economic performance of selected European and Vietnamese aquaculture species

**Schedule of relevant Milestones**

<b>Milestone number <sup>18</sup></b>	<b>Milestone title</b>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b>	<b>Means of verification</b>
	aquaculture species completed			
MS18	Analysis of “boom and bust” price cycles in European seafood markets completed	8 - UNIPARMA	24	Distribution of report on analysis of “boom and bust” price cycles in European seafood markets

<b>Work package number</b> <sup>9</sup>	WP3	<b>Lead beneficiary</b> <sup>10</sup>	14 - U STIRLING
<b>Work package title</b>	Supply Chain Relations and regulation		
<b>Start month</b>	2	<b>End month</b>	44

### Objectives

The overall goal of WP3 is to characterise seafood supply chain relations and their input-output structure and drivers of strategic decision making by lead actors. The specific objectives are to:

- Describe the configuration of global value chains (GVCs) for the five selected species
- Assess the impact of regulatory systems on the chosen value chains
- Assess current use and potential of market-based labelling and certification schemes
- Evaluate industry dynamics influencing the competitiveness of the European seafood industry
- Assessment and valuation of non-market effects of aquaculture and capture fisheries

### Description of work and role of partners

#### **WP3 - Supply Chain Relations and regulation** [Months: 2-44]

**U STIRLING**, MATIS, UA1b, SYN, UNIV-SAVOIE, TTZ, UIce, Kontali, NOFIMA, UTro, CETMAR, NTU, MemU

WP3 will focus on the main material flow in the supply chain (input-output structure) for the five chosen species based on publicly available data, including European catch/production as well as import and export to and from the EU. Results will form the sample frame/design for the subsequent micro level mapping of different product categories of the chosen species for key market segments (niche and commodity, local, European/international). The mapping will cover catch and harvesting as well as value-addition through the various stages of processing, distribution, retail and food-service marketing channels. Case studies will be used to highlight impacts of mandatory and market-based regulatory regimes along with governance and power-relations within the supply chain on risks, costs and rewards to participants. Using key informant interviews and systematic survey methods, primary data - qualitative and quantitative - will be collected from individual production companies, producers' organisations and sales organisations. Special attention will be paid to the effects of different management systems. Non-market effects (aka externalities) are non-intentional impacts of economic activity.

Negative examples include the spread of salmon lice and escapees from salmon farms threatening wild stocks as well as water pollution & benthic impacts. Conversely, aquaculture and capture fisheries may have a positive influence on employment, income generation and public services in remote, rural areas where alternatives are otherwise scarce. Non-market effects are not captured and regulated by the market but may have significant influence on social welfare. They will be assessed and valued using revealed and stated (monetary) preference methods. To reflect broader societal attitudes primary data will be collected from a diverse range of primary and secondary stakeholders associated with the specified value-chains.

Task 3.1 Value chain analysis. Lead U STIRLING; contribution from MATIS, SYN, UIce, Kontali, NOFIMA, CETMAR, NTU and MemU.

Description of value chain for species/country systems from point-of-production to sale covering channel intermediaries to major European consumer markets (supply, processing distribution). Analysis of major European markets using in-depth interviews with key channel actors spanning the chain and interest groups for selected seafood products, based on a strategic sample of regional European markets incorporating key consumer and institutional configurations. Assessment of market dynamics i.e. form dominance of processing, wholesale and retail outlets, concentration and capitalization of the industry at various nodes. The input-output structures assessed for specified value-chains.

Task 3.2 Market institutional analysis. Lead: UA1b; contribution from Syn, TTZ, UIce, NOFIMA, CETMAR.

Review of formal governance, policy structures, laws and regulatory systems (inc. the EU IUU regulation, the CFP discard ban, food safety and quality legislation), taxes, duties etc. in operation at national and international level (EU and selected European non-EU member states) governing trade of fish species and products there-off. Evaluation of informal institutions; organisation structure, traditions culture and market path dependency. Coverage of current and prospective policy on trade-agreements. Review of secondary data/ producer surveys to assess how different institutional configurations impact on producers, processors, channel intermediaries and retailers operating at different economic scales. Incorporating analysis of benefit shares and profitability along GVCs; examination of risks involved, overt and



hidden entry barriers for certain types of producers and capacities, knowledge and skills required to engage in the specified GVCs. Non-market attributes for T3.5 will also be identified in this task.

Task 3.3 Labelling and certification schemes. Lead: U STIRLING; contribution from MATIS, TTZ, NOFIMA, CETMAR, NTU and MemU.

This task will assess the current use and potential of voluntary market-based labelling & certification schemes for different channel actors. It will also examine interactions, cost/ benefits and areas of overlap between mandatory and major voluntary certification and recommendation schemes (e.g. MSC, GlobalGAP, ASC, BAP, SFP, Greenpeace red-list), and identify harmonization mechanisms/ equivalence criteria for voluntary and mandatory schemes (e.g. Global Sustainable Seafood Initiative (GSSI)) with the aim of reducing costs to producers and improving overall compliance. Outcomes will be referenced/ compared with the assessment of consumer attitudes toward certification schemes outlined in WP4 (Task 4.2).

Task 3.4 Industry dynamics, opportunities and threats. Lead: U STIRLING; contribution from MATIS, SYN, UIce, NOFIMA, NTU and MemU.

This task will analyse market dynamics i.e. form dominance of processing, wholesale and retail outlets, concentration and capitalization of the industry at various nodes. Assess barriers to entry, the structure of demands and rewards for quality and logistics for actors at different levels. Including horizontal effects such as clustering of allied production and processing operations as 'hotspots'; evaluation of formal/ informal linkages (e.g. knowledge & innovation, labour skills, technology, shared production and value chains), developmental stage (existing, emerging, potential), market failures (e.g. externalities, imperfect competition, transaction costs, agency problems, land and water rights i.e. excludability and transferability). Secondary review and in-depth interviews with key channel actors spanning the chain and respective interest groups.

Task 3.5 Assessment and valuation of non-market effects of aquaculture and capture fisheries. Lead: UTro; contribution from UNIV-SAVOIE, UIce, U STIRLING, NTU and MemU.

Using a combination of revealed and stated preference methods to monetize the most important effects, values will be derived for key non-market effects of two of the selected species, farmed salmon and (wild) cod. A discrete choice experiment (DCE, a stated preferences method) will be done to compare attitudes in an urban area without fisheries/ aquaculture activities and a remote area with such activity in selected countries. This survey will be coordinated with the consumer survey in WP4, which applies a similar methodology to assess consumer preferences.

#### Participation per Partner

Partner number and short name	WP3 effort
1 - MATIS	10.00
2 - UAlb	5.00
3 - SYN	7.00
5 - UNIV-SAVOIE	2.00
6 - TTZ	4.00
7 - UIce	6.00
10 - Kontali	5.00
11 - NOFIMA	6.00
12 - UTro	10.40
13 - CETMAR	8.00
14 - U STIRLING	19.00
15 - NTU	12.00
16 - MemU	8.00
<b>Total</b>	<b>102.40</b>

List of deliverables

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D3.1	Report on description of value chains and input-output structure.	14 - U STIRLING	Report	Public	24
D3.2	Report on market institutional analysis and implications for competitiveness.	2 - UA1b	Report	Public	26
D3.3	Report on costs & benefits of compliance with voluntary market-based labelling & certification schemes.	14 - U STIRLING	Report	Public	30
D3.4	Report on evaluation of industry dynamics, opportunities and threats to industry.	14 - U STIRLING	Report	Public	34
D3.5	Report on population assessment and valuation of non-market effects of aquaculture and capture fisheries activities.	12 - UTro	Report	Public	36
D3.6	Manuscript to a peer-reviewed journal seafood industry dynamics and competitiveness	14 - U STIRLING	Report	Public	42
D3.7	Manuscript to a peer-reviewed journal on non-market values in fisheries and aquaculture	12 - UTro	Report	Public	44

Description of deliverables

WP 3 will deliver reports on: • value chains and input-output structure • costs & benefits of compliance with voluntary market-based labelling & certification schemes. • evaluation of industry dynamics, opportunities and threats to industry • population assessment and valuation of non-market effects of aquaculture and capture fisheries activities  
The WP will also deliver 2 manuscripts for peer-reviewed journals on seafood industry dynamics and competitiveness and on non-market values in fisheries and aquaculture

D3.1 : Report on description of value chains and input-output structure. [24]

Description of value chain for species/country systems from point-of-production to sale covering channel intermediaries to major European consumer markets (supply, processing distribution)

D3.2 : Report on market institutional analysis and implications for competitiveness. [26]

Review of formal governance, policy structures, laws and regulatory systems (inc. the EU IUU regulation, the CFP discard ban, food safety and quality legislation), taxes, duties etc. in operation at national and international level (EU and selected European non-EU member states) governing trade of fish species and products there-off. Evaluation of informal institutions; organisation structure, traditions culture and market path dependency

D3.3 : Report on costs & benefits of compliance with voluntary market-based labelling & certification schemes. [30]

This deliverable will address the current use and potential of voluntary market-based labelling & certification schemes for different channel actors. It will also examine interactions, cost/ benefits and areas of overlap between mandatory and major voluntary certification and recommendation schemes (e.g. MSC, GlobalGAP, ASC, BAP, SFP, Greenpeace red-list), and identify harmonization mechanisms/ equivalence criteria for voluntary and mandatory schemes (e.g. Global Sustainable Seafood Initiative (GSSI)) with the aim of reducing costs to producers and improving overall compliance

D3.4 : Report on evaluation of industry dynamics, opportunities and threats to industry. [34]

The deliverable will be a report on market dynamics i.e. form dominance of processing, wholesale and retail outlets, concentration and capitalization of the industry at various nodes. Assess barriers to entry, the structure of demands and rewards for quality and logistics for actors at different levels

D3.5 : Report on population assessment and valuation of non-market effects of aquaculture and capture fisheries activities. [36]

This deliverable will be a report on results from using a combination of revealed and stated preference methods to monetize the most important effects, values will be derived for key non-market effects of two of the selected species, farmed salmon and (wild) cod. A discrete choice experiment (DCE, a stated preferences method) will be carried out in selected countries to compare attitudes in an urban area without fisheries/ aquaculture activities and a remote area with such an activity

D3.6 : Manuscript to a peer-reviewed journal seafood industry dynamics and competitiveness [42]

A manuscript will be delivered to a peer-reviewed journal on seafood industry dynamics and competitiveness as part of the results from task 3.4

D3.7 : Manuscript to a peer-reviewed journal on non-market values in fisheries and aquaculture [44]

A manuscript will be delivered to a peer-reviewed journal on non-market values in fisheries and aquaculture based on the results from task 3.5

#### Schedule of relevant Milestones

Milestone number <sup>18</sup>	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
MS4	Harmonised data collection methods; data collection starts	11 - NOFIMA	2	The milestone marks the completion of data harmonisation and start of data collection. Means of verification: Workshop minutes and conclusions distributed
MS6	Interview and survey questionnaire for use in WP 2, WP3 and WP4 harmonised and completed	1 - MATIS	6	Protocol produced and distributed to relevant partners
MS8	Harmonised data analysis methods	11 - NOFIMA	6	Workshop minutes and conclusions distributed

Schedule of relevant Milestones

Milestone number <sup>18</sup>	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
	available; data analysis starts			
MS9	Framework for characterisation of informal market institutions developed	2 - UA1b	8	Framework for characterisation of informal market institutions produced and distributed to relevant partners
MS10	In-depth industry dynamics survey tool developed and piloted	14 - U STIRLING	10	In-depth industry dynamics survey tool developed, piloted and distributed to relevant partners
MS19	Analysis of value chains and input-output structure completed	14 - U STIRLING	24	Distribution of report on Analysis of value chains and input-output structure
MS20	Data collection for non-market value study completed	12 - UTro	24	Data collection completed
MS25	Market institutional analysis completed	14 - U STIRLING	26	Distribution of report on analysis of economic performance of selected European and Vietnamese aquaculture species
MS27	Analysis of compliance costs and benefits completed	12 - UTro	30	Distribution of report on analysis of compliance costs and benefits
MS32	Evaluation of industry dynamics and opportunities completed	5 - UNIV-SAVOIE	34	Distribution of report on "Evaluation of industry dynamics and opportunities"
MS34	Compiling and quantification of non-market values completed	12 - UTro	36	Distribution of report on "Compiling and quantification of non-market values"

<b>Work package number</b> <sup>9</sup>	WP4	<b>Lead beneficiary</b> <sup>10</sup>	5 - UNIV-SAVOIE
<b>Work package title</b>	Products, consumers and seafood market trends		
<b>Start month</b>	2	<b>End month</b>	44

**Objectives**

- To analyse the impact of consumer behaviour, market trends, innovation and product development in the seafood market.
- To identify the recent trends in the fish/seafood consuming motivations and patterns in the main markets of Europe, using on one hand full range consumer studies and on the other, case studies of farmed and capture fish (salmon, trout, seabass, seabream, herring and cod).

**Description of work and role of partners**

**WP4 - Products, consumers and seafood market trends** [Months: 2-44]  
**UNIV-SAVOIE**, MATIS, INRA, TTZ, UIce, UNIPARMA, UNIPV, Kontali, NOFIMA, CETMAR , U STIRLING, NTU, MemU

WP4 will analyse the impact of consumer behaviour, market trends, innovation and product development in the seafood market. Work undertaken will be carried out in close co-operation with industry partners (IRG) and other key stakeholders. As a first step, micro-economic tools will be used to analyse how factors such as income, own prices and prices of substitute goods affect the demand for the chosen species. For this purpose, complete and/or partial systems of demand will be estimated. Results will highlight fish consumption within the consumers' diets, depending on country and types of consumers and will be used to simulate the effects of various price policies. In a second stage, past and current consumer preference trends will be analysed and the acceptability of fish products examined by looking at consumption in local, niche and global markets. The specific area of demand stimulation or manipulation through health, label and certification claims on one hand and negative press reports on the other hand will be analysed quantitatively where possible and compared with consumer acceptability of products using Conjoint Analysis. Finally, a database of successes and failures in product development and consumer behaviour will be used as a background material for trend research, yielding insights into product innovation and which product characteristics best fit consumers' preferences. The question of fish/seafood consumption patterns and drivers will be analysed in main European markets in which qualitative and quantitative studies will be performed, including a choice modelling experiment. Results will highlight fish/seafood consumption within the consumers' diets, depending on country, region, and types of consumers and will be used to simulate the effects of various marketing policies. Past and especially current consumer preference trends will be analysed and the acceptability of fish products examined by looking at consumption in local, niche and global markets.

Task 4.1. Industry study cases. Lead: Kontali; contribution from MATIS, INRA, TTZ, UNIPARMA, UNIPV, NOFIMA, CETMAR, U STIRLING, NTU and MemU.

A database of European successes and failures in innovative product development and consumer behaviour will be created, as a background material for trend research, yielding insights into product innovation and which product characteristics would best fit consumers' preferences. Using GNPD-Mintel database, which records all the food innovations launched in European countries, the main characteristics of seafood innovations during the last few years will be identified. Additionally in-house data from Kontali and interviews with key players from the IRG will be used to identify main characteristics of successful launches. This analysis will give important insights about the innovative strategies used in this sector regarding new packaging, new recipes, new ingredients, new claims and labels. By matching the database with purchases and consumption databases information on failures and successes in innovative product development will be obtained. The results will assist with the design of surveys in task 4.2.

Task 4.2. Qualitative studies. Lead: MATIS; contribution from UNIV-SAVOIE, TTZ, UIce, UNIPV, NOFIMA, CETMAR and U STIRLING.

Qualitative studies will be used to identify positive or negative motives, perceptions, associations, attitudes towards fish/seafood consumption (with a focus on the chosen species: salmon, trout, seabass/seabream, herring and cod). The study and questionnaire design will be led by MATIS in close cooperation with the other partners. 30 individual in-depth interviews will be conducted and reported by the RTD partner in each of the countries evaluated, or a total of 150 cases, including consumers and non-consumers. The results will be compiled within D4.2 by MATIS. The results of

task 4.2 will be used as an input for the design of the quantitative study conducted within Task 4.3 and choice modelling within Task 4.4

Task 4.3. Quantitative studies. Lead: UNIV-SAVOIE; contribution MATIS, INRA, TTZ, UIce, UNIPV, CETMAR & U STIRLING.

Micro-economic models will be used for example to analyse how factors such as income, own prices and prices of substitute goods affect the demand for the chosen species. For this purpose, complete and/or partial systems of demand will be estimated.

Task 4.3.1 Household purchases in Finland and France. Lead: INRA. This study will be based on households' purchase data using France and Finland as an example. The goal will be to characterize the evolution of fish consumption over the last years and to analyse the fish demand in these two countries. By estimating full and partial systems of demand, we will get direct and cross price elasticities which will give useful insights on product substitutions prioritized by consumers within the diet (e.g. meat versus fish consumption) and within the fish category (processed versus non-processed fish; substitutions between fish species; organic versus conventional etc). This analysis will be related to households' characteristics (size, income, education etc) that will inform on the socio-demographic characteristics of the fish demand. Micro-economic models will be used to analyse how factors such as income, own prices and prices of substitute goods affect the demand for the chosen species.

Task 4.3.2 Impacts of increased fish consumption. Lead: INRA. This study will focus on elasticities estimates and test the impacts of recommendations on increased fish consumption. Using nutritional (benefits related to fish consumption) and environmental data (e.g. carbon foot print), we will calculate the economic, health and environmental impacts of such a consumption increase taking into account the substitutions induced within the diet, and between fish species.

Task 4.3.3 Frequency of purchases. Lead: UIce. This study estimates demands system in terms of the frequencies of purchases rather than in terms of quantities, budget shares or expenditures. It is thus possible to analyse in more detail if and how often consumers buy certain seafood products such as those covered in our case studies.

Task 4.3.4 Demand stimulation/manipulation and negative press. Lead: UNIV-SAVOIE. Quantitative surveys are efficient for learning about the consumption behaviours and diet patterns, and about the purchasing intentions according to different scenarios. This study will analyse, quantitatively where possible, the specific area of demand stimulation or manipulation through health, label and certification claims on one hand and negative press reports on the other hand and compare the results with consumer acceptability of products. 800 representative responses per country studied (UK, Germany, France, Italy and Spain) will be gathered for a total sample of 4,000 questionnaires. Online panels would be used via local services providers for data collection.

Task 4.4. Choice modelling. Lead: UNIPARMA; contribution from MATIS, TTZ, UNIV-SAVOIE, UNIPV, CETMAR, U STIRLING & NTU

Choice modeling techniques are multi-attribute valuation techniques that elicit values for multiple attributes by asking respondents to rate, rank or choose a set of attributes (levels). In particular, choice experiments are valuation techniques where respondents have to make trade-offs and indicate their preferred option out of a set of alternatives. We will develop a choice-based on-line experiment, on a number of 500 respondents per country. The profile attributes and levels to be analysed are derived from previous tasks (i.e., qualitative analysis by in-person interviews and survey), and will include product innovation features such as labels, health claims, etc. The willingness to pay (WTP) associated with each attribute will also be estimated.

**Participation per Partner**

Partner number and short name	WP4 effort
1 - MATIS	7.00
4 - INRA	12.50
5 - UNIV-SAVOIE	26.00
6 - TTZ	7.00
7 - UIce	9.00
8 - UNIPARMA	7.00
9 - UNIPV	7.00
10 - Kontali	3.50

Partner number and short name	WP4 effort
11 - NOFIMA	1.50
13 - CETMAR	5.00
14 - U STIRLING	5.00
15 - NTU	4.00
16 - MemU	1.00
<b>Total</b>	95.50

List of deliverables

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D4.1	Industry study cases report: a collection of marketing successes and failures in the world based on clever product innovations and/or marketing activities	10 - Kontali	Report	Public	16
D4.2	Qualitative research report: analysis interviews aimed mainly at identifying the main positive and negative drivers of fish/seafood consumption (for the chosen species)	1 - MATIS	Report	Public	20
D4.3	Report on the development of fish consumption and demand in France and Finland	4 - INRA	Report	Public	24
D4.4	Report on the impacts of increased fish consumption on economic, health and environmental attributes	4 - INRA	Report	Public	26
D4.5	Report on frequencies of consumer purchases	7 - UIce	Report	Public	24

List of deliverables

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D4.6	Report on social awareness, attempts to stimulate fish consumption and negative press.	5 - UNIV-SAVOIE	Report	Public	30
D4.7	Choice modelling report on innovative features and the consumers' willingness to pay	8 - UNIPARMA	Report	Public	30
D4.8	Manuscript to a peer-reviewed journal on frequencies and consumer patterns	5 - UNIV-SAVOIE	Report	Public	42
D4.9	Manuscript to a peer-reviewed journal on the effects of health and environmental factors on fish consumption.	4 - INRA	Report	Public	44

Description of deliverables

WP3 will deliver reports covering: • marketing successes and failures in the world of fisheries and aquaculture based on clever product innovations and/or marketing activities • the main positive and negative drivers of fish/seafood consumption • fish consumption and demand in France and Finland • impacts of increased fish consumption on economic, health and environmental attributes • frequencies of consumer purchases • social awareness, attempts to stimulate fish consumption and negative press. • innovative features and consumers' willingness to pay The WP will also deliver manuscripts for peer-reviewed journals on the effects of health and environmental factors on fish consumption and on frequencies and consumer patterns.

D4.1 : Industry study cases report: a collection of marketing successes and failures in the world based on clever product innovations and/or marketing activities [16]

A database of European successes and failures in innovative product development and consumer behaviour will be created, yielding insights into product innovation and which product characteristics best fit consumers' preferences. Using GNPD-Mintel database, which records all the food innovations launched in European countries, the main characteristics of seafood innovations during the last few years will be identified. Additionally in-house data from Kontali and interviews with key players from the IRG will be used to identify main characteristics of successful launches.

D4.2 : Qualitative research report: analysis interviews aimed mainly at identifying the main positive and negative drivers of fish/seafood consumption (for the chosen species) [20]

A report on qualitative studies of identification of positive or negative motives, perceptions, associations, attitudes towards fish/seafood consumption (with a focus on the chosen species: salmon, trout, seabass/seabream, herring and cod). The study and questionnaire design will be led by MATIS in close cooperation with the other partners.

D4.3 : Report on the development of fish consumption and demand in France and Finland [24]

Report from the study in task 4.3.1 that will be based on households' purchase data using France and Finland as an example. The goal will be to characterize the evolution of fish consumption over the last years and to analyse the fish demand in these two countries.



- D4.4 : Report on the impacts of increased fish consumption on economic, health and environmental attributes [26]  
 A report based on a study that focuses on elasticities estimates and tests the impacts of recommendations on increased fish consumption. Using nutritional (benefits related to fish consumption) and environmental data (e.g. carbon foot print), we will calculate the economic, health and environmental impacts of such a consumption increase taking into account the substitutions induced within the diet, and between fish species.
- D4.5 : Report on frequencies of consumer purchases [24]  
 A report from a study that estimates demands system in terms of the frequencies of purchases rather than in terms of quantities, budget shares or expenditures. It is thus possible to analyse in more detail if and how often consumers buy certain seafood products such as those covered in our case studies.
- D4.6 : Report on social awareness, attempts to stimulate fish consumption and negative press. [30]  
 Result from a study that will analyse, quantitatively where possible, the specific area of demand stimulation or manipulation through health, label and certification claims on one hand and negative press reports on the other hand and compare the results with consumer acceptability of products
- D4.7 : Choice modelling report on innovative features and the consumers' willingness to pay [30]  
 Report on choice modeling techniques, multi-attribute valuation techniques, that elicit values for multiple attributes by asking respondents to rate, rank or choose a set of attributes (levels). In particular, choice experiments are valuation techniques where respondents have to make trade-offs and indicate their preferred option out of a set of alternatives.
- D4.8 : Manuscript to a peer-reviewed journal on frequencies and consumer patterns [42]  
 A manuscript to a peer-reviewed journal on frequencies and consumer patterns
- D4.9 : Manuscript to a peer-reviewed journal on the effects of health and environmental factors on fish consumption. [44]  
 Manuscript to a peer-reviewed journal on the effects of health and environmental factors on fish consumption.

**Schedule of relevant Milestones**

Milestone number <sup>18</sup>	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
MS4	Harmonised data collection methods; data collection starts	11 - NOFIMA	2	The milestone marks the completion of data harmonisation and start of data collection. Means of verification: Workshop minutes and conclusions distributed
MS5	Framework for characterisation of success on seafood markets	10 - Kontali	4	Framework for the characterisation of success on seafood markets established. Means of verifications as minutes and conclusions from Workshop
MS6	Interview and survey questionnaire for use in WP 2, WP3 and WP4 harmonised and completed	1 - MATIS	6	Protocol produced and distributed to relevant partners
MS8	Harmonised data analysis methods	11 - NOFIMA	6	Workshop minutes and conclusions distributed

**Schedule of relevant Milestones**

<b>Milestone number <sup>18</sup></b>	<b>Milestone title</b>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b>	<b>Means of verification</b>
	available; data analysis starts			
MS15	Analysis of markets success and failures in the seafood market completed	10 - Kontali	16	Distribution of report on analysis of markets success and failures in the seafood market.
MS21	Data collection from consumers' surveys/ interviews completed	4 - INRA	24	Interviews & surveys completed
MS26	Analysis on consumer preferences completed	4 - INRA	26	Distribution of report on Analysis on consumer preferences
MS28	Analysis on social awareness, attempts to stimulate fish consumption and negative press completed	5 - UNIV-SAVOIE	30	Distribution of report on Analysis on social awareness, attempts to stimulate fish consumption and negative press
MS29	Analysis of innovative features and the consumers' willingness to pay completed	8 - UNIPARMA	30	Distribution of report analysis of innovative features and the consumers' willingness to pay

<b>Work package number</b> <sup>9</sup>	WP5	<b>Lead beneficiary</b> <sup>10</sup>	7 - UIce
<b>Work package title</b>	Development of robust simulation and prediction models		
<b>Start month</b>	6	<b>End month</b>	46

**Objectives**

- To apply the Fisheries and Aquaculture Competitive Index (FACI)
- To develop simulation and prediction models
- To develop value-chain positioning models
- To analyse the likelihood of launching successfully innovative seafood products
- To evaluate seafood consumers’ willingness to pay for new products

**Description of work and role of partners**

**WP5 - Development of robust simulation and prediction models** [Months: 6-46]  
**UIce, MATIS, SYN, UNIV-SAVOIE, UNIPARMA, UNIPV, Kontali, NOFIMA, U STIRLING, NTU, MemU**  
 This WP builds heavily on work carried out in WP2, WP3 and WP4, as well as on the expanded Fisheries and Aquaculture Competitiveness Index (FACI) designed in WP1.  
 The spatial and time series data to be analysed in PrimeFish is likely to be affected by multiple outliers, multiple populations, leverage points, non-normality and areas of high concentration; making standard statistical models, which assume the presence of normality and a single population, inappropriate. A main objective of this WP is the application of robust statistical models which take into account the specific characteristics of fishery data. This will be achieved by use of various econometric and statistical methods, including the procedures already available in the MatLab toolbox FSDA.

Task 5.1 Development of Fisheries and Aquaculture Competitiveness Index (FACI). Lead: UIce; contribution from SYN, UNIPARMA, UNIPV, Kontali, NOFIMA, NTU and MemU.  
 The Fisheries Competitiveness Index will be extended to also cover aquaculture by taking aboard some of the results from tasks carried out in WP2, WP3 and WP4. The new index, the Fisheries and Aquaculture Competitiveness Index (FACI), will then be applied to the case studies analysed in PrimeFish. The index can be used to compare the fisheries and aquaculture industries between European countries and between Europe and the rest of the world, and gauge the competitiveness of individual companies and sectors. The index will be implemented into PrimeDSS in WP6.

Task 5.2 “Boom and bust” analysis. Lead: UNIPARMA contribution from UIce, UNIPV, Kontali, NTU and MemU.  
 This task will analyse in more detail some of the cycles identified in Task 2.3. Using the FSDA toolbox, simulation and prediction models will be compiled that can be used 1) to predict price behaviour and give early-warning signals of a potential “boom and bust” cycle 2) to highlight the eventual presence of dumping phenomena and or other infringements that affect the market competitiveness of the European fisheries and aquaculture sectors. As this task will generate new knowledge and insights into the economic sustainability and competitiveness of the sectors it will be especially important for helping companies avoid bankruptcies. The new robust models will be integrated into PrimeDSS in WP6.

Task 5.3 Strategic positioning model. Lead: MATIS; contribution from SYN, UIce, UNIPARMA, UNIPV, NOFIMA, U STIRLING, NTU and MemU.  
 Using results obtained from WP3, this task will consist of analysing strategically where in the value-chain companies chose to position themselves and how changes in their environment can affect this choice. If necessary, in-depth interviews will also be conducted with key personnel. The model will then be tested on value-chains that have not been analysed in WP3. The model will be implemented into PrimeDSS in WP6.

Task 5.4 Success analysis model. Lead: UNIPV; contributions from SYN, UNI-SAVOIE, UIce, UNIPARMA, NOFIMA, NTU, and MemU.  
 Building on the demand and consumer analysis conducted in WP4, this task will consist of compiling robust model to analyse the likelihood that new seafood products launched will be successful. A “what if” analysis will be carried out in order to explore the outcome under different scenarios. The model will be implemented into PrimeDSS in WP6.

Task 5.5 Innovation and price analysis model. Lead: UIce; contributions form UNIPARMA, UNIPV, Kontali, NTU and MemU.

Building on the demand and consumer analysis conducted in WP4, this task will consist of compiling models to analyse the willingness-to-pay of consumers, and consequently the price that producers may charge in different markets. This will be done by analysing in depth the relationship between the various product attributes and price. The models will be implemented into PrimeDSS in WP6.

**Participation per Partner**

Partner number and short name	WP5 effort
1 - MATIS	2.00
3 - SYN	5.00
5 - UNIV-SAVOIE	2.00
7 - UIce	14.00
8 - UNIPARMA	9.00
9 - UNIPV	9.50
10 - Kontali	2.00
11 - NOFIMA	3.00
14 - U STIRLING	2.00
15 - NTU	4.00
16 - MemU	2.00
<b>Total</b>	<b>54.50</b>

**List of deliverables**

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D5.1	FACI	7 - UIce	Demonstrator	Confidential, only for members of the consortium (including the Commission Services)	30
D5.2	“Boom-and-bust” model	8 - UNIPARMA	Demonstrator	Confidential, only for members of the consortium (including the Commission Services)	36
D5.3	Strategic positioning model	1 - MATIS	Demonstrator	Confidential, only for members of the consortium (including the Commission Services)	40
D5.4	Demand analysis model	9 - UNIPV	Demonstrator	Confidential, only for members of the consortium	36

**List of deliverables**

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
				(including the Commission Services)	
D5.5	Innovation and price analysis	7 - UIce	Demonstrator	Confidential, only for members of the consortium (including the Commission Services)	36
D5.6	Scientific review paper	8 - UNIPARMA	Report	Public	46

**Description of deliverables**

This WP will have deliverables on: The fisheries and aquaculture index and models for “boom and bust”, strategic positioning, demand analysis and innovation and price analysis. Additionally one deliverable as a paper for a peer-reviewed scientific journal.

**D5.1 : FACI [30]**

The Fisheries Competitiveness Index (FCI) will be extended to also cover aquaculture by taking aboard some of the results from other WPs. The new index, the Fisheries and Aquaculture Competitiveness Index (FACI), will then be applied to the case studies analysed in PrimeFish.

**D5.2 : “Boom-and-bust” model [36]**

Using the FSDA toolbox, simulation and prediction models will be compiled that can be used to predict price behaviour and give early-warning signals of a potential “boom and bust” cycle and to highlight the eventual presence of dumping phenomena and or other infringements that affect the market competitiveness of the European fisheries and aquaculture sectors.

**D5.3 : Strategic positioning model [40]**

The deliverable will be a model based on analysing strategically where in the value-chain companies choose to position themselves and how changes in their environment can affect this choice.

**D5.4 : Demand analysis model [36]**

Building on the demand and consumer analysis conducted in WP4, this task will consist of compiling robust model to analyse the likelihood that new seafood products launched will be successful. A “what if” analysis will be carried out in order to explore the outcome under different scenarios.

**D5.5 : Innovation and price analysis [36]**

Building on the demand and consumer analysis conducted in WP4, this task will consist of compiling models to analyse the willingness-to-pay of consumers, and consequently the price that producers may charge in different markets. This will be done by analysing in depth the relationship between the various product attributes and price

**D5.6 : Scientific review paper [46]**

A scientific review paper on “Early warning signs for “boom and bust” cycles”

**Schedule of relevant Milestones**

Milestone number <sup>18</sup>	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
MS30	Compilation of fisheries and aquaculture	7 - UIce	30	Compilation of fisheries and aquaculture competitiveness index

**Schedule of relevant Milestones**

<b>Milestone number <sup>18</sup></b>	<b>Milestone title</b>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b>	<b>Means of verification</b>
	competitiveness index completed			produced and distributed to relevant partners
MS38	Construction of prediction and simulation tools completed	7 - UIce	40	Construction of prediction and simulation tools/ models completed and ready

<b>Work package number</b> <sup>9</sup>	WP6	<b>Lead beneficiary</b> <sup>10</sup>	3 - SYN
<b>Work package title</b>	Development of PrimeDSF		
<b>Start month</b>	6	<b>End month</b>	46

**Objectives**

The overall objective of WP6 is to develop, test and adapt an innovative decision support framework (PrimeDSF), based on and containing economic models and a decision support system (PrimeDSS) that can be used by the industry and policymakers to better predict consequences based on existing knowledge and simulation / forecasting models. The specific objectives are:

- Describe and define formats for aggregate and detailed data from selected case studies for the PrimeDSF.
- Develop the PrimeDSF as a container for the main durable outputs of the PrimeFish project.
- Specify, develop and test the PrimeDSS as an operational web based software tool with key user groups.
- Evaluate and refine based on relevant indicators for the added value of the toolbox.
- Prepare PrimeDSF and PrimeDSS for utilisation beyond project PrimeFish.

**Description of work and role of partners**

**WP6 - Development of PrimeDSF** [Months: 6-46]  
**SYN, MATIS, UA1b, UNIV-SAVOIE, TTZ, UIce, UNIPARMA, UNIPV, Kontali, NOFIMA, UTro, CETMAR, U STIRLING, NTU, MemU**

In WP6 a Decision Support Framework (PrimeDSF) is developed which contains the models from WP5 as well as method descriptions, assumptions and guidelines from WP1. PrimeDSF is thus the container for the main durable outputs generated in the project. Specific performance indicators for the added value of the toolbox will be defined and monitored throughout the project.

Task 6.1. Ongoing development and collection to the PrimeDSF. Lead: SYN; contributions from MATIS, UNIV-SAVOIE, UIce, Kontali, NOFIMA, CETMAR and U STIRLING.  
 The PrimeDSF is the container for the main durable outputs of this project, and in addition to the PrimeDSS it contains the models underlying the tool, as well as method descriptions, assumptions, guidelines, recommendations and other relevant knowledge generated in the project.

Task 6.2. Specify the PrimeDSS. Lead: SYN; contributions from MATIS, UNIV-SAVOIE, UIce, Kontali, NOFIMA, CETMAR and U STIRLING.  
 PrimeDSS is specified on the basis of the FACI and the statistical simulation and prediction models compiled in WP5. The product is to be used by fishermen, aquaculture producers, processing companies, market analysts, public authorities and other stakeholders to understand and predict seafood market behaviour. The users will be able to upload their own data or data sets into the software in order to benchmark their own operations and/or conduct a “what if” scenario analysis. Data uploaded will become a part of the permanent data bank of PrimeDSS and thus be available for later users.

Task 6.3. Develop and test the PrimeDSS in cooperation with key user groups. Lead: SYN with contributions from MATIS, UA1b, SYN, UNIV-SAVOIE, UIce, UNIPARMA, UNIPV, Kontali, NOFIMA, CETMAR and U STIRLING.  
 The PrimeDSS will be developed according to the specification in Task 6.2. It will be an inter-active, user friendly web-based tool which will enable tests and comparisons of multiple scenarios with a focus on the impact of human activities in terms of stakeholders’ interest variables. Easy to understand infographics will display differences between scenario outcomes and provide a combined result. PrimeDSS will be developed in close cooperation with the IRG. The system will be validated in WP7 and iterated a number of times to ensure (a) its focus and (b) the added value it generates.

Task 6.4. Evaluation of added value. Lead: U STIRLING with contributions from MATIS, UIce, UNIPARMA, UNIPV, NOFIMA, UTro, CETMAR, NTU and MemU  
 This task will develop key value performance indicators for added value of the PrimeDSS in order to monitor and evaluate the toolbox. Building on the co-creation process in WP7 and the information from the case study an impact assessment on socio-economic and innovation will be conducted with respect to the effects on the competitive advantages for the 5 cases studies. The analysis will focus on the following: production costs, supply chain relationships, market dynamics, consumer preferences and product innovation.

Task 6.5. Utilisation of PrimeDSF and PrimeDSS. Lead: SYN with contributions from MATIS, TTZ, Kontali, CETMAR, NTU and MemU.

The actual implementation of the PrimeDSS will be the intellectual property of one of the project participants and it will be commercially exploited beyond the lifetime of the project. The collected data as well as the methods and assumptions that the PrimeDSS builds on and the rest of the PrimeDSF will be public and open knowledge available to anyone at project end.

**Participation per Partner**

Partner number and short name	WP6 effort
1 - MATIS	5.00
2 - UA1b	2.00
3 - SYN	16.00
5 - UNIV-SAVOIE	0.80
6 - TTZ	2.50
7 - UIce	5.00
8 - UNIPARMA	3.00
9 - UNIPV	3.00
10 - Kontali	2.00
11 - NOFIMA	3.70
12 - UTro	1.00
13 - CETMAR	3.00
14 - U STIRLING	5.00
15 - NTU	4.00
16 - MemU	2.00
<b>Total</b>	<b>58.00</b>

**List of deliverables**

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D6.1	PrimeDSF (documentation)	3 - SYN	Report	Confidential, only for members of the consortium (including the Commission Services)	36
D6.2	Software specifications for the prototype PrimeDSS	11 - NOFIMA	Demonstrator	Confidential, only for members of the consortium (including the Commission Services)	24



**List of deliverables**

<b>Deliverable Number</b> <sup>14</sup>	<b>Deliverable Title</b>	<b>Lead beneficiary</b>	<b>Type</b> <sup>15</sup>	<b>Dissemination level</b> <sup>16</sup>	<b>Due Date (in months)</b> <sup>17</sup>
D6.3	Prime DSS (software)	3 - SYN	Demonstrator	Confidential, only for members of the consortium (including the Commission Services)	40
D6.4	Evaluation of added value	14 - U STIRLING	Report	Public	44
D6.5	IPR strategy	3 - SYN	Report	Public	46

**Description of deliverables**

WP5 wil deliver documents for PrimeDSF, software specifications for PrimeDSS, PrimeDSS as a prototype software and reports on added value and IPR strategy.

D6.1 : PrimeDSF (documentation) [36]

The PrimeDSF is the container for the main durable outputs of this project, and in addition to the PrimeDSS it contains the models underlying the tool, as well as method descriptions, assumptions, guidelines, recommendations and other relevant knowledge generated in the project

D6.2 : Software specifications for the prototype PrimeDSS [24]

PrimeDSS is specified on the basis of the FACI and the statistical simulation and prediction models compiled in WP5.

D6.3 : Prime DSS (software) [40]

The PrimeDSS will be developed according to the specification in Task 6.2. It will be an inter-active, user friendly web-based tool which will enable tests and comparisons of multiple scenarios with a focus on the impact of human activities in terms of stakeholders' interest variables.

D6.4 : Evaluation of added value [44]

A report on key value performance indicators for added value of the PrimeDSS in order to monitor and evaluate the toolbox. Building on the co-creation process in WP7 and the information from the case study an impact assessment on socio-economic and innovation will be conducted with respect to the effects on the competitive advantages for the 5 cases studies.

D6.5 : IPR strategy [46]

The actual implementation of the PrimeDSS will be the intellectual property of one of the project participants and it will be commercially exploited beyond the lifetime of the project. The collected data as well as the methods, assumptions, models and algorithms that the PrimeDSS builds on and the rest of the PrimeDSF will be public and open knowledge available to anyone at project end.

**Schedule of relevant Milestones**

<b>Milestone number</b> <sup>18</sup>	<b>Milestone title</b>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b>	<b>Means of verification</b>
MS12	Data formats defined	11 - NOFIMA	12	Data formats defined and distributed to partners
MS22	PrimeDSS specified	11 - NOFIMA	24	Spec for a prototype software
MS31	1st iteration of PrimeDSS	3 - SYN	31	Revised spec of prototype

**Schedule of relevant Milestones**

<b>Milestone number<sup>18</sup></b>	<b>Milestone title</b>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b>	<b>Means of verification</b>
MS33	Evaluation criteria developed	14 - U STIRLING	35	Evaluation criteria distributed to partners
MS37	IPR strategy implementation commenced	3 - SYN	38	IPR strategy implementation commenced and distributed to partners
MS40	2nd Iteration of PrimeDSS	3 - SYN	40	2nd Iteration of PrimeDSS completed
MS44	PrimeDSF ver. 1,0	3 - SYN	44	Operational prototype
MS46	International Concluding Symposium	3 - SYN	46	Symposium completed

<b>Work package number</b> <sup>9</sup>	WP7	<b>Lead beneficiary</b> <sup>10</sup>	13 - CETMAR
<b>Work package title</b>	Creating Shared Value		
<b>Start month</b>	1	<b>End month</b>	48

**Objectives**

The overall goal of WP7 is to provide stakeholder participation, training and dissemination, ensuring IPR and commercial exploitation beyond the project lifetime. The specific objectives are:

- To create shared value and promote the exchange of knowledge among project partners, Industry Reference Group (IRG) and other relevant stakeholders.
- To train fishermen, producers, decision-makers, educators and other potential actors in the use of PrimeDSS.
- To ensure adequate and wide dissemination for each specific target audiences.
- To facilitate the validation of the project outcomes.

**Description of work and role of partners**

**WP7 - Creating Shared Value** [Months: 1-48]  
**CETMAR**, MATIS, UA1b, SYN, INRA, UNIV-SAVOIE, TTZ, UIce, UNIPARMA, UNIPV, Kontali, NOFIMA, UTro, U STIRLING, NTU, MemU

WP7 aims to develop tailor-made actions, combining engagement training and dissemination activities enhancing socio-economic progress. WP7 builds on:

- Research and innovation, reflecting the stakeholder interests and needs with the view of expanding the research focus and the seafood market.
- Education; promoting the knowledge-based development of the seafood markets.
- Dissemination and exploitation of project results through accessible and accurate tools, information and strategies.

Task 7.1 Shared value through stakeholders’ interaction. Lead: CETMAR; contribution from all partners in PrimeFish. This task is designed to effectively engage the stakeholders (IRG, other relevant stakeholder, and particularly SMEs). Synergies with the main European Fisheries and Aquaculture events will be boosted, through matching up with conferences and major trade exhibitions (e.g. European Maritime Days, Seafood Expo, AquaNor, Fish International).

- 4 Workshops on the Prime Decision Support System: validation meetings providing both geographical and case studies coverage under shared value principles (Months 9, 22 and 40).
- Round Table Discussion on PrimeDSS value: Final meeting to guarantee the commercial exploitation of PrimeDSS
- International Concluding Symposium: the project results will be presented and discussed under the auspices of CONXEMAR and FAO if possible, in close collaboration with the DG-Mare (Vigo, Spain in Month 48).

Task 7.2 Training for target groups. Lead: TTZ; contributions from all other partners. Designed to be efficient, “hands-on” and cost-effective, creating tailor-made actions to decision-makers, fishermen, aquaculture producers, processing companies and other relevant stakeholders, including general audience.

- 10 Webinars Demonstrations on PrimeDSS (two per case study) to ensure a wide attendance. Target group: fishing & aquaculture organizations.
- “European Seafood Economy Summer School”. Target group: Scientist and students on environmental economy and marketing.
- Quick-start tutorials. Friendly and short video-tutorials to learn about outcomes and tools available in the website (Learning Resources Centre). Target groups: general audience and peer educators.
- Seminar on Blue Growth. Target group: Public service and administrators.

Task 7.3 Dissemination activities. Lead: CETMAR; contributions from all other partners. Dissemination activities aim to transfer science (WP1 to WP5) and technology (WP6) to Seafood producers, decision-makers and general audience, as well as to enhance seafood consumption. A communication and media plan will guide general and social media presence, allowing for assessment and adaptation of specific strategies through the project lifetime. The aim is to create a community of knowledge that supports and enhances the economic sustainability of European seafood markets by using and exploiting the PrimeFish results.

- Printed material:
  - Publications in relevant magazines, newspapers, newsletters, etc.
  - Tailor-made and translated material (poster, flyer, templates, etc.).

- Fact pages, comics, infographics, recipes, etc. to meet the target audience needs.
  - Internet-based products
  - Website to share information and tools to overcome the barriers of participation (e.g. web streaming meetings, online forums, etc.), including a document management system and the Learning Resources Centre.
  - Social media (Facebook®, LinkedIn®, Twitter® and YouTube®)
  - E-newsletter, including special issues according to PrimeFish topics.
  - Videos: 1 infomercial (general audience) and 1 project movie (3 to 5 minutes and at least 3 languages).
- The communication will be reassessed and adapted periodically through measurement tools that evaluate the progress and effectiveness (e.g. ad-hoc indicators, surveys, Google analytics®, comments forms...)

#### Participation per Partner

Partner number and short name	WP7 effort
1 - MATIS	5.00
2 - UA1b	2.10
3 - SYN	8.00
4 - INRA	1.50
5 - UNIV-SAVOIE	4.00
6 - TTZ	12.00
7 - UIce	2.00
8 - UNIPARMA	2.60
9 - UNIPV	3.70
10 - Kontali	2.00
11 - NOFIMA	3.00
12 - UTro	2.00
13 - CETMAR	16.60
14 - U STIRLING	6.80
15 - NTU	4.00
16 - MemU	1.00
<b>Total</b>	<b>76.30</b>

#### List of deliverables

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D7.1	PrimeFish Website	13 - CETMAR	Websites, patents filling, etc.	Public	1
D7.2	Communication plan	13 - CETMAR	Report	Public	4
D7.3	Dissemination Annual Report I	13 - CETMAR	Report	Public	12

List of deliverables

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D7.4	Dissemination Annual Report II	13 - CETMAR	Report	Public	24
D7.5	Dissemination Annual Report III	13 - CETMAR	Report	Public	36
D7.6	Strategy for communication plan beyond project lifetime	6 - TTZ	Report	Public	45
D7.7	Training package: all material for training	6 - TTZ	Report	Public	46
D7.8	Creating Shared Value for the European Seafood Market	3 - SYN	Report	Public	47

Description of deliverables

WP 7 will deliver a website, communication plans, dissemination reports, a strategy for communication beyond the project lifetime and material for training. The WP will also deliver a manuscript for a peer reviewed scientific journal.

D7.1 : PrimeFish Website [1]

A website to share information and tools to overcome the barriers of participation (e.g. web streaming meetings, online forums, etc.), including a document management system and the Learning Resources Centre.

D7.2 : Communication plan [4]

To create shared value and promote the exchange of knowledge among project partners, Industry Reference Group (IRG) and other relevant stakeholders.

D7.3 : Dissemination Annual Report I [12]

Annual report on dissemination activities in the project.

D7.4 : Dissemination Annual Report II [24]

Annual report on dissemination activities in the project.

D7.5 : Dissemination Annual Report III [36]

Annual report on dissemination activities in the project.

D7.6 : Strategy for communication plan beyond project lifetime [45]

Strategy for communication plan beyond project lifetime, how will the material be accessible after the project is officially finished.

D7.7 : Training package: all material for training [46]

Training material will be designed to be efficient, “hands-on” and cost-effective, creating tailor-made actions for decision-makers, fishermen, aquaculture producers, processing companies and other relevant stakeholders, including general audience

D7.8 : Creating Shared Value for the European Seafood Market [47]

This deliverable is a report on how the project will effectively engage the stakeholders (IRG, other relevant stakeholder, and particularly SMEs). Synergies with the main European Fisheries and Aquaculture events will be boosted, through matching up with conferences and major trade exhibitions (e.g. European Maritime Days, Seafood Expo, AquaNor, Fish International).

Schedule of relevant Milestones

Milestone number <sup>18</sup>	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
MS2	Operative Website	13 - CETMAR	1	The milestone is a website for the project, PrimeFish. The means of verification will be an accessible and operational website
MS13	Review and update of the dissemination strategy I	13 - CETMAR	13	Revised strategy distributed to partners
MS24	Review and update of the dissemination strategy II	13 - CETMAR	25	Revised strategy distributed to partners
MS36	Review and update of the dissemination strategy III	13 - CETMAR	37	Revised and updated dissemination strategy distributed to partners
MS39	Workshops on DSS	6 - TTZ	40	Workshops on DSS concluded and minutes distributed
MS41	Webinars Demonstrations on DSS	6 - TTZ	42	Webinar completed
MS42	Round Table Discussion	13 - CETMAR	42	Minutes from Round Table discussion distributed
MS43	European Seafood Summer School	13 - CETMAR	44	School completed
MS45	Learning Resources Centre with quick-start tutorials	6 - TTZ	45	Tutorials completed and published

<b>Work package number</b> <sup>9</sup>	WP8	<b>Lead beneficiary</b> <sup>10</sup>	1 - MATIS
<b>Work package title</b>	Project Management		
<b>Start month</b>	1	<b>End month</b>	48

**Objectives**

- Overall co-ordination and management of the project, including the organisational and financial responsibility for the project
- Ensure the start of the project, full participation from all partners so the contract is executed in a timely and efficient way and that all the project’s objectives are met.
- Ensure liaison with – and reporting to – the contracting unit in such a way that the Commission’s rules are followed, thus providing maximum support to PrimeFish’s implementation.
- Monitor the expenses and allocation of the budget; to ensure accurate and timely financial reporting and make necessary adjustments to the implementation of the project.
- Activate and maintain a communication framework, appropriate knowledge management, and fulfilment of responsibilities towards the European Commission and Consortium commitments, including gender equality issues.

**Description of work and role of partners**

**WP8 - Project Management** [Months: 1-48]  
**MATIS, SYN, UNIV-SAVOIE, UIce, Kontali, NOFIMA, CETMAR , U STIRLING**  
 Set up and maintain the administrative framework. Responsible for the overall management of the activities, the organisation of major project meetings and communications with the Commission. The responsibilities for project management tasks will be split between the Coordinator (CO), Administration Manager (AM) and the Project Steering Group (PSG). The administration manager (AM) is responsible for project administrative and financial management tasks. The AM will be supported by the PSG. The AM is responsible for collecting reports and financial statements from the participants. Each participant has a representative person called “Partner Manager” (PM) who will be responsible for reports and financial statements. All partners will meet in conjunction with annual project meetings. The Project Technical Committee (TC) will be led by the Technical Manager (TM) and consists of all WP leaders. Members of an External Strategic Advisory Group (SAB) have been identified, contacted and confirmed their participation (Table 3.2.3). Furthermore a Project Exploitation and Dissemination Committee (EDC) will be set up consisting of the Exploitation and Dissemination manager (EDM), the CO and members of the IRG.

Task 8.1: Project activations, meetings and webpage. Annual project meetings will take place in the individual countries involved on a rotation basis, starting with a kick-off meeting in Month 1. Regular meetings of the TC and WP coordination meetings will be organised by the SG. A webpage will be established in WP7 presenting the project’s achievements and partners’ profiles. The site will be regularly updated with results and developments. The contributions to journals, scientific conferences, meetings and the media will be co-ordinated and monitored.

Task 8.2: Project monitoring and reporting, deliverables and milestones. Progress report templates will be provided by the AM and used to follow the progress every six months. The WP leader will submit the reports to the CO. It is the responsibility of the CO to submit reports to the EU. Six-month reports, periodic and final reports will be made accessible through the project’s webpage after revision by the CO and accepted by the Commission.

Task 8.3: Maintaining the consortium and legal issues. The AM will support the PSG in maintaining and enforcing the Consortium Agreement of the Proposal. The PSG will deal with legal issues, supported and executed by the AM as well as gender issues. Procedures for incorporating new participants will be defined and executed in this task. PrimeFish members will make public and scientific presentations during the course of the project. Where necessary, AM will support the organisation of the meetings and workshops by providing invitations, agenda setting, choice of location, production of minutes and communication. The CO and AM will ensure that the knowledge gained in the project will be exploited and disseminated for the benefit of the partners in the consortium and relevant IRG members and other stakeholders. Also be responsible for updating the exploitation plan in collaboration with the EDM. This will be reviewed regularly at the formal meetings of the PSG during the lifetime of the project. IPR issues will be defined in detail in the “Consortium Agreement”. Knowledge generated is potentially subject for Intellectual Property Rights (IPR) will be managed by the PSG. For more information see Chapter 3.2.

Task 8.4: Liaison activity with other projects and other funding. The CO will be responsible for liaisons with other projects and to introduce other additional national and European funding to the consortium. Information and knowledge resulting from this activity will be made available to PrimeFish's participants on a regular basis. All partners will contribute to this task, especially the PrimeFish partners that coordinate or participate in relevant EU projects.

**Participation per Partner**

Partner number and short name	WP8 effort
1 - MATIS	46.00
3 - SYN	2.00
5 - UNIV-SAVOIE	0.50
7 - UIce	2.00
10 - Kontali	0.50
11 - NOFIMA	2.00
13 - CETMAR	2.00
14 - U STIRLING	0.50
<b>Total</b>	<b>55.50</b>

**List of deliverables**

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D8.1	1st Annual summary report	1 - MATIS	Report	Confidential, only for members of the consortium (including the Commission Services)	14
D8.2	2nd Annual summary report	1 - MATIS	Report	Confidential, only for members of the consortium (including the Commission Services)	26
D8.3	3rd Annual summary report	1 - MATIS	Report	Confidential, only for members of the consortium (including the Commission Services)	38

**Description of deliverables**

The deliverables from this WP will be 2 periodic reports and a final report.

D8.1 : 1st Annual summary report [14]

1st Annual summary Report

D8.2 : 2nd Annual summary report [26]



2nd Annual summary report  
 D8.3 : 3rd Annual summary report [38]  
 3rd annual summary report

**Schedule of relevant Milestones**

<b>Milestone number <sup>18</sup></b>	<b>Milestone title</b>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b>	<b>Means of verification</b>
MS3	Kick-off meeting in Iceland	1 - MATIS	1	The milestone marks the completion of the first consortium meeting in PrimeFish; the kick-off meeting to be held in Iceland. The means of verification is the distribution of meeting minutes.
MS11	1st Annual meeting completed	1 - MATIS	12	Meeting minutes distributed to partners and agreed
MS23	2nd Annual meeting completed	1 - MATIS	24	Meeting minutes distributed
MS35	3rd Annual meeting completed	1 - MATIS	36	3rd Annual meeting completed and meeting minutes distributed
MS47	Final meeting completed	1 - MATIS	46	Meeting minutes distributed to partners

### 1.3.4. WT4 List of milestones

Milestone number <sup>18</sup>	Milestone title	WP number <sup>9</sup>	Lead beneficiary	Due Date (in months) <sup>17</sup>	Means of verification
MS1	Identification of the type of data needed and granularity	WP1	11 - NOFIMA	1	The milestone will be a workshop within the kick-up meeting. The means of verification will be the distribution of workshop minutes and conclusions.
MS2	Operative Website	WP7	13 - CETMAR	1	The milestone is a website for the project, PrimeFish. The means of verification will be an accessible and operational website
MS3	Kick-off meeting in Iceland	WP8	1 - MATIS	1	The milestone marks the completion of the first consortium meeting in PrimeFish; the kick-off meeting to be held in Iceland. The means of verification is the distribution of meeting minutes.
MS4	Harmonised data collection methods; data collection starts	WP1, WP2, WP3, WP4	11 - NOFIMA	2	The milestone marks the completion of data harmonisation and start of data collection. Means of verification: Workshop minutes and conclusions distributed
MS5	Framework for characterisation of success on seafood markets	WP4	10 - Kontali	4	Framework for the characterisation of success on seafood markets established. Means of verifications as minutes and conclusions from Workshop
MS6	Interview and survey questionnaire for use in WP 2, WP3 and WP4 harmonised and completed	WP1, WP2, WP3, WP4	1 - MATIS	6	Protocol produced and distributed to relevant partners
MS7	Framework for FACI identified	WP1	7 - UIce	6	Protocol produced and distributed to relevant partners.
MS8	Harmonised data analysis methods available; data analysis starts	WP1, WP2, WP3, WP4	11 - NOFIMA	6	Workshop minutes and conclusions distributed
MS9	Framework for characterisation	WP3	2 - UAlb	8	Framework for characterisation of informal

Milestone number <sup>18</sup>	Milestone title	WP number <sup>9</sup>	Lead beneficiary	Due Date (in months) <sup>17</sup>	Means of verification
	of informal market institutions developed				market institutions produced and distributed to relevant partners
MS10	In-depth industry dynamics survey tool developed and piloted	WP3	14 - U STIRLING	10	In-depth industry dynamics survey tool developed, piloted and distributed to relevant partners
MS11	1st Annual meeting completed	WP8	1 - MATIS	12	Meeting minutes distributed to partners and agreed
MS12	Data formats defined	WP6	11 - NOFIMA	12	Data formats defined and distributed to partners
MS13	Review and update of the dissemination strategy I	WP7	13 - CETMAR	13	Revised strategy distributed to partners
MS14	Data for boom and bust price cycles collected	WP2	8 - UNIPARMA	14	Boom and bust data available for analysis
MS15	Analysis of markets success and failures in the seafood market completed	WP4	10 - Kontali	16	Distribution of report on analysis of markets success and failures in the seafood market.
MS16	Analysis of economic performance of selected European and Canadian fisheries completed	WP2	7 - UIce	18	Distribution of report on analysis of economic performance of selected European and Canadian fisheries.
MS17	Analysis of economic performance of selected European and Vietnamese aquaculture species completed	WP2	10 - Kontali	21	Distribution of report on analysis of economic performance of selected European and Vietnamese aquaculture species
MS18	Analysis of “boom and bust” price cycles in European seafood markets completed	WP2	8 - UNIPARMA	24	Distribution of report on analysis of “boom and bust” price cycles in European seafood markets
MS19	Analysis of value chains and input-output structure completed	WP3	14 - U STIRLING	24	Distribution of report on Analysis of value chains and input-output structure
MS20	Data collection for non-market value study completed	WP3	12 - UTro	24	Data collection completed

<b>Milestone number</b> <sup>18</sup>	<b>Milestone title</b>	<b>WP number</b> <sup>9</sup>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b> <sup>17</sup>	<b>Means of verification</b>
MS21	Data collection from consumers' surveys/interviews completed	WP4	4 - INRA	24	Interviews & surveys completed
MS22	PrimeDSS specified	WP6	11 - NOFIMA	24	Spec for a prototype software
MS23	2nd Annual meeting completed	WP8	1 - MATIS	24	Meeting minutes distributed
MS24	Review and update of the dissemination strategy II	WP7	13 - CETMAR	25	Revised strategy distributed to partners
MS25	Market institutional analysis completed	WP3	14 - U STIRLING	26	Distribution of report on analysis of economic performance of selected European and Vietnamese aquaculture species
MS26	Analysis on consumer preferences completed	WP4	4 - INRA	26	Distribution of report on Analysis on consumer preferences
MS27	Analysis of compliance costs and benefits completed	WP3	12 - UTro	30	Distribution of report on analysis of compliance costs and benefits
MS28	Analysis on social awareness, attempts to stimulate fish consumption and negative press completed	WP4	5 - UNIV-SAVOIE	30	Distribution of report on Analysis on social awareness, attempts to stimulate fish consumption and negative press
MS29	Analysis of innovative features and the consumers' willingness to pay completed	WP4	8 - UNIPARMA	30	Distribution of report analysis of innovative features and the consumers' willingness to pay
MS30	Compilation of fisheries and aquaculture competitiveness index completed	WP5	7 - UIce	30	Compilation of fisheries and aquaculture competitiveness index produced and distributed to relevant partners
MS31	1st iteration of PrimeDSS	WP6	3 - SYN	31	Revised spec of prototype
MS32	Evaluation of industry dynamics and opportunities completed	WP3	5 - UNIV-SAVOIE	34	Distribution of report on "Evaluation of industry dynamics and opportunities"

<b>Milestone number</b> <sup>18</sup>	<b>Milestone title</b>	<b>WP number</b> <sup>9</sup>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b> <sup>17</sup>	<b>Means of verification</b>
MS33	Evaluation criteria developed	WP6	14 - U STIRLING	35	Evaluation criteria distributed to partners
MS34	Compiling and quantification of non-market values completed	WP3	12 - UTro	36	Distribution of report on "Compiling and quantification of non-market values"
MS35	3rd Annual meeting completed	WP8	1 - MATIS	36	3rd Annual meeting completed and meeting minutes distributed
MS36	Review and update of the dissemination strategy III	WP7	13 - CETMAR	37	Revised and updated dissemination strategy distributed to partners
MS37	IPR strategy implementation commenced	WP6	3 - SYN	38	IPR strategy implementation commenced and distributed to partners
MS38	Construction of prediction and simulation tools completed	WP5	7 - UIce	40	Construction of prediction and simulation tools/models completed and ready
MS39	Workshops on DSS	WP7	6 - TTZ	40	Workshops on DSS concluded and minutes distributed
MS40	2nd Iteration of PrimeDSS	WP6	3 - SYN	40	2nd Iteration of PrimeDSS completed
MS41	Webinars Demonstrations on DSS	WP7	6 - TTZ	42	Webinar completed
MS42	Round Table Discussion	WP7	13 - CETMAR	42	Minutes from Round Table discussion distributed
MS43	European Seafood Summer School	WP7	13 - CETMAR	44	School completed
MS44	PrimeDSF ver. 1,0	WP6	3 - SYN	44	Operational prototype
MS45	Learning Resources Centre with quick-start tutorials	WP7	6 - TTZ	45	Tutorials completed and published
MS46	International Concluding Symposium	WP6	3 - SYN	46	Symposium completed
MS47	Final meeting completed	WP8	1 - MATIS	46	Meeting minutes distributed to partners

**1.3.5. WT5 Critical Implementation risks and mitigation actions**

Risk number	Description of risk	WP Number	Proposed risk-mitigation measures
R1	It may be difficult and time consuming to extend the methodology for evaluating competitiveness to cover countries, different fish species and individual companies.	WP1	The partners in WP1 have excellent scientific and technical experience and network connections. Participants within the WP leader’s institute have worked extensively on the methodology used for the Fishery Competitive index and are therefore well suited to adapt and update the methodology.
R2	A serious delay in preparing guidelines for data collection and/or analysing methods can lead to delays in WP2, WP3 and WP4	WP1	The time plan will be closely watched. The leader of WP1 has an excellent background in data and project management. He has worked closely together with the coordinating institute before and will, in collaboration with other partners of WP1, ensure that guidelines will be handed in timely.
R3	The main risks associated with carrying out WP2 lie in the availability of reliable and appropriate data for the economic performance analysis to be undertaken	WP2	By focusing on specific cases (Atlantic cod and herring, farmed salmon, trout, sea-bass and sea-bream) and having access to both public as well as in-house (Kontali) and private (IRG) data, access to the necessary information is ensured
R4	Companies may be hesitant to provide access to detailed information on their operation	WP2	Maintain strict security procedures and guarantee absolute confidentiality. Code sensitive data. Publish no results that can be traced to individual companies, only aggregates
R5	Individuals may not want to be interviewed for fear of being quoted	WP2	Guarantee anonymity to interviewed individuals. Publish no results that can be traced to individuals
R6	The main risks lie in obtaining reliable data and information from the industry sector (IRG). The companies may be hesitant	WP3	Data from companies on specific cases will be coded before using for analysis to ensure that it cannot be traced back to source

Risk number	Description of risk	WP Number	Proposed risk-mitigation measures
	to provide the project with information on the supply chain that they believe gives them an edge over a competitive company, locally or globally		
R7	Companies may be hesitant to provide access to detailed information on their operation	WP3	Maintain strict security procedures and guarantee absolute confidentiality. Code sensitive data. Publish no results that can be traced to individual companies, only aggregates
R8	Individuals may not want to be interviewed for fear of being quoted directly	WP3	Guarantee anonymity to interviewed individuals. Publish no results that can be traced to individuals
R9	The main risks concerning WP3 T3.5 is the access to data under the revealed preferences method. This includes using data on prices and quantities sold in ordinary market on goods and services associated with the case goods (farmed salmon and cod). Data must be gathered for comparable goods and services in several of the countries involved in the case studies. Although these are basic data which are usually accessible there might be exceptions	WP3	Conduct a pre-study where possible associated market goods and services to be used when valuing non-market effects are set up. It will then be possible to ascertain for which of these there exist data on price and quantities sold across all involved countries
R10	When it comes to stated preferences, implementing a comparable survey across several countries demands a high degree of precision in the formulation of the survey	WP3	Researchers from each of the countries where the survey is to be implemented will meet and jointly formulate the survey, and ascertain that all understand the same by each of the survey questions. The survey questions can then be translated from English into their mother tongue. Care must also be taken to ensure that the samples are comparable in each country
R11	Implementing a comparable survey across several countries demands a high	WP4	Researchers from each of the countries where the survey is to be implemented will meet and jointly

Risk number	Description of risk	WP Number	Proposed risk-mitigation measures
	degree of precision in the formulation of the survey		formulate the survey, and ascertain that all understand the same by each of the survey questions. The survey questions can then be translated from English into their mother tongue. Care must also be taken to ensure that the samples are comparable in each country
R12	Individuals may not want to be interviewed for fear of being quoted directly	WP4	Guarantee anonymity to interviewed individuals. Publish no results that can be traced to individuals
R13	As WP 5 is dependent on input from WPs 1, 2, 3 and 4 it is crucial the data collection and analysis is delivered on time	WP5	The time plan for tasks in WP1-4 will be monitored closely to ensure on-time delivery of deliverables. The leaders of the WP1-5 have good background in project management and have worked together previously with good success
R14	WP6 is the central point of the project, delivering the main outputs, PrimeDSF/ PrimeDSS and at the same time dependant on input from WP5. Delays in WPs 1, 2, 3, 4 and/or 5 will seriously affect the timing/ completion of this WP	WP6	WP5 and WP6 will be to a large extent run in parallel. It is of utmost importance that the time plan is followed closely so these 2 WPs can start on time. Both leaders of the WPs have worked together on numerous occasions and they are both highly capable project managers
R15	The statistical simulation and prediction models in WP5 may not or only partly be suitable for implementation into usable Decision Support System	WP6	The PrimeDSS will be developed based on simple “what if” scenarios and using an iterative process with WP7 validated and expanded by adding more simulation/prediction models analysis and data
R16	The software development of the prototype PrimeDSS may exceed the time allocated to the task	WP6	The leader of WP6 will implement a hands-on project management based on SCRUM methods. In addition partner SYN will call upon associates for increased capacity
R17	Fisheries and aquaculture stakeholders have expressed	WP7	The sectors are lacking in competitiveness and have



Risk number	Description of risk	WP Number	Proposed risk-mitigation measures
	<p>that frequently their involvement in projects does not imply bidirectional communication; generally they are providers of information or receptors of outcomes, without establishing a real dialogue</p>		<p>encountered problems e.g. in relation with “boom and bust” cycles. For this reason there is real interest by key industry &amp; industry associates to actively take part in the IR Group, not only to provide data but also to ensure the requirements for the tool to be developed and to act as pilot users of the outcomes of project (PrimeDSS/DSF). Once the value of the tool has been established other stakeholders will effectively be engaged and trained as necessary</p>
R18	<p>Budget issues are likely to prevail in a project with broad activities and technical risks. Activities might become more expensive than estimated. Furthermore, the consortium might involve communication and cultural differences causing challenges for the communication and collaboration. The monitoring and reporting of project progress can be delayed if deadlines for submitting information are not respected by partners. Legal disputes can occur in relation to IPR and other existing legislation.</p>	WP8	<p>The CO &amp; AM have a project management system in place that enables updates on resource consumption and work progress according to planned timeline in close collaboration with the TM. A communication guideline will be developed by the EDM for SG and TC in order to avoid misunderstandings and lack of information among project partners and stakeholders. Procedures handling issues regarding IPR will be described in the Consortium Agreement</p>

### 1.3.6. WT6 Summary of project effort in person-months

	WP1	WP2	WP3	WP4	WP5	WP6	WP7	WP8	Total Person/Months per Participant
1 - MATIS	1	0	10	7	2	5	5	46	76
2 - UAlb	0	8	5	0	0	2	2.10	0	17.10
3 - SYN	2	3.40	7	0	5	16	8	2	43.40
4 - INRA	1	0	0	12.50	0	0	1.50	0	15
5 - UNIV-SAVOIE	1	0	2	26	2	0.80	4	0.50	36.30
6 - TTZ	0	3	4	7	0	2.50	12	0	28.50
7 - UIce	2.10	6	6	9	14	5	2	2	46.10
8 - UNIPARMA	1.50	6	0	7	9	3	2.60	0	29.10
9 - UNIPV	2	5	0	7	9.50	3	3.70	0	30.20
10 - Kontali	2	9	5	3.50	2	2	2	0.50	26
11 - NOFIMA	9.40	2	6	1.50	3	3.70	3	2	30.60
12 - UTro	1.50	0	10.40	0	0	1	2	0	14.90
13 - CETMAR	0	5	8	5	0	3	16.60	2	39.60
14 - U STIRLING	4	3	19	5	2	5	6.80	0.50	45.30
15 - NTU	2	10	12	4	4	4	4	0	40
16 - MemU	2	7	8	1	2	2	1	0	23
<b>Total Person/Months</b>	31.50	67.40	102.40	95.50	54.50	58	76.30	55.50	541.10

### 1.3.7. WT7 Tentative schedule of project reviews

Review number <sup>19</sup>	Tentative timing	Planned venue of review	Comments, if any
RV1	19	TO BE DECIDED	Coordinator should contact the project officer 2 months in advance in order to arrange for the meeting
RV2	37	TO BE DECIDED	Coordinator should contact the project officer 2 months in advance in order to arrange for the meeting
RV3	48	TO BE DECIDED	Coordinator should contact the project officer 2 months in advance in order to arrange for the meeting

## 1.4. Ethics Requirements

Ethics Issue Category	Ethics Requirement Description
PROTECTION OF PERSONAL DATA	<p>- Copies of ethical approvals for the collection of personal data by the competent University Data Protection Officer / National Data Protection authority must be submitted to the REA. Detailed information must be provided on the procedures that will be implemented for data collection, storage, protection, retention and destruction and confirmation that they comply with national and EU legislation. Detailed information must be provided on the informed consent procedures that will be implemented. The applicant must explicitly confirm that the existing data are publicly available. In case of data not publicly available, relevant authorisations must be provided.</p>
NON-EU COUNTRIES	<p>- The applicant must confirm that the ethical standards and guidelines of Horizon2020 will be rigorously applied, regardless of the country in which the research is carried out.</p>

### **1. Project number**

The project number has been assigned by the Commission as the unique identifier for your project. It cannot be changed. The project number **should appear on each page of the grant agreement preparation documents (part A and part B)** to prevent errors during its handling.

### **2. Project acronym**

Use the project acronym as given in the submitted proposal. It can generally not be changed. The same acronym **should appear on each page of the grant agreement preparation documents (part A and part B)** to prevent errors during its handling.

### **3. Project title**

Use the title (preferably no longer than 200 characters) as indicated in the submitted proposal. Minor corrections are possible if agreed during the preparation of the grant agreement.

### **4. Starting date**

Unless a specific (fixed) starting date is duly justified and agreed upon during the preparation of the Grant Agreement, the project will start on the first day of the month following the entry into force of the Grant Agreement (NB : entry into force = signature by the Commission). Please note that if a fixed starting date is used, you will be required to provide a written justification.

### **5. Duration**

Insert the duration of the project in full months.

### **6. Call (part) identifier**

The Call (part) identifier is the reference number given in the call or part of the call you were addressing, as indicated in the publication of the call in the Official Journal of the European Union. You have to use the identifier given by the Commission in the letter inviting to prepare the grant agreement.

### **7. Abstract**

### **8. Project Entry Month**

The month at which the participant joined the consortium, month 1 marking the start date of the project, and all other start dates being relative to this start date.

### **9. Work Package number**

Work package number: WP1, WP2, WP3, ..., WPn

### **10. Lead beneficiary**

This must be one of the beneficiaries in the grant (not a third party) - Number of the beneficiary leading the work in this work package

### **11. Person-months per work package**

The total number of person-months allocated to each work package.

### **12. Start month**

Relative start date for the work in the specific work packages, month 1 marking the start date of the project, and all other start dates being relative to this start date.

### **13. End month**

Relative end date, month 1 marking the start date of the project, and all end dates being relative to this start date.

### **14. Deliverable number**

Deliverable numbers: D1 - Dn

### **15. Type**

Please indicate the type of the deliverable using one of the following codes:

- R Document, report
- DEM Demonstrator, pilot, prototype
- DEC Websites, patent filings, videos, etc.
- OTHER

### **16. Dissemination level**

Please indicate the dissemination level using one of the following codes:

- PU Public

CO Confidential, only for members of the consortium (including the Commission Services)

CI Classified, as referred to in Commission Decision 2001/844/EC

**17. Delivery date for Deliverable**

Month in which the deliverables will be available, month 1 marking the start date of the project, and all delivery dates being relative to this start date.

**18. Milestone number**

Milestone number: MS1, MS2, ..., MSn

**19. Review number**

Review number: RV1, RV2, ..., RVn

**20. Installation Number**

Number progressively the installations of a same infrastructure. An installation is a part of an infrastructure that could be used independently from the rest.

**21. Installation country**

Code of the country where the installation is located or IO if the access provider (the beneficiary or linked third party) is an international organization, an ERIC or a similar legal entity.

**22. Type of access**

VA if virtual access,

TA-uc if trans-national access with access costs declared on the basis of unit cost,

TA-ac if trans-national access with access costs declared as actual costs, and

TA-cb if trans-national access with access costs declared as a combination of actual costs and costs on the basis of unit cost.

**23. Access costs**

Cost of the access provided under the project. For virtual access fill only the second column. For trans-national access fill one of the two columns or both according to the way access costs are declared. Trans-national access costs on the basis of unit cost will result from the unit cost by the quantity of access to be provided.

## History of changes

Page 4. This is a RTD project called “*Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets*” or PrimeFish

Page 5: The collected data as well as the methods and assumptions that the PrimeDSS builds on and the rest of the PrimeDSF will be public and open knowledge available to anyone at project end.

Page 7. Additionally, WP2 analyses historically the behaviour of seafood prices in general including that of shellfish, as well as the development of market prices of the chosen species, focusing especially on the “boom and bust” cycles characteristics

Page 24. A new chapter called “Commercial utilisation beyond the project’s lifetime” replaces chapter “commercial exploitation of PrimeDSS”

Page 42. For consistency the full names of participants have been inserted and their short names have been changed and subsequent changes on short names made on the whole document (shown in Track Changes) and for Part A. Of these:

- 12 are from European RTD organisations (MATIS OHF (MATIS), Aalborg universitet (UAlb), INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (INRA), UNIVERSITE DE SAVOIE (UNIV-SAVOIE), VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (TTZ), HASKOLI ISLANDS (UIce), UNIVERSITA DEGLI STUDI DI PARMA (UNIPARMA), UNIVERSITA DEGLI STUDI DI PAVIA (UNIPV), NOFIMA AS (NOFIMA), UNIVERSITETET I TROMSOE (UTro), CENTRO TECNOLOGICO DEL MAR - FUNDACION CETMAR (CETMAR), UNIVERSITY OF STIRLING (U STIRLING)
- 2 are from European SMEs (SP/F SYNTESA (SYN), KONTALI ANALYSE AS (Kontali)
- 1 is from an International Developing country, TRUONG DAI HOC NHA TRANG (NTU)
- 1 is from an International Developed Country, Memorial University of Newfoundland (MemU)

Page 80. Changes from YES to NO to question “Does the participant plan to subcontract certain tasks (please note that core tasks of the project should not be sub-contracted)” and therefore removal of text “*In the budget there are estimated costs of € 14.000 to cover “direct costs of subcontracting” for Certificates on the Financial Statements (CFS) for partners receiving funds from the EU in excess of € 325 thousand*”

Page 80 Chapter 2.3.4. Third parties involved: Two tables have been inserted for the participants with third parties involved.

Page 81: Chapter 2.3.4.2 Financial support to third parties: Has been deleted

Page 82. Chapter “2.3.5 Planned use of resources” has been changed and a new chapter has been inserted with further financial clarification, including that of using third party resources. A table has been inserted (page 85) giving an overview of “other direct cost” items in the project.

Page 82: Changes in sentence: “€ 95 thousand (incl. OH) will cover third party cost (in-kind contribution against payment GA Art. 11) or about 2% of the total budget, thereof € 76 thousand safeguarded by INRA and € 19 thousand UIce”.

Page 86. A chapter on Ethics and security has been added, specifically on protection of personal data and non-EU countries.

Page 86. New sentence added: The data collection within these WPs (3 and 4) will not be started before completing deliverable 1.6 Ethical Clearance in Month 2

Page 86: A new deliverable has been added. 1.6 Ethical clearance in Month 2

### **Changes made 12.01.15**

Page 81. Changes in sentences: € 75 thousand for covering direct costs of industry partners (IRG) for case studies on the North Atlantic species, cod, herring and salmon, and € 75 thousand to cover the cost of SAB; all of which totals at €254 thousand (incl. OH) or 5% of the total budget and is safeguarded by the coordinator, i.e. included in the budget of MATIS. “Other goods and services” include as well € 75 thousand reserves (incl. OH) to cover costs associated with stakeholder participation, training and dissemination and € 75 thousand to cover direct costs of industry partners (IRG) for case studies on sea-bream, sea-bass and trout in total € 150 thousand or 3% of the total budget;

Page 81. Changes in sentences: Budget wise, the 16 partners can be broken into three categories i.e. the coordinator, which has an estimated total costs of € 1 million, but 25% of that amount is though only safeguarded by the coordinator to be allocated to external costs. Then there are 6 partners with total estimated costs around € 400 thousand and the remaining 9 partners have total estimated costs around € 200 thousand, as can be seen in Figure 11.

Page 82: Figure 11 updated according to budget changes.

Page 82: Table 2.3.5.1: ‘Other direct cost’ items (travel, equipment, other goods and services, large research infrastructure) updated according to budget changes.

Page 84: Table “Other goods and services (without 25% overhead)” updated according to budget changes.

### **Changes made 05.02.15**

Page 80: Addition of the word “personnel” for clarification.

*Direct personnel cost € 15.187, Indirect cost € 3.797, Total cost € 18.984.*

*Direct personnel cost € 60.414, Indirect cost € 15.104, Total cost € 75.518.*

Page 81: Changes in text to match with changes in budget: “The total estimated personnel cost in the project is € 4.432 thousand (incl. OH) or 84% of the total budget, travel & subsistence is estimated at € 376 thousand (incl. OH) or 7% of the total budget, and the rest (9%) is allocated for “other goods and services”

Page 81: Movement and clarification of sentence: As stated in section 2.3.4.2: € 95 thousand (incl. OH) will cover third party personnel cost (in-kind contribution against payment, GA Art. 11) or about 2% of the total budget, thereof € 76 thousand safeguarded by INRA and € 19 thousand by UIce.

Page 82: Removal of sentence and INRA from table 2.3.5.1.

Page 84: Table “Other goods and services (without 25% overhead)” updated according to budget changes



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## 2.1. EXCELLENCE

### 2.1.1 Objectives

The EU is the largest market in the world for fish; with a value of €55 billion and a volume of 12 million tons. While EU seafood consumption has risen over the past 10 years with stable or declining supply from the fisheries sector, most of this increase has come from imports rather than from EU aquaculture. Today 25% of all EU seafood consumption comes from EU fisheries, 10% from EU aquaculture and 65% from imports from third countries, both fisheries and aquaculture products. European aquaculture growth has stagnated since the turn of the century partly because its products have not been competitive compared with imports.

Catch volume, aquaculture production volume and market prices have varied a lot over time, and this has had severe effects on profitability in different seafood sectors and for different product types, leading to numerous seafood company bankruptcies. In addition the seafood sector, especially the captured fish sector, is in some countries expected to provide value to the society beyond company profit, in particular in relation to employment for fishermen and for the processing industry in rural areas. These additional expectations, coupled with unique requirements for sustainable harvest and production, make it difficult to achieve stable profit over time for a seafood company. The captured fish industry has its main challenges related to the supply of fish, both because of overfished stocks and because of the extreme seasonality for main species. This in turn leads to market-related challenges for captured fish, as it may be more profitable to catch less fish when the price is high. The European farmed fish industry has its main challenges on regulatory issues, conflicts with other water users, but also directly related to the market and to the lead time in the production cycle (for a temperate specie, such as salmon typically 24-36 months). With price per kg for salmon varying from around €2 to well over €5 (since 2000), it is very difficult to assess the expected profitability of different business cases. A well-known problem, particularly in the sea-bass and sea-bream industry and up until quite recently also in the salmon industry, is the “boom and bust” cycle. This is when high prices in the market encourage individual companies to increase production significantly (boom). However, when all companies react in this manner the market is flooded, leading to overproduction, low prices, declining profits and eventually bankruptcies (bust).

These severe and to some degree unique challenges lead to various societal problems in relation to the seafood industry. This is a RTD project called “*Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets*” or PrimeFish where an attempt is made to address some of these challenges:

Societal challenges	How PrimeFish will address the challenge:
European seafood producers are facing increased competition from overseas	Analyse the competitiveness of the European fisheries and aquaculture sectors and provide producers and policy makers with a decision support framework based on and containing economic models and a decision support system
Fluctuations in the prices of seafood products destabilise markets and can drive companies out of business	Conduct analysis of price fluctuations and improve our knowledge of “boom and bust” cycles, thus making it possible for producers to better plan their production
Variable prices to harvesters in the capture fisheries and aquaculture	Compare supply-chains across industries and countries and identify possibilities for increasing value-added in the industry
Roughly two thirds of all new products fail within two years	Analyse the seafood market, identify criteria that characterise successful and unsuccessful products and their commercialization
Producers are unable to meet the demand or expectations of consumers	Analyse the behaviour of consumers, identify successful and not-so-successful consumer products, paying special attention to different cultural aspects on local and global markets
Inappropriate regulations threaten the competitiveness of the European seafood industry	Identify and compare how various forms of regulations affect individual companies and the industry as a whole
Decisions on location and production volume are based solely on direct production costs and output prices	Assess the non-market value of fisheries and aquaculture and provide examples of how social sustainability can be incorporated into the decision making process

The overall objective of PrimeFish is to enhance the economic sustainability of European fisheries and aquaculture sectors. New knowledge and insights about competitive performance is needed in order to achieve this goal. In PrimeFish an innovative decision support framework will be developed (PrimeDSF), based on and containing economic models and a decision support system (PrimeDSS) that can be used by the industry and policymakers to better predict consequences based on existing knowledge and simulation / forecasting models. The PrimeDSS tool will be developed based on aggregate and detailed data from selected case studies. This quantitative and qualitative data will feed into an analysis of production parameters, supply-chain relationships and market dynamics with regard to high and low performers in the market place. In addition consumer preferences and potential for product innovation will be identified and incorporated into the tool and the underlying models.

The PrimeDSF is the container for the main durable outputs of this project and in addition to the PrimeDSS, it contains the models underlying the tool, as well as method descriptions, assumptions, guidelines, recommendations and other relevant knowledge generated in the project. The PrimeDSS is a set of software tools to be used by fishermen, aquaculture producers, processing companies, market analysts, public authorities and other stakeholders to understand and predict seafood market behaviour. The actual implementation of the PrimeDSS will be the intellectual property of one of the project's participant and it will be commercially exploited beyond the lifetime of the project. The collected data as well as the methods and assumptions that the PrimeDSS builds on and the rest of the PrimeDSF will be public and open knowledge available to anyone at project end.

To facilitate this, PrimeFish has defined the following specific objectives (SOs):

- SO1) To select, configure and extend the methodology for the assessment of the competitiveness of aquaculture and fisheries
- SO2) To carry out analysis of the current production and market dynamics for the herring, cod, salmon, freshwater trout and sea-bass/sea-bream sectors with respect to critical success factors and bottlenecks
- SO3) To do a supply-chain evaluation on herring, cod, salmon, freshwater trout and sea-bass/sea-bream from catch/hatching to final market, including the effect of non-market values and regulations
- SO4) To evaluate current and future trends and consumer behaviour in local, European and international seafood markets
- SO5) To develop simulation / forecasting models for analysing changes in competitiveness, prediction of instability of demand and supply including warning signs for "boom and bust" cycles and indication of potential for product innovation success
- SO6) To develop the PrimeDSS based on these models, and to deliver the rest of the PrimeDSF
- SO7) To provide training, dissemination and stakeholder interaction; to ensure IPR and commercial exploitation beyond the project lifetime

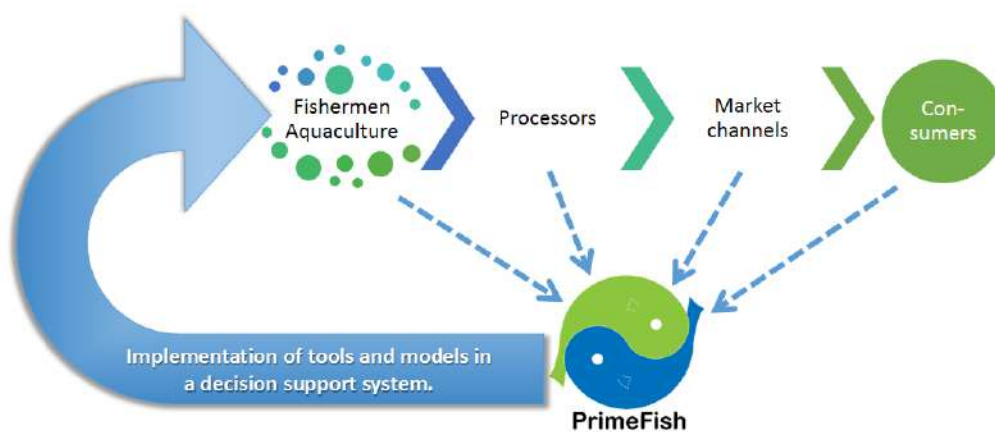
The lead users will be European fishermen, aquaculture producers and processing companies who will be able to use the results, including insights into current and future market development, trends and consumer behaviour, to better understand the functioning of their markets and in setting strategic plans for future production and innovation. By strengthening their production and market competitiveness the overall long term viability of the European fisheries and aquaculture sectors will be improved. Furthermore, public authorities will be able to use the outcomes, e.g. in developing and adapting regulations and in setting strategic policies for enhancing the overall competitiveness and performance of the European fisheries and aquaculture sectors.

### ***2.1.2 Concept and approach***

The overall objective of PrimeFish is to enhance the economic sustainability of European fisheries and aquaculture sectors. As there is a lack of appropriate production and socio-economic data (e.g. on supply and demand and trading information for various stages in the supply-chain) the idea behind the project is to gather data not only on aggregate level obtained from publically available sources, but also from individual production companies, industry organisations, sales organisations and other marketing channels. The gathered data will be analysed to generate new knowledge and insights about the competitive performance of both European fisheries and aquaculture sectors and to compare the outcome with that of international players in Vietnam and Canada. The consortium will do this using a trans-disciplinary approach from the perspective of economics, business administration, simulation and modelling, mathematics & statistics, aquaculture science, fisheries science, food science, food safety, supply-chain management, marketing, consumer behaviour and habits, innovation and product development and non-market value of fisheries. The evaluation and analysis will give new insights and knowledge about the economic sustainability of the European

fisheries and aquaculture sectors; its competitiveness, productivity, growth and price behaviour and the supply-chain for the specific case studies; of salmon (Scotland, Norway and the Faroe Islands), white fish (cod from Iceland, Norway, Spain and UK in comparison with cod from Canada and farmed pangasius from Vietnam), freshwater trout (from Spain, Italy, Denmark and UK), sea-bass/sea-bream (from Spain, Italy and Greece) and herring (from the North Atlantic) in which high and low performers in the market place will be identified. Furthermore the new knowledge will cover local, European and international markets, consumer preferences, successful and unsuccessful products and the potential for product innovation.

Based on the gathered new knowledge and insights the concept is to develop simulation and prediction models enabling production planning, forecasting of potential product success as well as for market trends and new developments. Identification of common attributes of instability between demand and supply, which may arise because of production growth or because of market issues, will give indications of possible upcoming “boom and bust” price cycles. The implementation of the simulation and prediction model into a useable toolbox for fish business operators and policymakers is one of the key concepts of the project. The PrimeDSS will provide peer comparison to both fishermen, aquaculture producers and processing companies (on a supply-chain level) and to public stakeholders (on a country or species level). The idea is that PrimeDSS can simulate specific production scenarios and give early warning signs of a “boom and bust” cycle. The idea is also that the toolbox can be used by producers in new product development and to spot needs on markets or potential markets.



**Figure 1. PrimeFish links to the European fisheries and aquaculture sectors**

PrimeFish gathers data and information from producers and producers’ organisations on business performance and supply-chain relationship as well as on local, European and international markets, consumer behaviour and preferences, successful and unsuccessful products and on potentials for product innovation/new markets. The data and facts will be analysed by the experts in the project giving new knowledge and insights into the business, as well as using the data to develop models and prediction tools that will be implemented into the PrimeDSS. The outcomes of the project will boost the competitiveness of the lead users (fishermen, aquaculture producers and processing companies) by peer comparison on competitiveness within the business (relevant actors or international sectors) and on the overall supply-chain to final market and on consumer trends and preferences. It will thus pinpoint critical factors and bottlenecks limiting the competitiveness and economical sustainability, as well as spotting opportunities for innovative products and markets. By strengthening their production and market competitiveness the overall long term viability of the European fisheries and aquaculture sectors will be improved. The implementation of the DSS toolbox will be commercially exploited after the completion of the project, ensuring that part of the project will also have very high applicability and Technological Readiness Level (TRL).

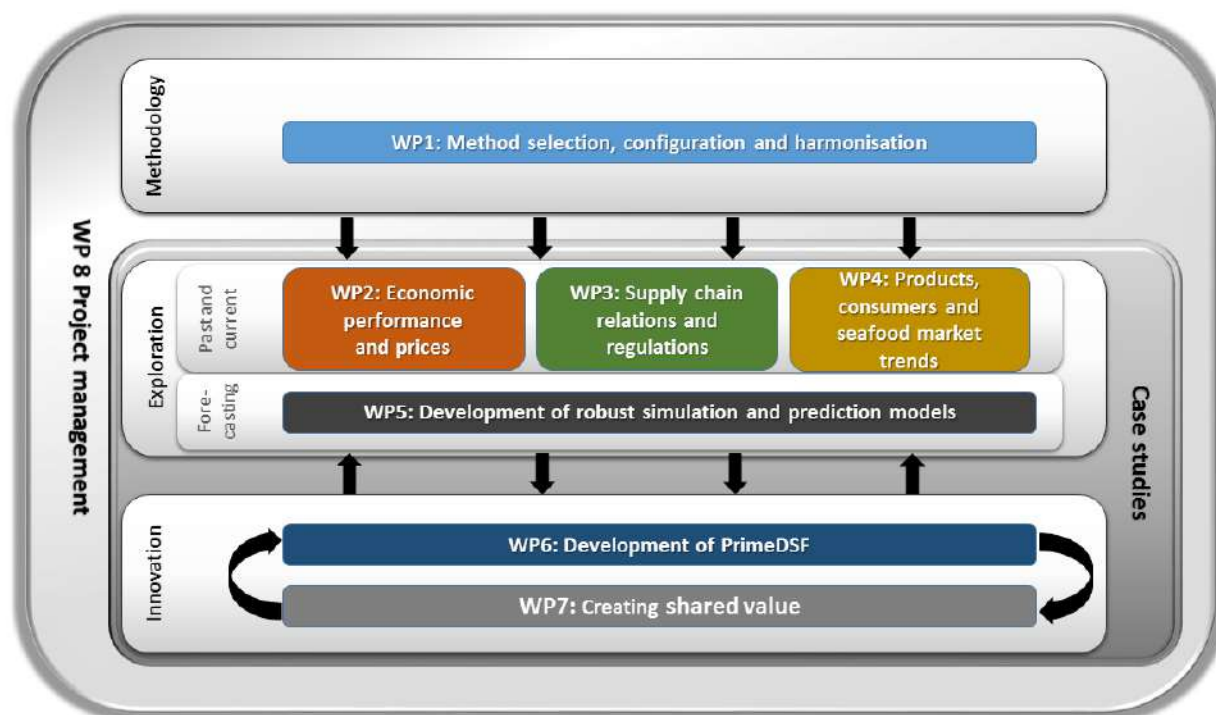


Figure 2. The PrimeFish proposal is organized into 8 work packages (WPs)

WP1 will select, configure, extend and harmonise the methodologies that will be used to assess the competitiveness of European aquaculture and fisheries sectors. In addition, WP1 will improve and develop the Fishery Competitive Index (FCI; Verlagsstofa skiptaverds, 2005) which breaks down competitiveness into 3 major themes (Creating stability, Stimulating environment and Competence of the industry) to cover aquaculture production. The result will be a comprehensive index for fisheries and aquaculture competitiveness (FACI). On a disaggregated level, the index can be used to benchmark individual producers within a given sector. On an aggregated level, the index can be used to compare the competitiveness of sectors in different countries (as the original FCI work did) or different production sectors in the same country. The index will be compiled and made available for PrimeDSS in WP5. An online resource will be created that allows for self-assessment. **The outcome of the WP will be an adapted and updated methodology for the assessment of the competitiveness of aquaculture and fisheries (SO1).**

In WP2, WP3 and WP4 case studies for the salmon sectors in Scotland, Norway and the Faroe Islands, the freshwater trout sector in Spain, Italy, Denmark and UK, the sea-bass/sea-bream sector in Spain, Italy and Greece, and the whitefish (cod) and pelagic (herring) sectors in the North Atlantic will be used to evaluate the overall economic performance of the production segments, price behaviour, the supply-chain from hatching/catch to the final market and finally on products and consumers trends including that of innovation and consumer preferences and acceptance of products.

WP2 analyses economic performance of the European fisheries and aquaculture sectors using aggregate data obtained from available public sources as well as detailed data from individual companies. This will allow for comparison of the performance of these sectors within Europe, as well as between European countries and other relevant international players. In particular, detailed analysis of growth, productivity and forefront efficiency, using parametric and non-parametric methods, will be conducted on individual European case studies of the chosen species and compared with the performance of Canadian cod and Vietnamese pangasius producers. Additionally, WP2 analyses historically the behaviour of seafood prices in general including that of shellfish, as well as the development of market prices of the chosen species, focusing especially on the “boom and bust” cycles characteristics. **The outcome of the WP will be analysis on critical factors and bottlenecks in the economic performance of the salmon, freshwater trout, cod, sea-bass and bream and herring sectors (SO2).**

WP3 will focus on the main material flow in the supply-chain (input-output structure) for the five chosen species based on publicly available data, including European catch/production as well as import and export to and from the EU. Results will form the sample frame/design for the subsequent micro level mapping of different product categories of the chosen species for key market segments (local, niche and commodity (European/international)). The mapping will cover catch or hatching/harvesting through the various stages of processing, distribution, retail and food-service marketing channels. Focus will be on evaluating impacts of mandatory and market-based regulatory regimes along with governance and power-relations within the supply-chain on risks, costs and rewards to participants. Using key informant interviews and systematic survey methods, primary data - qualitative and quantitative - will be collected from producers' organisations, sales organisations and individual production companies. Using revealed and stated preference methods, non-market value associated with aquaculture and captive fisheries will be assessed and used for improved societal decision making. Special attention will be paid to the effects of different management systems. **The outcome of the WP will be analysis on critical factors and bottlenecks in the supply-chain of the salmon, whitefish, sea-bass/sea-bream, freshwater trout and herring sectors including the effects of non-market values and regulations (SO3).**

WP4 will analyse the impact of consumer behaviour, market trends, innovation and product development in the seafood market. Work undertaken will be carried out in close co-operation with industry partners and key stakeholders. As a first step, micro-economic tools will be used to analyse how factors such as income, own prices and prices of substitute goods affect the demand for the chosen species. For this purpose, complete and/or incomplete demand systems will be estimated. Results will highlight fish consumption within the consumers' diets, depending on country and types of consumers and will be used to simulate the effects of various price policies. In a second stage, past and current consumer preference trends will be analysed and the acceptability of fish products examined by looking at consumption in local, niche and global markets. The specific area of demand stimulation or manipulation through health, label and certification claims on one hand and negative press on the other hand will be analysed quantitatively where possible and compared with consumer acceptability of products using Conjoint Analysis. Finally, a database of successes and failures in product development and consumer behaviour will be used as a background material for trend research, yielding insights into product innovation and which product characteristics best fit consumers' preferences. **The outcome of the WP will be an overview of current and future trends and consumer behaviour in local, European and international seafood markets (SO4).**

In WP5 simulation models are developed to analyse how changes in supply and demand affect production planning, economic performance, supply-chain relationships, value added, potential product success, market trends and developments and competitiveness as measured by the updated FACI developed in WP1. Simulations of "boom and bust" cycles will be carried out and common traits highlighted that facilitate the development of prediction models. Building on work undertaken in WP4, a set of product success indicators will be established designed to indicate probability of successful launches on a targeted seafood market. **The outcome of this WP will be simulation/forecasting models for analysing changes in competitiveness, prediction of instability of demand and supply including warning signs for "boom and bust" cycles and indication of potential for product innovation success (SO5).**

In WP6 a Decision Support Framework (PrimeDSF) is developed which contains the models from WP5 as well as method descriptions, assumptions and guidelines. PrimeDSF is thus the container for the main durable outputs generated in the project. The statistical simulation and prediction models compiled in WP5 are implemented into usable tools for 'what-if' analysis in general. The Decision Support System (PrimeDSS) will be developed as a software tool to be used by fishermen, aquaculture producers, processing companies and other stakeholders to understand and predict seafood market behaviour. The PrimeDSS will be validated in WP7 and iterated a number of times to ensure (a) its focus and (b) the added value it generates. Specific performance indicators for the added value of the toolbox will be defined and monitored throughout the project. **The outcome of the WP will be the decision support framework PrimeDSF and the Decision Support System, PrimeDSS (SO6).**

In WP7 the knowledge generated within the project will be implemented through interaction with IRG in the project to test and validate PrimeDSS. Their feedback on added value and system shortcomings will feed the iterative development process of WP6. In a second step, other selected stakeholders will be trained in the use of PrimeDSS as peer educators. In the third step general stakeholders will be trained in the use of the toolbox in workshops, through the social media and videos. These workshops will be organized around major trade shows and conferences to increase their reach and impact. The workshops will also provide the basis for further feedback from the stakeholders that will allow the project to improve the DSS. A particular task is to facilitate the IPR transition of the

background/foreground in the PrimeFish project for commercial exploitation of PrimeDSS beyond the project lifetime.

In addition, the dissemination activities will consist of a pro-active presence in social media especially aimed at the five fish commodity segments. The PrimeFish.eu webpage will be a key platform for the project's internal and external communication, where stakeholders enter their data and facts and it can be visualized with other data and shared by all that have access to the site. Other type of media, such as Facebook, LinkedIn, Twitter, Youtube and Snapchat will also serve a key role, both for communicating the outcome of the project, but no less as potential marketing tools that may influence European consumers' choices. **The outcome of this WP will be trained stakeholders, disseminated results and outcomes, ensured IPR and commercial exploitation of PrimeDSS (S07).**

WP8 will provide efficient and cost-effective contractual, financial and administrative management of the project and communication with the EU Commission, facilitate understanding and cohesion within the consortium and manage risks.

The coordinator of the proposal, Dr. Gudmundur Stefansson (MATIS) has a background that will facilitate the uptake of the outcomes of PrimeFish within the fish business industry. His background is R&D activities (1986-2000) including that of participating in national and European research projects, various roles in international fish businesses (2000-2012) such as project manager, operational manager, plant manager, vice MD and R&D director and since 2012, a research group leader at MATIS focusing on food product development and innovation. The leadership of the project will be managed by a Steering Group, which serves as the overall decision making body. The project coordinator will chair it. In addition to the Steering Group there will also be an Exploitation and Dissemination Committee (EDC), chaired by Dr. Rosa Chapela (CETMAR) and a Technical Committee (TC), chaired by Olavur Gregersen (SYN). All WP leaders will be members of the Technical Committee.

To support the role of the Coordinator and further to strengthen the industrial involvement in the project, an External Strategic Advisory Board (SAB) will be formed and its role is to consult with the coordinator on a regular basis (every 3 months). Dr. Sveinn Margeirsson, the CEO of MATIS will serve as the chairman of the board.

The project coordinator will be the sole contact person directly responsible for communication with the EU Commission. To ensure efficiency, the project coordinator will work closely with the project partners, the WP leaders, the EDC Chair and the TC Chair. A Project Support Team from MATIS will assist the coordinator, and the Steering Group, in the day-to-day management activities.

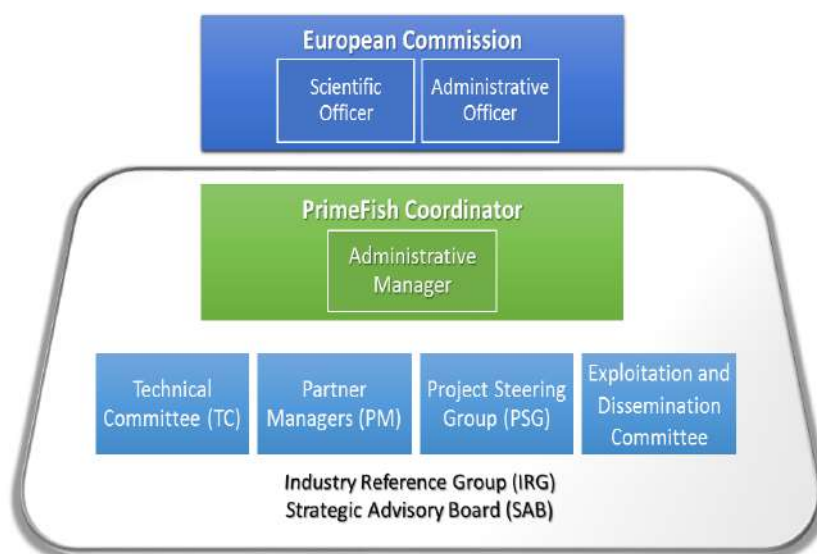


Figure 3. PrimeFish management structure

### Relevant national or international research and innovation activities

The PrimeFish core participants have an extensive RTD project portfolio with leadership and participation in numerous relevant national and international projects. Among those are: TraceFish, Seafood Plus, Chill-on, IQ-Freshlabel, Fresh Label, DeepFishMan, EcoFishMan, MEFEPO, MareFrame, Eumofa, WhiteFish, WhiteFishMaLL (Nordic Innovation), BrightAnimal, SustainAqua, CleanHatch, BioHatch, FishFermPlus, Chitofood, Enviguard, COBECOS, COSTAL FISHERIES (Nora), Sustaining Ethical Aquaculture Trade (SEAT), CONSENSUS, AQUAINNOVATION (CSN-INTRAN), GENESIS, AquaFlow, NovaMar, AralFutur, Profopescas STP, Xestpol, NSA Nicaragua, PO Cabo Verde, Subproductos Colombia, CONSIDER, COBEREN, MUSING. Other relevant

projects PrimeFish expects to liaise with or use results from include: [www.aquatnet.com](http://www.aquatnet.com), [www.asemaquaculture.org](http://www.asemaquaculture.org), [www.aqualabs.eu](http://www.aqualabs.eu), [www.pescalex.org](http://www.pescalex.org), [www.asemaquaculturehealth.net](http://www.asemaquaculturehealth.net), [www.aquaexcel.eu](http://www.aquaexcel.eu).

## Gender issues

The project will focus on equal opportunities for both genders. The project will be led by a male and 1 of the 8 WPs will be led by a female. A female leads the EDC. Females will be leading many of the tasks within the WPs. In most WPs there will be both female and male scientists actively involved in carrying out the tasks.

Fishery and aquaculture is today dominated by male employment (approximately 3/4 on Europe scale) but PrimeFish will develop strategic planning tools that might have a positive effect on including females in the strategic decision making. This argument is related to research on Masculinity / Femininity (Hofstede, 2001). This dimension focuses on to which extent a society emphasises achievement or nurture. Masculinity is seen to be the trait which emphasises ambition, acquisition of wealth, and differentiated gender roles. Femininity is seen to be the trait which emphasises caring and nurturing behaviours, sexuality equality, environmental awareness, and more fluid gender roles. PrimeDSS and PrimeDSF will increase transparency throughout the value chain, and they will facilitate creative and long-term thinking and planning of decision makers, especially in regard to the use of social intelligence to understand and utilise market trends and consumer demands. This could be an opportunity for women to become more involved in the European Fishery and Aquaculture sectors on management level.

Travel during weekends and holiday will be avoided as much as possible as they have a negative effect on family life. In the project every effort will be made to reduce time away from home and to reduce the negative ecological footprint by minimizing the number of training activities and physical meetings. Alternatives to physical meetings e.g. electronic meetings, PC/Skype conferences, telephone conferences and electronic messaging will be used when face-to-face meetings are not required. Training activities and workshops will not be arranged during weekends

### 2.1.3 Ambition

The viability of European fisheries and aquaculture sectors is not ensured long term, as they face increasing competition in the global marketplace both for inputs and outputs. EU capture fisheries have decreased in recent years while the overall world supply of captured fish has remained relatively constant during the last 20 years. At the same time global aquaculture production has increased steadily, but within EU the supply from aquaculture production remains stable. Currently EU supplies about 5% of the global capture fisheries and 3.5% of the world aquaculture production (A.I.P.C.E. – C.E.P., 2013). Therefore EU is increasingly relying on non-European sources of seafood; in 2012, EU imported 64% of whitefish required for its processing sector.

In order to improve the competitiveness and to strengthen the economic sustainability of European fisheries and aquaculture sectors, reliable data input/information and supportive innovative tools are required for fishermen, aquaculture producers and processing companies that can be used to predict the long term functioning of their markets, thus supporting sustainable strategic decisions. No such toolbox is currently available and additionally the lack of reliable production and socio-economic data has inhibited the development of such tools.

The data necessary for the analysis to be undertaken will be compiled from international public sources, as well as from individual companies, industry organisations and consumers and through interviews and surveys. Stakeholders will be consulted by means of questionnaires, personal interviews, web panel and polls, focus groups or Delphi interviews. The consortium includes companies that specialise in market analysis, data gathering and forecasting, such as Kontali (Norway) and INRA (France). Kontali is taking part in The European Market Observatory for Fisheries and Aquaculture (EUMOFA; European Commission, 2010), which is a market intelligence tool on the European Union fisheries and aquaculture sector. EUMOFA provides data from first sale to consumption. Data are collected from EU countries (plus Norway and Iceland) and from European institutions. They are updated daily.

Additionally the consortium has access to data from IRG which will result in a unique European dataset, covering both capture fisheries (herring, cod) as well as farmed species (salmon, sea-bass/sea-bream and freshwater trout). This will make it possible to carry out detailed study of the European seafood market, using microeconomic models, time-series analysis and methods used for analysis of supply-chains, markets and consumer behaviour.

Microeconomic methods will be used to analyse growth, profits, and demand for inputs and outputs, thus identifying the forces driving the sector, both less predictable variables that may influence the sector trend as well as those that affect demand for individual products (e.g. own price, price of substitutes, income). This can be done through the



estimation of incomplete or complete demand systems. Parametric (stochastic frontiers) and non-parametric (data envelopment analysis, DEA) will also be used to estimate productivity and efficiency for individual companies and the industry as a whole.

In addition to traditional econometric methods, the project will take advantage of a new software tool, Flexible Statistics for Data Analysis (FSDA), recently developed jointly by the University of Parma and the Joint Research Centre of EC in support of a robust and efficient analysis of data sets (Riani et al., 2013). The tool is particularly useful in detecting potential anomalies (outliers) in data sets and from an innovation perspective the outliers are potentially of outermost interest.

The Global Value Chain (GVC) framework (Keane, 2008; Bolwig et al., 2010) will provide the analytical basis for supply-chain comparisons with a view to assessing the distribution of risks, costs and rewards, potential up grading strategies (process, product, functional, inter-chain, standards matching etc.) and identifying associated barriers to their uptake. The supply-chain will be mapped, thus delineating actors, nodes, functions, ownership, market share, finance and product flows, geographic configuration, input-output structure and value added at each step. In-depth case studies will then be used to assess these and the additional areas of (i) chain governance (who does what, when, how and under which conditions) identifying lead companies, their product specification and reward roles - and the linked area of chain coordination (relations between actors, networks, contracts, information, knowledge and technology flows), (ii) institutional frameworks i.e. the influence of mandatory and voluntary market based regulatory systems including 3rd-party certification.

Regulation refers to all rules imposed by a government, backed by the use of penalties or incentive mechanisms that are intended to, or in practice, modify the economic behaviour of individuals and companies in the seafood sector. An important area of regulation in the fisheries includes measures designed for resource management purposes. In the aquaculture industry, the regulation of access to space in coastal and inland areas and fresh water resources are important determinants. Often, regulatory frameworks affecting the seafood industry are designed for a range of societal goals, imposing bottlenecks in the value chain.

Whereas the supply-chain has a special focus on the commercial aspects of the activities, mainly expressed by value added, a more holistic view of the marine sector must also take into account non-market values. These may be positive or negative. Examples of positive non-market values are the presence and preservation of marine culture including ways of living, production techniques and biological knowledge. The marine sector also provides occupation in rural areas, which often have few alternatives. Examples of negative non-market values may be the creation of imbalances in “natural” marine ecosystems, when commercially attractive species, or their prey and habitats, are removed in large quantities. Aquaculture may produce negative effects such as escapees or pathogens, which may pollute the natural gene pool or wild stocks in the area. All these non-market values are reasons for why regulations are important in the marine sector, be it capture fisheries or aquaculture.

Past and current consumer behaviour and habits will be analysed using aggregate and detailed data and experiments. Conjoint analysis will be used to specifically evaluate consumer acceptance of products. The method is one of the analytical techniques traditionally used in the field of marketing research to evaluate consumer behaviour in respect of product's multidimensional attributes purchasing decisions. Qualitative and quantitative studies will be undertaken to gather further knowledge on consumer preferences and behaviour. Questionnaires about attitudes and personality traits have commonly been used in consumer research. This method can generate extensive, quantifiable insights regarding e.g. interest in healthy eating (Roininen et al, 1999), attitudes towards functional foods and health claims (Grunert et al, 2009).

Special attention will be paid to analysing promotions/campaigns undertaken to increase consumption of fish and introduce new products to the public. A list of successful and less successful promotions and products will be compiled, which will be of special value for producers and policy makers. For this purpose the Mintel-GNPD data, which records all food innovations each year introduced into the European market and other supply-side sources, will be matched with information from consumption databases. The consortium has expert knowledge in this area, as it includes members of the Consumer Behaviour Erasmus Network (COBEREN) which is a network developed to analyse consumption culture, consumer behaviour and the linkage among them in 30 countries in Europe.

### ***Innovation potential***

Applications of Decision Support System (DSS) in the food industry, including seafood industry, are increasingly being studied and developed. The amount of data recorded in the food industry has increased greatly in the last decade, as a result of decreasing cost in data recording through automation and the use of computer software. The

data can be used to fulfil the demands of consumers who want information on their food products, such as origin, impact on the environment and more.

There are a number of areas, including that of fisheries and aquaculture, in which the return on investment in a DSS can be substantial. DSS can provide site specific, integrated and interpreted advice that fishers, farmers, producers and other stakeholders need in order to efficiently manage fisheries and aquaculture resources. However, the development of DSS for the fisheries sector is fairly recent and the use of these systems in commercial ventures is rare to date, especially with respect to understanding market dynamics and increasing competitiveness (Alagappan and Kumaran, 2013). The National Agricultural Library's Aquaculture Information Centre has developed an expert system based advisor called AQUAREF for supporting reference related to aquaculture information inquiries. It is an automated system developed for computer storage and access. This expert system was developed to help improve access to basic resource tools and information in aquaculture in U.S. Another expert system, REGIS (Regional Information System for African aquaculture) provides information on aquaculture of the Sub-Saharan Africa region in an easy-to-use form for administrators. It presents a descriptive summary of African aquaculture, covering areas such as consumption and production statistics, extension, training, credit programmes, associations, government policy and legislation and development projects.

There are also DSS applications in forecasting of future market prospects for various products and for fish market forecasting (Alagappan and Kumaran, 2013). STRATEX (STRATegic decision making system for EXport companies), a knowledge based system, aids in decision making in trade of fish and fisheries products by supporting the choice of market segments and export trade of raw and manufactured fish products in Norway. APPFSS (Aquatic Products Price Forecasting Support System) was developed by China Agricultural University to provide decision aids to price forecasting to avoid market imbalance. This expert system combines models, data, expert knowledge and a user interface and support participants of aquaculture industry to predict market price and related information. By using a Case Based Reasoning (CBR) approach, an expert system was developed forecasting the price of aquatic products and constructs a forecasting system which can automatically collect internet data on aquatic product prices. The system could effectively analyse and forecast the aquatic product prices using source data from dedicated web sites. Expert systems have also been developed to predict the fishery market in Jiangxi Province in China, to forecast Danish ex-vessel seafood prices, and to forecast aquatic products price based on agent.

A valuable lesson learned is the importance of having access to accurate and well-structured data. The potential benefits of using DSS for implementing collaborative planning and advanced forecasting methods and that of inventory, production management and marketing methods are obvious. These potential benefits will however not be properly obtained without the access to accurate and up-to-date data from all levels in the supply-chain. Information stored in Enterprise Resource Planning (ERP) systems can be very valuable if used correctly, but most current ERP systems are not using the information properly to support decision making and there is a large scope for improvements obtained with useful and effective decision support modules, either as part of the ERP systems or individually developed.

It is therefore evident that there are a lot of opportunities in developing, extending and implementing the use of DSS in the seafood industry. The innovation process involving seafood business operators, software providers, research institutes and universities is pivotal in accelerating the use of DSS in the seafood industry. Merging of information systems and operation research is required and detailed understanding of the food industry as well, in order to interpret the answers found and to ensure realistic usage of PrimeDSS. To ensure durable project results that will actually be used by the industry the PrimeFish consortium contains industrial partners with an interest in commercial exploitation of the PrimeDSS toolbox after the project has ended.

## 2.2 IMPACT

### 2.2.1 *Expected impacts*

EU seafood consumption has risen over the past 10 years. Although capture fisheries supply has declined, most of the increase in EU seafood consumption has come from import rather than growth of EU aquaculture. Aquaculture is one of the pillars of the EU's Blue Growth Strategy. As outlined in the reform of the CFP, the EU aquaculture industry could provide a viable alternative to overfishing and generate growth and jobs in both coastal and inland areas, if only it can enter a virtuous spiral of robust and sustainable growth. Each percentage point of current EU fish consumption produced internally through aquaculture could help create between 3.000 and 4.000 full time jobs (European Commission, 2013a).

***PrimeFish has set out to extend current knowledge and insights about the competitive performance of the EU seafood sector. The essential aim is to improve strategic decision making based on market intelligence for industry players and policymakers in EU.***

PrimeFish will have an impact on micro-economic level for the companies that can utilize the insights generated by the project in general, and in particular for the companies that use the PrimeDSF and PrimeDSS. This impact will typically entail the following:

<b>Insight or functionality provided by PrimeFish</b>	<b>Micro-economic impact for user company</b>
Develop a comprehensive index that can be used to evaluate the competitiveness of European Fisheries and Aquaculture sectors (FACI)	This will constitute a benchmark evaluation of "world class" performers within the fisheries and aquaculture sectors and will highlight success stories and challenges.
Analysis of the effects of production costs and productivity growth	Benchmarking of the primary production in the capture fisheries and aquaculture
Analysis of innovation, product development and successful seafood products	Benchmarking of the product innovation in the company, better business decisions by learning from the successes and failures of others
Identify and analyse key parameters to predict market trends and consumer preferences and price developments in the global market place.	Enhanced and new knowledge about the global consumer markets which the seafood operators can utilise in their business development – both in terms of new products and value added features of existing products.
The data collected in PrimeFish both on aggregated level and case studies level will enable development of simulations models for describing production parameters, supply-chain relationships, market dynamics (incl. "boom and bust cycles"), consumer preferences and product innovation.	The new models will be used in a web based user-friendly decision support system (PrimeDSS) for production planning, forecasting of potential product success as well as market trends and developments.
The PrimeDSS tool that is web-based and has interactive features.	Cost-effective, innovative information processing for enhanced insight and decision making. Interactive part enables a continuously increasing pool of data that will improve the usability of the simulation models.
The PrimeDSF decision support framework	Access to a knowledge repository containing data, methods, assumptions, models and algorithms pertaining to aspects of economic sustainability and competitiveness in the seafood sector, leading to improved understanding of the factors and mechanisms involved and better business decisions overall

With the extensive Industry Reference Group (IRG) already committed to the project, and the many outreach activities designed to involve more stakeholders PrimeFish also has the potential for larger overall societal impact in the long run. A simple PESTLE analysis can serve to highlight this potential:

Impact category	Potential impact
Political	Seafood production and trade is a political sensitive area, both when it comes to subsidies, taxes and tariffs, and also to some degree when it comes to access to resources (catch quotas, feed quotas). PrimeFish will evaluate the effectiveness of these measures and indicate to what degree they fulfill the stated policy objectives. Policy makers can use PrimeDSF and in particular PrimeDSS for structural and legal decision support on planning for reaching the objective to be set for each member state balancing sustainable social, environmental and economic trade-offs.
Economic	Economic impact is obviously the main impact of PrimeFish, with the potential for companies, regions and sectors to become more efficient, competitive and profitable, and the enabling of economically more sustainable decisions on every level. If the European aquaculture will double in volume by 2020 a simple rule of thumb predicts that this growth will create up to 4.000 new jobs in this Blue Growth industry
Social	Economically more stable seafood production and trade will clearly have a direct and positive social impact with respect to provision of stable and long term employment, especially in rural areas. With more profitable companies in the long term there is a potential for higher and more stable salaries which is tied to job satisfaction. Profitable companies are more inclined to invest in their workers, and this in turn may have direct impact on social issues such as worker safety and corporate social responsibility.
Technological	The insights related to characteristics of successful seafood products will have technological impacts in various ways. It may be that successful new products often are the result of technological innovation, or the opposite might be true; that the success of new products is not in general dependent on new technology. Either way, the outcome of this analysis will have a technological impact, either in encouraging or in discouraging investments in new technology.
Legal	Regulation is an important factor in the seafood industry especially in relation to resource management, and PrimeFish will identify and compare how various forms of regulations affect individual companies and the industry as a whole. This analysis will serve as input for authorities when developing and adapting regulations, it will indicate consequences, limitations and side effects of various forms of legislation, and the impact will hopefully be better and more relevant legislation in the future, designed to protect society's interest while minimizing unnecessary negative impact on the industry and the seafood sector in general.
Environmental	While there's little direct environmental impact from the project, in the current situation with occasional overproduction and market flooding due to "boom and bust" cycles, waste, spoilage and inefficiency is unavoidable, and this obviously has negative environmental impact associated with unnecessary resource use. In this context the economic and the environmental concerns are well aligned; by reducing the variance over time in production volume and price the supply will to a larger degree match the demand which will mean less overproduction and less spoilage and waste.

### ***Direct impact from PrimeFish as called for in the work programme***

PrimeFish aims to have a significant innovative impact on the following aspects of the competitive performance of the European seafood sector: Future of European fishing industry and aquaculture. The impact can be listed as follows:

#### ***A. Impact on consolidation of the economic sustainability of European fisheries and aquaculture sectors (marine and freshwater).***

Overall, in 2011 there was a decrease in the total volume of seafood landed by the EU fleet but the value of catch increased. Although the total costs of the EU fleet increased, the total income increased more and subsequently the economic performance of the EU fleet showed improvements to that of 2010, with 6% of income retained as net profit (Döring and Borello, 2013). The data shows that the economic performance of the EU fleet has been improving gradually over recent years, showing a net profit margin of 1% in 2008 that increased to 6% in 2011. However, as the EU fleet is very diverse, operating in many different fisheries using a wide variety of fishing techniques, this trend did not apply to all fleet segments. While the EU fleet overall was profitable in 2011, six national fleets and around 45% of the fleet segments made net losses. Economic performance estimates for 2012 suggest increased income for 9 out of the 14 Member State fleets that provided sufficient data for analysis, while gross value added (GVA) as a proportion of total income increased in half of those member states and net profit margin increased in a third of those Member State fleets.

According to the 2013 Annual Economic Report on the EU Fishing Fleet, the EU fleet generated €3.4 billion in GVA, €1.3 billion of gross profits and a net profit of €410 million. Economic performance data broken down by main fishing activities suggests that the large-scale fleet generated 71% of the EU fleet's income, with the small and distant water fleets each contributing around 15%.

An analysis of factors that may have contributed to improved economic performance in 2011 include the following market parameters: a) higher average first sale prices for many commercially important species, b) favourable market conditions (internal and export) for several species, c) implementation of certification schemes and the growing demand for certified products and d) innovation projects. The analysis also indicates the following reasons for poor economic performance: a) the effects of the global economic crisis which continues to affect internal and international markets for some species and limits access to credit and b) insufficient routes to market.

In 2011, EU-28 fish farming provided an estimated 1.28 million tons, worth €3.51 billion and provided an estimated 80,000 jobs in hatcheries, production and related upstream and downstream activities (Döring and Borello, 2013). It is recognised that aquaculture underpins sustainable economic growth in rural and coastal communities. However, the sector has shown slow growth (1% per year) over the last decade, while imports continue to rise, accounting for 65% of the 12 million tons of seafood required by the EU market. In fact, growth has been seen only in marine aquaculture (>7%) while freshwater farming growth was reduced (-2%). In recent times, the economic crisis has caused reductions in Mediterranean yields, particularly in Greece & Spain (FEAP, 2013).

Although European aquaculture offers good quality products and respects strict environmental sustainability, animal health and consumer protection standards, its growth has been minimal since the turn of the century, as its products have not been price competitive compared with imports. The excellent quality of EU seafood should constitute a major competitive advantage, but still the growth has stagnated in contrast with strong growth in other regions of the World.

To address this issue, the European Commission has issued a Communication on the "Strategic Guidelines for the sustainable development of EU aquaculture" (European Commission, 2013a). The guidelines identify the main challenges for the sector: red tape and uncertainty for EU operators; limitations in access to spatial and aquatic resources; the need for greater competitiveness; and not making full use of the EU products' competitive advantage in terms of quality.

Stagnation in EU finfish aquaculture has been primarily due to a loss of corporate profitability, widely attributed to high competition in the marketplace but also difficulties in adapting to evolving consumer preferences and EC legislative conditions. "Boom and bust" incidents have been seen for most components of European fish farming, including that of salmon.

In freshwater aquaculture, the production of both carp and trout (95% of EU freshwater aquaculture) has declined while in marine conditions, after many years of growth, the production of sea-bass/sea-bream has also been reduced in recent years. Salmon remains the exception, where production has doubled in 10 years, growth being seen both in the EU/EEA (e.g. Norway, UK, and the Faroe Islands) and in Chile.

One important outcome of PrimeFish will be the development of the **comprehensive index that can be used to evaluate the competitiveness of European Fisheries and Aquaculture sectors (FACI). This will constitute a benchmark evaluation of "world class" performers within the fisheries and aquaculture sectors and will highlight success stories and challenges.** Through the FACI index, PrimeFish will have a positive impact on the overall competitiveness and economic performance of European fishing and aquaculture industry.

***B. Impact on improved understanding of market dynamics and how to reap business potential based on science-based support.***

The seafood sector remains very fragmented, in particular for markets of fresh seafood, but it is in a phase of consolidation and globalization. In the last two decades, the consumption of fish and fishery products has also been influenced considerably by globalization in food systems and by innovations and improvements in processing, transportation, distribution, marketing and food science and technology. These factors have led to significant enhancements in efficiency, lower costs, wider choice and safer and improved products. Owing to the perishability of fish, developments in long distance refrigerated transport and large-scale and faster shipments have facilitated the trade and consumption of an expanded variety of species and product forms, including live and fresh fish. Consumers can benefit from increased choice, with imports boosting the availability of fish and fishery products in the domestic markets (OECD-FAO, 2013).

PrimeFish will through state-of-the art market research in WP2, WP3 and WP4, identify key parameters to predict market trends and consumer behaviour in the global market place. The findings will provide the European seafood industry with an improved understanding of the global value chain, market dynamics and consumer preferences. This information will be gathered for decision making at production level. Thus the industry can match customer needs and consumer preferences with respect to product innovation and new and more efficient channels to communicate relevant and competitive product information about origin, nutrition and health benefits, etc. The impact of PrimeFish will thus be enhanced and new knowledge about the global consumer markets which the seafood operators can utilise in their business development – both in terms of new products and value added features of existing products.

### ***C. Impact on the availability of tools for production planning and development of novel products and markets.***

To promote the competitiveness of European fish farming, the recognized needs include ‘shaping a high performance aquatic animal-farming industry’. The consideration is integral to the measures identified in the aquaculture components of the proposed Common Fisheries Policy (CFP) 3 (from 2014), which notes that the ‘EU must promote sustainable, competitive and diverse aquaculture, supported by the most advanced research and technology (European Commission, 2011).

The data collected in PrimeFish both on aggregated level and case studies level will enable development of simulations models in WP5 for describing production parameters, supply-chain relationships, market dynamics, consumer preferences and product innovation.

The models will also be designed to predict upcoming instability between demand and supply, e.g. the well-known “boom and bust cycles”. Thus a main outcome of PrimeFish is new models which can be used in a web based user-friendly PrimeDSS for production planning, forecasting of potential product success as well as market trends and developments.

The web based tool will be designed, specified and partly developed in WP6 and a prototype will be tested with relevant stakeholders during the project lifetime in WP7. An important aspect is the possibility to utilise big data features such as high-volume, high-velocity and high-variety information enabling interactivity between research and industry in collecting and benchmarking operational and historical data. The impact will be cost-effective, innovative forms of information processing for enhanced insight and decision making. In addition a continuously increasing pool of data that will improve the usability of the simulation models. Thereby the PrimeDSS will become a relevant decision support tool to be used by industry for strategic business decisions.

### ***D. Impact on supply-chain optimization and avoiding negative effects of “boom and bust” cycles.***

Aquaculture has pushed the demand for, and consumption of, species that have shifted from being primarily wild-caught to being primarily aquaculture-produced, with a decrease in their prices and a strong increase in their commercialization, such as for shrimps, salmon, bivalves, tilapia, catfish and pangasius. Aquaculture also plays a role in food security through the significant production of some low-value freshwater species, which are mainly destined for domestic production, also through integrated farming.

These ongoing changes in consumer preferences are call process and product innovations and on new procedures for organizing the supply-chain. The majority of product innovations deal with incremental modifications, such as variations in taste and packages designed for different forms of consumption.

The innovative impact for utilisation beyond the project lifetime is the development and user validation of the PrimeDSS. This system will be fed with information from the whole supply-chain and based on simulation models enable informed decisions about optimisation in the supply-chain for a given product in a target market at a given time. Thus the PrimeDSS will enable decision support on specific seafood species for specific markets and the effects on the supply-chain (input costs – process cost– output price) depending on the added value or properties a seafood operator wants to apply to the product.

Stakeholder interaction is vital for the success of the project to ensure that the knowledge generated within the project reaches stakeholders and that the system is tested and validated. Data from the IRG will be a key in generating the new knowledge, insights, models and the DSS toolbox and it is impertinent that these actors have an incentive in using the toolbox after the completion of the project and feeding data into it.

PrimeDSS will be implemented as an easy-to-use web-based software that will be accessible on commercial terms beyond the project’s lifetime for seafood operators and key stakeholders. It is likely that PrimeDSS will have a significant impact on reducing the negative consequences of “boom and bust” within the industry. With PrimeDSS

seafood operators can “tap” in their future business development plans and the system will provide them with forecasts about potential supply (based on updated and aggregated industry data), operational costs (e.g. feed & fuel), market trends and market prices. The consequences will be few investment decisions made with high risk for “boom and bust” scenarios.

One of the two SME partners in the consortium, Kontali, who currently holds one of the most extensive private databases on the supply-chain for aquaculture and fisheries in the world, will commercially exploit PrimeDSS and the data analyses generated in the project beyond the project lifetime.

### ***E. Impact on boosting the competitiveness of European seafood products based on added value and preference from European consumers' choices.***

The total impact from PrimeFish on competitiveness of European seafood, both in terms of added value and consumers' choices, can be summarised:

<b>Target group</b>	<b>Needs</b>	<b>Constraints</b>	<b>How will PrimeFish help?</b>
Fishermen	To understand and benefit from the dynamics of their markets	Lack knowledge and overview	Gives science-based support, overview and usable PrimeDSF toolbox
Fish and aquaculture processors	Models and tools for production planning and the development of new products and markets	Lack of appropriate overview and data on the supply-chain and final market	Scientific knowledge & insight; toolbox for planning and developing new products and markets, that warns against “boom and bust” cycles
Public stakeholders	Information on markets, industry performance, opportunities for species and countries	Lack of appropriate overview and socio-economic data	Scientific knowledge & insight, toolbox for peer comparison on a country or species basis
European fisheries and aquaculture sectors	Lack competitiveness and economic sustainability	Limited availability of information and tools, innovation and market insights	Enhanced competitiveness – more diversified production, increased value added, new markets
European consumers	Safe, healthy, good quality seafood products that are competitively priced	Lack of information on origin, catching methods, processing and sustainability	Improved information on products and processing (labels, certification, health claims), novel products

The impact will be obtained through the concrete project outcome PrimeDSF, the web-based prototype of PrimeDSS and the commercial exploitation of the design and development of the system, and through dissemination activities in terms of training of the industry and stakeholders in the use of the toolbox in workshops, through the social media and videos. These workshops will be organized around major trade shows and conferences to increase their reach and impact. In addition there will publications of the scientific outcome of the projects in journals and on relevant scientific seminars and conferences.

### ***Impact from PrimeFish on innovation capacity to strengthening European competitiveness on a global scale***

The long-term forecast for food demand remains positive, driven by population growth and urbanization. In particular, demand for fish products is expected to continue to rise in the coming decades. However, future increases in per capita fish consumption will depend on the availability of fishery products. With capture fisheries production stagnating, major increases in fish food production are forecast to come from aquaculture. However, future demand will be determined by a complex interaction of several factors and elements. The global food sectors, including the fishery sector, will have to face several challenges stemming from demographic, dietary, climate and economic changes, including reduced reliance on fossil energy and increasing constraints on other natural resources. In particular, the future supply and demand of food commodities, including fisheries, will be affected by population dynamics and the location and rate of economic growth. The global population is set to increase from about 7 billion in 2011 to 7.7 billion in 2020 and 9.3 billion in 2050, with the bulk of the increase occurring in developing countries, according to the medium-variant projections prepared by the United Nations (FAO, 2012).

Preliminary data from (OECD-FAO, 2013) indicate that total fishery production continued to rise in 2012 setting a new record at 157 million tons, due to a 6% rise in aquaculture production over 2011. Subsequent to the 5% increase experienced in 2011, capture fisheries declined by more than 3% in 2012 due to lower catches of anchoveta in South America. These reduced catches also triggered a decline in fishmeal and fish oil production with subsequent strong price increase, negatively affecting poultry, pig and fish producers reliant on these products as feed ingredients.

During 2012, the value of trade set a new record at more than \$129.3 billion, but it was only a modest increase over 2011 (+1.5%) as international prices of fish and fishery products for human consumption were under downward pressure in 2012. This was particularly true for farmed fish species, while prices of captured fish have increased. The price dip was the result of a reduced consumer demand in many key markets. These tendencies were reflected in the FAO Fish Price Index, which shows international fish prices sliding by almost 6% in 2012 compared to 2011 for total fisheries products, but by more than 17% if taking into account only farmed fish.

The European fishery and aquaculture industry can utilise the expected results from PrimeFish in increasing their innovation capacity in order to increase their ability to respond on the following market trends:

Global market trend within fisheries (based on OECD-FAO, 2013)	Impact from PrimeFish on innovation capacity
The fish market outlook for the decade ahead reflects the response to growing production costs in a context of steady demand, particularly from developing countries. Higher prices are expected in fishery production and trade.	The European seafood industry (wild catch and aquaculture) can use the market analysis tool (contained in the PrimeDSF) to benchmark competitiveness, target market segments (products & regions) and position in the value chain in order to conduct process, product or market innovation and thereby increase their share of the future growing demand for seafood on a global scale
World fisheries and aquaculture production is expected to reach about 181 million tons by 2022, a 18% growth compared to the 2010-12 base period. Most of the production gains will come from aquaculture, which will increase by 35%.	The PrimeDSS tool and the underlying simulations models can become a pivotal instrument for both industry and policy makers to use in order to avoid “boom and bust” cycles in certain aquaculture species, and at the same time use the PrimeDSS to identify and optimize high value species that can be combined with sustainable spatial and ecosystem planning for increased aquaculture activity across coastal regions in Europe.
The annual growth rate of fish consumption will slightly decelerate (from 1.8% to 0.6%) due to higher fish prices and a slowing of population growth. Additional fish consumption expansion will mostly originate from developing countries, which will also continue to dominate production and exports.	Since the main market increase will be in the developing countries European competitiveness is likely to be based on innovation with respect to increasing the efficiency of utilising marine proteins and fatty acids for healthy and nutritious products in both food and feed worldwide. PrimeFish provides tools and information for strategic planning on how to position European seafood industry in this development – both on a business development level and on political, regulation and standard framework level.
In 2010, the total aquaculture production in Europe (including Norway and Faroe Islands) was 2.6 million tons (European Commission, 2011). Available data show a growing gap – estimated at 6-7 million tons – between the level of consumption of seafood in the EU and the volume of captures from fisheries.	As described above for the global market development, the PrimeDSF and PrimeDSS can be used as tools in predicting and planning for production expansion of aquaculture. But the tools can also be used to understand how to make European consumers appreciate local sourced and produced food, e.g. through information about regional origin, date of catch/ process and nutritious benefits through smartphones and social media. <sup>1</sup> This understanding is required in order to steer European consumers' choices towards European produced seafood.

### ***Impact from PrimeFish on environmental and social awareness***

The overall objective of PrimeFish is to enhance the economic sustainability of European fisheries and aquaculture sectors.

<sup>1</sup> Partners MATIS, NOFIMA and SYN have demonstrated examples of such innovation in the Nordic Innovation project WHITEFISHMALL ([www.whitefishmall.com](http://www.whitefishmall.com))



According to the Strategic Guidelines for the sustainable development of EU aquaculture, high environmental, animal health and consumer protection standards are among the EU aquaculture's main competitive factors and should be more effectively exploited to compete on the markets. Existing sanitary checks of EU and imported products already ensure a high level of food safety. Societal concerns have also resulted in demand from consumers, NGOs and retailers for assurances that the food they purchase has been produced respecting very high environmental and social sustainability standards. If the level of sustainability of EU aquaculture products is correctly addressed and communicated to the public, this can improve the competitiveness and societal acceptance of EU aquaculture and its products. New labelling provisions as proposed in the CMO Regulation may help better differentiation of EU aquaculture products; voluntary certification schemes can also play a role in this context.

Experience in the agricultural sector confirms that there is a growing demand for sustainable, high quality food. For instance, in the last ten years the growth rate of organic food retail sales in the four largest EU markets has outpaced the overall demand growth for food products in the EU, with average yearly growth rates of 7-15% for organic food against 2-5% for non-organic (European Commission, 2013b).

According to FAO, organic aquaculture production in Europe increased by close to 30% annually between 1998 and 2007. Some retailers play an important role in bringing certified fish products to the marketplace, and do so as part of their overall corporate social responsibility commitments; the entry of major retailers has been one of the decisive factors leading to the rapid growth of the organic food sector in the last decade.

The impact from PrimeFish will be market-led innovation with new product concepts based on market research that will support producers in their diversification strategy. The product concepts will include important demands from European consumers related to smart, sustainable and inclusive growth, such as sustainable and resource-efficient production (e.g. water, energy, and feed), support of rural and coastal communities and inclusion of SMEs in future growth. Long term thinking in the seafood industry will increase, and managers within the industry will focus more on sustainable growth instead of running after fluctuations in market price of seafood and short term availability of catch.

### ***Impact from PrimeFish on industry employment***

Although the number of people employed in the fish industry is falling, there were still more than 400,000 people working in fishing, aquaculture, processing, trade and distribution in 2005, over one quarter of them women. Fishing, fish processing and aquaculture face a number of major challenges: Fishing is affected by quota restrictions and other management measures, increasing fuels costs and crew shortages, while processing suffers from lack of raw material, high labour costs and competition from non-EU imports. As the production from the capture fisheries will remain smaller than the European domestic demand, aquaculture products are expected to meet the market need. However, European aquaculture faces increasing competition from imports, depressed prices for some species, stricter environmental regulations and conflicts for space in the coastal zones (European Commission, 2006)

The increased activity in aquaculture will lead to increases in jobs. In Norway, one employee is required for the production of each 600 tons of salmon per year. If the European aquaculture will double in volume by 2020 a simple rule of thumb predicts that this growth will create up to 4.000 new jobs in this Blue Growth industry.

Primefish can have also a positive impact on quality of employment (availability of qualified crew/staff) and attractiveness in the industry (decent salaries, job satisfaction) through increased competitiveness as a consequence of product and market innovation and optimised position in the value chain. This impact can be obtained if the industry uses the market intelligence tools developed in PrimeFish, and understands the need to provide the market with products and information that matches the demand of their target customers. PrimeFish will analyse the non-market value of fisheries and aquaculture which is closely connected to the social impact that the sectors have beyond the direct monetary value.

Despite all good intentions on responsible behaviour by fisheries and aquaculture the main driver for implementing new procedures and best practices in an industry are economic aspects. Unless new standards for business operations are economic, viable and profitable, the industry will be reluctant to implement these standards. Furthermore a majority of the European fisheries companies can be characterized as SMEs, which often make decisions based on short rather than long-term expectations. The investment perspective is thus related to short term socio-economic gains, while long term expected but not quantifiable changes in market behaviour will not act as major incentives for strategic changes.

PrimeDSS can contribute to sustainable and long-term planning by simulating negative and positive consequences of business dispositions in order to select the development option with the optimal socio-economic benefits. Thus the impact of PrimeDSS “*will be of high relevance to the future management of marine living resources and will support proper implementation of the new Common Fishery Policy, the Marine Strategy Framework Directive and the Habitat Directive.*” The ability of PrimeDSS to have such an impact will be tested and evaluated in WP7.

### ***Impact from PrimeFish on political, regulation and standard framework***

The agreement on a new, reformed fisheries policy for the EU was reached between the Council of Ministers and the European Parliament in 2013 and enforced in January 2014. PrimeFish can have a useful impact on several of the aspects of the reformed CFP:

#### **Management of fishing capacity of fleet**

Member States will have to ensure that the fleet capacity (number and size of vessels) is in balance with the fishing opportunities. Where a Member State identifies overcapacity in a fleet segment, it will develop an action plan to reduce this overcapacity.

- **Impact:** The PrimeDSF can be used as a tool to predict the need for fishing capacity for a specific species in a specific region based on data for market outlook.

#### **Developing sustainable aquaculture**

A better framework for aquaculture will contribute to increased production and supply of seafood in the EU, reduced dependence on imported fish and boosting of growth in coastal and rural areas. By 2014, Member States will draft national strategic plans to remove administrative and other barriers, while upholding environmental, social and economic standards for the farmed-fish industry.

- **Impact:** In the future, Member States can use PrimeDSF as a tool for simulating consequences of planned development – both in terms of social (job creation), environmental marine ecosystem and economic impact. The PrimeDSF can have an impact as a common reference in the communication with community and environmental stakeholders.

#### **Improving scientific knowledge**

The CFP establishes the basic rules and obligations in order that Member States will be entrusted with collecting, maintaining and sharing data about fish stocks, fleets and the impact of fishing at sea-basin level, so as to improve the advice to policy and management.

- **Impact:** The web-based, user-friendly and interactive PrimeDSS will have a significant impact in obtaining this data sharing and maintaining, especially since the project already in its establishing phase has managed to bring an SME into the consortium that will continue operating the PrimeDSS on commercial terms.

#### **New market policy - empowerment of the sector and better informed consumers**

The new market policy aims to strengthen the competitiveness of the EU industry, improve the transparency of the markets, and ensure a level playing field for all products marketed in the Union.

- **Impact:** PrimeFish will contribute to this “level playing field” with transparency and benchmarking opportunities.

The existing intervention regime will be modernized and simplified: producer organisations will be allowed to buy up fisheries products when prices fall under a certain level, and store the products or placing them on the market at a later stage. This system will foster market stability.

- **Impact:** In this context PrimeDSF and PrimeDSS can be used by the industry as tangible tools for decision support.

Producer organisations will also play a greater role in collective management, monitoring and control. New marketing standards on labelling, quality and traceability will give consumers clearer information and help them support sustainable fisheries. Certain labelling information will be compulsory, other claims may be supplied on a voluntary basis.

- **Impact:** By using the simulation models developed in WP5 European producer organisations can conduct “what if?” calculations based on high/low price vs. market access based on standardisation schemes.

#### **Taking international responsibility**

In bilateral fishing agreements with non-EU countries, the EU will promote sustainability, good governance and the principles of democracy, human rights and the rule of law. Sustainable Fisheries Partnership Agreements (SFPAs) will replace the existing Agreements and they will ensure that the exploitation of fishery resources takes place on the basis of sound scientific advice only targeting surplus resources as internationally recognized. Under SFPAs, partner countries shall be compensated for granting access to their fishing resources and financial assistance shall be provided to the partner countries for the implementation of a sustainable fisheries policy.

- **Impact:** In this context PrimeDSF contains tools and methods to analyse the strategic consequences of such bilateral fishing agreements with non-EU countries.

## **2.2.2. Measures to maximise impact**

### **2.2.2.1. Dissemination and exploitation of results**

The dissemination activities in PrimeFish will be the main communication platform for project communication, transfer and exploitation of results, improvements of systems by innovation and public awareness. A number of activities have been foreseen in order to ensure that both business impacts (products and services) and societal benefits reach all relevant stakeholders (e.g. fishing organizations, aquaculture and fish producers, governmental departments, NGOs, research organizations, educational/training institutions, research platforms, etc.) at internal level and at regional, European and global scale.

Common understanding of the activities in the project is the basis to identify problems and to get results. This means that communication and integration between the WPs are important and will be stimulated by WP7. PrimeFish will utilize tools for inter-communication which includes PrimeFish intranet and discussion forums, in addition to WP meetings, seminars, webinars and workshops. A document management system will be used (e.g. PB, Dropbox) as a repository for all project documents and reference materials and for sharing ideas among researchers, partners and the IRG. Particularly, a summary will be provided after each event to inform the IRG on the results and how the input is going to be incorporated in the PrimeFish information flow.

WP7 has a fundamental role in the project since it will be responsible for the overall dissemination of the project. WP7 will thus act as a dissemination platform between all the other WPs and the IRG. This will be accomplished via a number of regional sessions aimed at exploiting the maximal R&D potential of the project. Additionally, the internal dissemination will be re-assessed and adapted periodically through measurement tools that evaluate the progress (e.g. ad-hoc indicators, surveys, comments form, etc).

#### **PrimeFish target groups**

To achieve maximum impact of a project the target groups and potential users of project results have to be fully known and their needs understood. PrimeFish has a wide variety of stakeholder groups – vessel operators, aquaculture farmers, processors, wholesaler, retailers, customers, investors, consumers, policy makers, regulators, interest groups, citizens and suppliers. To understand their different interests and concerns PrimeFish fosters stakeholder relationships at both consortium and local levels of target areas through regular and systematic forms of dialogue, such as meetings, conferences, workshops, open days and surveys. By listening to stakeholders' concerns, engaging in serious discussions, and striving for transparency in all activities, PrimeFish aims to build sustainable and social innovation.

In addition PrimeFish has a dedicated IRG that will provide data and will act as an industrial reference point in the different seafood product and geographical regions. A thorough stakeholder analysis provides the basis for all activities aimed to maximise PrimeFish impacts and serves as the foundation for the Dissemination and Exploitation Plan and communication activities. Figure 4 shows the identified stakeholder groups which have been sub-divided by their levels of influence on and interest in PrimeFish into the following groups:

- Key Stakeholders (high influence/high interest)
- Facilitators or Risks (high influence/low interest)
- Multipliers & Target Groups (low influence/high interest)
- Potentially Interested Parties (low influence/low interest)

Communication and dissemination activities are targeted at all identified groups with varying and well-defined goals. Activities and means are chosen in accordance to those goals and can be divided in ‘dissemination and exploitation’ and ‘communication’ activities.

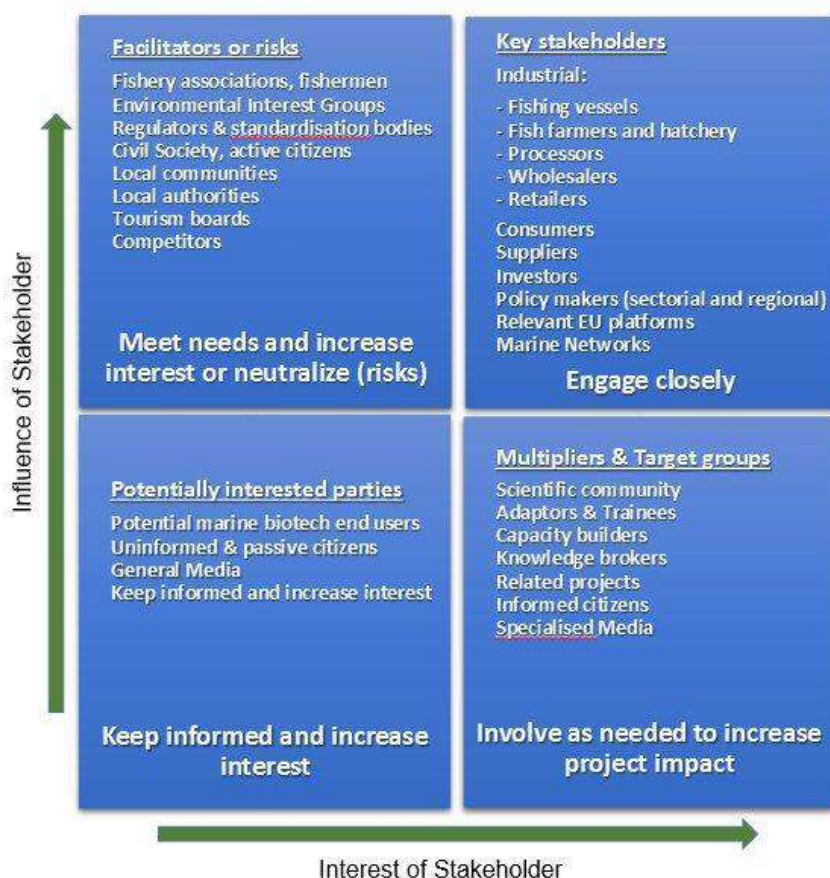


Figure 4. : Stakeholder analysis as function of Influence and Interest

### Training and skills development

The European Commission (2014) has identified another challenge for the blue economy as the development of a skilled workforce: ‘Growth in the blue economy will require an appropriately skilled workforce, able to apply the latest technologies in engineering and a range of other disciplines. There is currently a skills gap that must be tackled.’

PrimeFish aims to contribute to this challenge by providing training for various target groups based on new knowledge that will be generated during the project.

Intended activities aimed at skills development are shown in the table below:

Event	Skills/Training provided	Task	When
4 Seminars on implementation of PrimeDSS tool	Capabilities and tools to build “what if” scenarios How to identify early signs for “boom and bust” cycles To understand trends and behaviours of prices and consumers	T7.1	(2) M36 (2) M40
European Seafood Economy Summer School	Guidelines to develop business plans for entrepreneur Proposing methods to fill new research gaps and challenges	T7.2	M24
Seminar in Blue Growth	How to evaluate the effectiveness of policies and its degree they fulfil the Blue Growth goals Analysis on the industry dynamics and its relation to their strategic positioning, enhancing cost-effective policy frameworks	T7.2	M42
Specific Theme in the Final Conference	The collected data as well as the methods, assumptions, models and algorithms that the PrimeDSS builds on for creating socio-economic growth in terms of income and employment.	T7.1	M48
Specific section in the Round Table Discussion	How to be successful in understanding and predicting market and consumer trends using PrimeDSF and PrimeDSS.	T7.1	M46

Industry Trade Fairs	Demonstration on the technical and commercial viability of the PrimeDSF and PrimeDSS	T7.1& 7.3	M12-M48
Community of knowledge	How to use and share the advances in science (WP1 to WP5) and technology (WP6)	T7.3	M12-M48

### **Dissemination channels and materials**

#### *Logo and graphical identity*

A graphical identity is composed of visual elements that aims to represent an organization. To show the importance put by the consortium on this, the logo has already been created and used in the proposal preparation phase. The PrimeFish graphical identity includes logo, fonts, colours and templates for presentations and text documents. It is important to follow the graphical identity, since good use of it will help to consistently disseminate the project. Guidelines and templates will also save time and effort for the members of the consortium, since no further design work will be necessary.

#### *Web site & blog*

To ensure an immediate visibility of the project, a basic, mainly informative project website will be set up in month 1 of the project. It will continuously be extended, e.g. by an internal space/wiki for all project participants. To inspire and facilitate continuous interest in the PrimeFish and project topics a blog will be created. Contributors will be members of the consortium and guest bloggers within the field. The blog will invite public contributions or feedback to topics related to PrimeFish. It will also be used as a place to advertise milestones and training. Both the PrimeFish website and blog will make use of new media and, for instance, video clips presenting the project and ongoing research.

#### *Newsletter*

For the interested public there will be a newsletter, delivered on a quarterly basis starting in month 1. The newsletter will, among other relevant issues, contain information on achievements in the project, reports from conferences and announcements of upcoming events. The newsletter will also be published on the web site.

#### *Leaflet, poster & brochures*

Leaflets, brochures and posters with details on the project and contact information will be produced. The material will also be placed on the website for download.

### **Dissemination to the scientific community**

PrimeFish partners will publish their work in peer-reviewed scientific journals. All scientific articles will be published via Open Access using 'Gold' access. That way scientific content and underlying data will be accessible and usable free of charge straight after publication. Protected knowledge and data will be excluded from publications.

## Commercial utilisation beyond the project's lifetime

*PrimeFish has set out to extend current knowledge and insights about the competitive performance of the EU seafood sector. The essential aim is to improve strategic decision making based on market intelligence for industry players and policymakers in EU.*

<b>PrimeFish will:</b>	<b>Expected impact:</b>	<b>Measures to maximize impact:</b>	<b>Potential impact after project's lifetime:</b>
Develop a comprehensive index that can be used to evaluate the competitiveness of European Fisheries and Aquaculture sectors (FACI)	This will constitute a benchmark evaluation of "world class" performers within the fisheries and aquaculture sectors and will highlight success stories and challenges.	FACI will be part of PrimeDSS as an online interactive user friendly web-based tool for fisheries and aquaculture producers as well as policy makers for bench marking companies, sectors and countries	Companies, regions and sectors can become more efficient, competitive and profitable. Policy makers can use the tool for structural and legal decision support planning.
Identify the characteristics of "boom and bust" cycles	Prediction of price behaviour on markets that will give early-warning signs of a potential "boom and bust" cycles	PrimeDSS will contain a "boom and bust" model that can give producers and fishermen early warning signs of "boom and bust" cycles and highlight possible dumping phenomenon and other infringements that affect the market competitiveness of the European fisheries and aquaculture sector	Reduced risks of "boom and bust" cycles in aquaculture production and fisheries. More long term profit for fishermen and seafood producers. Enhanced competitiveness of European seafood producers
Analyse supply-chain relations and market trends in the global market place.	Provides the European seafood industry with an improved understanding of the global value chain and market dynamics	A strategic positioning model will be included in PrimeDSS that will allow producers to position themselves in the supply-chain and how changes in the environment can affect this choice	More long term economic sustainability for EU seafood producers
Analyse innovation, product development and successful seafood products	Enhanced and new knowledge about the global seafood market highlighting successes and failures which individual seafood operators can utilise in their business development	Success analysis model will be included in the PrimeDSS that will allow producers to benchmark with other producers and analyse the likelihood of successful launches of seafood products on markets	Enhanced success during launches of new seafood products. Improvements in innovation procedures within EU seafood companies
Identify and analyse key parameters to predict consumer preferences and price developments in the global market place	Improved knowledge about consumers and prices of seafood products in different markets	An innovation and price analysis model will be included in the PrimeDSS that will evaluate the willingness of consumers to pay and enable producers to set a "right" price for new products on markets	More focussed product development and innovation to meet the demands of consumers and different market. Improved competitiveness and economic sustainability for EU seafood producers

**Kontali Business Case**

To ensure continuation and further development of PrimeFish Decision Support System (PrimeDSS) after the completion of the project, a platform will be set up to maintain and expand the data base via the web-based interactive portal. Kontali Analyse AS is an ideal platform to operate and develop further the PrimeDSS beyond the lifetime of the project. Kontali is regarded to be a source of information that players in the field of fisheries and aquaculture can rely on to maintain their competitiveness. Kontali is especially strong in providing information within the field of salmon and trout aquaculture, the pelagic industry and now more recently within Mediterranean aquaculture and the sea bass and sea bream industry. An interactive web portal such as PrimeDSS, will open up new opportunities for users to apply economic, market, consumer and supply-chain data for strategic decisions in production and product development.

The demand for sectorial information for decision support is increasing not least because of increased competition on the marketplace both for inputs and outputs. Companies have, consequently become more willing to share key information. Sharing information is though a volatile subject and up to now, the willingness to pay for such information has been limited. However, as the market is expanding it will be possible to share the same information on a larger market and the volume will provide an acceptable price for the service for the relevant companies.

The price of the service cannot be decided upon at this stage, but it will likely be based on the business model of Kontali; that is annual subscriptions with fees depending on the contents of the access i.e. to which information users have access to, e.g. related to species, markets, level of differentiation etc. Access for SMEs will be made affordable.

Through the communication scheme for PrimeFish (WP7) the outputs – also PrimeDSF and PrimeDSS – will be widely marketed, and the project will in this way, serve to relieve Kontali of some of the difficulties associated with establishing new products. Kontali's current business network, which extends far beyond the IRG of PrimeFish, will also provide Kontali with access to potential customers.

### **Knowledge exchange and data transfer – towards ‘Marine Knowledge 2020’**

The European Commission (2014) has identified the gaps in knowledge and data about the state of our oceans, seabed resources, marine life and risks to habitats and ecosystems an issue that is specific to the blue economy. It is stated that ‘*Innovation in the blue economy is held back by a lack of information about the sea, the seabed and the life it supports. Increased knowledge of our seas will promote growth in the blue economy, through both a better knowledge of the resources it contains and a better understanding of how these can be used, in tandem with achieving our environmental objectives*’. There is a clear cost to the fragmentation and inaccessibility of marine data; the impact assessment accompanying the Communication estimated that the existing users would save €300 million a year if the data were properly integrated and managed (European Commission, 2010). The Commission has therefore established a sustainable process that aims to ensure that marine data is easily accessible, inter-operable and free of restrictions on use. This will, among other initiatives be achieved by improving the European Marine Observation and Data Network (EMODnet) under the ‘Marine Knowledge 2020’ policy.

PrimeFish will collect and collate data on seafood production and markets from the following sources:

- Public data
- In-house data (Kontali and INRA)
- Data from industry stakeholders (e.g. IRG)
- Qualitative and quantitative data from interviews and surveys

PrimeFish has a dedicated WP1 on standardisation of data and will thus have an impact on the work towards ‘Marine Knowledge 2020’ by making relevant collected data on fish and habitats, seafood market, biology and human activities available to EMODnet (unless protected for IPR and/or patenting reasons according to the consortium agreement). EMODnet experts will be consulted at the start of PrimeFish to learn about required data formats; data protection issues where relevant will be addressed.

Furthermore, knowledge exchange will be implemented via relevant European platforms and PPPs with varying objectives. PrimeFish members according to their specific roles and expertise within PrimeFish will - if they are not already members – join (where active membership is possible), participate in events and/or enter dialogues with respective initiatives. The following have been identified as being relevant:

- *EU Joint Programming Initiative (JPI) ‘Healthy and Productive Seas and Oceans’*  
Knowledge exchange for a knowledge based maritime economy, the marine bio economy in relation to new products, services and jobs, participate in the research to policy mechanism
- *MarineKIC Initiative*  
Support the creation of a Knowledge and Innovation Community under the European Institute of Innovation and Technology (EIT)
- *European Aquaculture Technology and Innovation Platform (EATIP)*  
Contributing to a Strategic Research and Innovation Agenda for European aquaculture for the coming two decades
- *Blue Economy Business and Science Forum* (to meet for the first time in the margins of the 2015 European Maritime Day in Piraeus, Greece)
- Food-related initiatives and stakeholder platforms, such as *JPI A Healthy Diet for a Healthy Life, European Innovation Partnership on Active and Healthy Ageing*

The PrimeFish consortium does also include partners from Canada and Vietnam, and knowledge exchange with international groups will be implemented, e.g. via the *Canada-EU-US Atlantic Ocean Research Alliance*. Other networks will be explored during the project term.

### **Providing a knowledge base for policy making**

Activities will be targeted at policymakers at various levels of government. This includes, depending on the level of knowledge to be provided, policy makers at international, national, regional and local level. Where possible PrimeFish will also consider targeting intermediaries with policy-related information, such as international organisations, NGOs, stakeholder platforms that involve policy makers (for example the EU stakeholder platforms listed above), mass media, but also research and technological organisations (RTOs) in PrimeFish and individuals with good contacts to individual policy makers.

To achieve maximum impact, PrimeFish will

- Present knowledge and recommended strategies in a short, easily digestible form
- Use language that a non-specialist can understand



- Summarize the information and present clear arguments for a particular course of action

Policy briefs will be utilized as a proven means of knowledge provision for policy makers. Content that will be considered for the policy making process:

- Knowledge and recommendations for regulations (coastal areas, aquaculture, environment etc.)
- Knowledge and recommendations for innovated marine-based products for Blue Growth (incl. standards)
- Knowledge for developing blue economy, skills development, economic growth strategies, infrastructures/support for SMEs

### **Standardisation**

Participating in data standardisation activities will enable PrimeFish to:

- Gain detailed knowledge of standards in all sectors touched by the project
- Influence the contents of standards and ensure that specific needs are taken into account
- Establish contacts with other stakeholders, experts and regulators at both national and European levels
- Contribute to the development of new standards that will ensure increased safety, performance, efficiency and inter-operability of blue economy products and/or services.

NOFIMA with their expertise in standardisation will lead the activities and will for example organise training activities for PrimeFish researchers in data standardisation processes.

### **Knowledge management and protection of IPR**

As PrimeFish will promote innovation inside the 16 partners of the consortium and a close cooperation between public and private organisations under dissemination (WP7), the intellectual property rights (IPR) has to be clearly defined. The terms of IPR management will be specified in detail in the Consortium Agreement (CA) to be signed at the beginning of the project as well as in the Exploitation Strategy Document (ESD) to be developed within the first 6 months.

The general principles relating to access of IPR are:

- Access rights shall be granted to any of the other partners upon written request.
- The granting of access rights may be made conditional on the conclusion of specific agreements aimed at ensuring that they are only used for the intended purpose.

The question of background exclusion is dealt with in a simple way. The participants have to define the “background needed” to set up the project and “where appropriate excludes specific background”. Access rights for execution of the project are the following:

- Partners shall enjoy access rights to the foreground and the background IPR, if that foreground or background IPR is needed to carry out their own work under that project.
- Access rights to foreground shall be granted on a royalty-free basis
- Access rights to background IPR shall be granted on a royalty-free basis, unless an agreement was effective before the signature of the Contract

Subject to its legitimate interests, the termination of the participation of a partner shall in no way affect its obligation to grant access rights to the other partners pursuant to previous paragraph until the end of the project.

Access rights for use of foreground IPR are the following:

- Partners shall enjoy access rights to foreground and to background IPR, if that foreground or background IPR is needed in order to use their own knowledge
- Access rights for use purposes have to be granted either under fair and reasonable conditions or royalty-free (participants may choose). The period during which access right for use may be requested is reduced from 2 years to 1, unless the participants agree differently (i.e. shorter or longer period).

The consortium will also closely collaborate with the Commission’s IPR Helpdesk.

When staff working for a partner is entitled to claim rights on the foreground, the partner must ensure that applying those rights will be done in accordance with its obligations under the grant agreement. When work is jointly carried out by several partners, with no possibility to ascertain their share, joint ownership of the foreground will apply. Where no joint ownership agreement has been concluded regarding the allocation and terms of exercising that joint ownership, each of the joint owners shall be entitled to grant non-exclusive licenses to third parties, based on prior notice and reasonable compensation.

The knowledge generated in PrimeFish will be managed by using an interactive project website and through internal WP's and PSG meetings. The responsibility for an efficient internal management of knowledge in the project will be divided on different levels:

- The management team will have the responsibility for evaluating that each WP leaders' management of knowledge is satisfactory.
- The management team will have the responsibility to control that the knowledge is properly addressed on the project website.
- Each WP leader will inform the participants in his/her WP about ongoing activity and new results by using e-emails, web-based conference calls, face-to-face meetings and the project website to attain improved knowledge within the tasks.

Dr Rosa Chapela, Exploitation and Dissemination Manager, is responsible for managing PrimeFish generated IPR and Exploitation issues in collaboration with the PSG.

#### **2.2.2.2. Communication activities**

The aim of the communication activities in the project is to make the results well-known in Europe, informing, engaging, promoting and raising awareness within SMEs, fish and aquaculture producers and retailers, consumers, research organizations, solution providers and public authorities. PrimeFish will disseminate the results to other on-going projects and initiatives relevant for the project in order to create synergies and to increase the visibility of the project worldwide. In WP7 tailor-made communication strategies are outlined to reach the various audience groups in the most efficient manner. The project participants in PrimeFish have long experience with disseminations of research results in several EU projects (e.g. ECOFISHMAN (FP7), MAREFRAME (FP7), OYSTERECOVER (FP7), PARASITES (FP7) and the Spanish Network of Fishing Groups (Axe 4, FEP)).

It is essential to ensure that the results of PrimeFish reach the widest possible group of stakeholders and hence secure the biggest possible scientific, economic and societal impact in Europe. To achieve this goal, the draft plan for the dissemination and exploitation (DEP) presented in this chapter will be elaborated at the start of PrimeFish and continuously assessed and adapted to the realities of the project. The plan in combination with the project's communication strategy is designed following a thorough consideration of the relationship between objective, target, message to convey, timing of the communication and the appropriate channels.

The advanced DEP will provide the framework of *what* will be communicated and *why*, to *whom*, *how* and *when*; it will describe:

- Communication aims, target groups and appropriate channels
- Strategy, content and timeline of the information, communication and publicity measures
- Responsibilities for the implementation of the information, communication and publicity measures
- Evaluation concept for information, communication and publicity measures

In this sense, the communication results will be coordinated and assessed between the WPs and the Exploitation and Dissemination Committee (EDC), included in WP7. Additionally, the communication will be reassessed and adapted periodically through measurement tools that evaluate the progress (e.g. ad-hoc indicators, Google analytics®, surveys, comments forms, etc.).

The DEP will ensure that all project partners have a joint idea and understanding of what should be done in terms of information and exploitation and which knowledge protection measures will have to be taken into account. As IPR issues will have to be respected by all means, dissemination activities will be designed and implemented. No dissemination of foreground may take place before a decision is made regarding its role in the exploitation plan and the possible protection through IPR.

Dissemination, exploitation and communication activities in PrimeFish are based on the principles of Responsible Research and Innovation/RRi and aim to maximise the project impact by:

1. Identifying exploitable project outputs and knowledge to be protected (in accordance to the IPR principles outlined below)
2. Disseminating newly generated knowledge to the 'Blue Growth' community
3. Contributing to the European marine knowledge base by making knowledge and data generated by PrimeFish available for use and re-use (unless protected for IPR and patent reasons)

4. Entering knowledge exchange and transfer by engaging in European and international knowledge platforms and networks related to PrimeFish topics
5. Contributing to skills' development of researchers and professionals by providing training and seminars as well as setting up and communicating skills catalogues for a future qualified workforce
6. Providing a knowledge base for policy makers in policy-relevant aspects of PrimeFish

Summary of the communication plan outlined in WP7:

Target Audience	How to reach them	Expected Results	When
Project partners and scientific summits	Open access files to present the project findings with PrimeFish image	PrimeFish presentation and poster in portable document format (*.pdf and *.ppt) for events	M1
IRG	By visits and interviews, emails and telephone. Validation of output and as first users of innovation	Data to be used for the various WPs	Starting at M2
Regional and European seafood stakeholders, mainly producers and distributors as well as the general public, policy-makers and NGOs.	Articles and interviews in the periodic PrimeFish newsletter and other independent media	Newsletter and publication in relevant magazines (e.g. EUROFISH) and newspapers	Every six-months, starting at M3
General public and industry, policy-makers, NGOs.	Summarizing the knowledge created and communicating PrimeFish activities in the Website, poster, flyers, fact pages, infographics.	To inform about PrimeFish goals, methodology, findings and main challenges.	M2, annually updated.
General audience (mainly seafood consumers)	Communication via website, e-newsletter and infographics about major project findings	To announce the results of the meetings, advances in development, findings, etc. , including promotions of the seafood consumption (e.g. receipts, comics, etc.)	Every three-months, starting at M3
Facebook®: general audience and seafood consumers. LinkedIn®: professionals linked to the seafood market Twitter®; general audience, industry and policy-makers YouTube®; general audience, PrimeDSS users.	A community manager for the social media: Facebook®, LinkedIn®, Twitter®, YouTube®, focus on project findings, events and reminder advertising.	To create a community of knowledge and to communicate and ensure an adequate and wide scale dissemination	M1-M48
General audience	Infomercial wide available (e.g. website, social media, TV) that highlights the project goals and the main strategies to achieve them	To inform about PrimeFish project and how it strengthens the seafood market	M10
General audience, industry, policy-makers and consumers	Project movie available at Social media, Website and TV (e.g. Euronews – FUTURIS) to promote and inform about the results of the project	To communicate major findings of the PrimeFish at mid-term of the project lifetime.	M30
PrimeDSS users, general audience and peer educators	Webinars and Quick-start tutorial videos (friendly and short video-tutorials) available at the Learning Resources Centre of the website	Trained users in the implementation of the PrimeFish tools	M48
General audience, industry, policy-makers and consumers	Project findings and connections with community of knowledge and dissemination through social media, institutional platforms (e.g. Cordis) and engagement with other projects related	Strategies to ensure an accurate dissemination beyond the project lifetime	M48

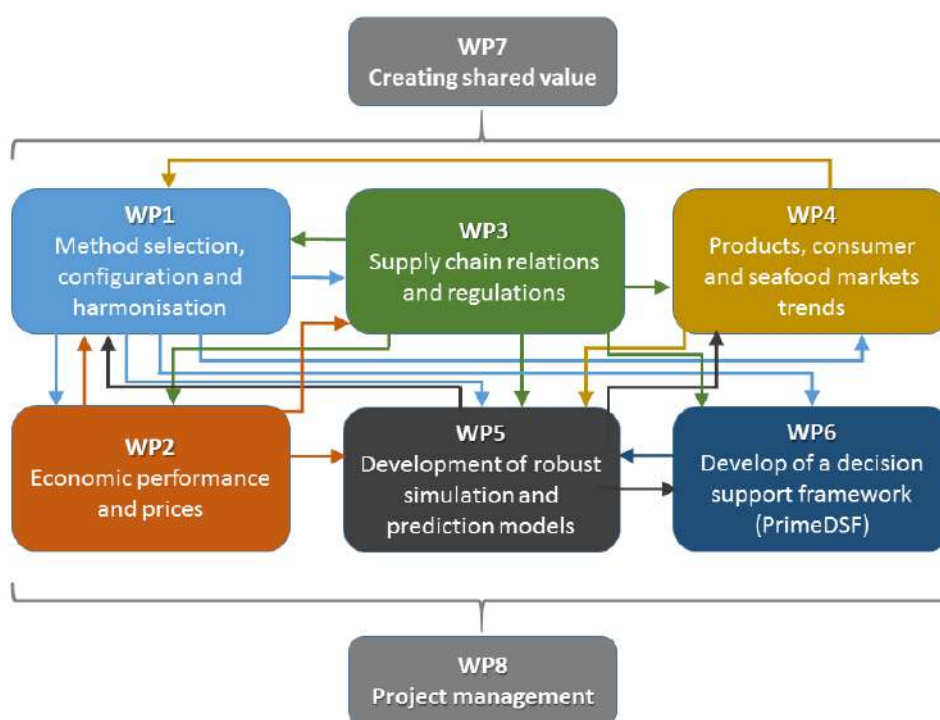
## 2.3 Implementation

### 2.3.1 Work plan — Work packages, deliverables and milestones

The overall objective of PrimeFish is to enhance the economic sustainability of European fisheries and aquaculture sectors by developing an innovative and practical market orientated decision support system (PrimeDSS) that can be used by fishermen, aquaculture producers, processing companies, public authorities and other stakeholders to understand and predict seafood market behaviour. The approach taken in the project is that of co-creation in order to break down barriers between researchers, producers, markets and consumers. The strong involvement of stakeholders in the project through the IRG, facilitates access to data both on micro and macro level in the five sectors chosen; additionally the stakeholders will provide requirements and be the pilot users of the prediction and simulation tools, including that of PrimeDSS, developed in PrimeFish.

The work plan of the PrimeFish is broken down into **eight work packages (WPs)**, as follows (Figure 5):

- WP 1 Method selection, configuration and harmonisation
- WP 2 Economic performance and prices
- WP 3 Supply chain relations and regulation
- WP 4 Products, consumers and seafood market trends
- WP 5 Development of robust simulation and prediction models
- WP 6 Develop of a decision support framework (PrimeDSF)
- WP 7 Creating shared value
- WP 8 Project management



**Figure 5. PrimeFish work plan showing the main interactions between WPs**

WP1 develops sets up and extends the methodology that will be used to assess the competitiveness of European aquaculture and fisheries sectors including that of data collection and data analysis. The results will be a comprehensive index for fisheries and aquaculture competitiveness (FACI) that can be used on specific fish species (fished and farmed) and for peer comparison by individual companies.

WP2 analyses the economic performance of European fisheries and aquaculture sectors. Using selected case studies the growth, productivity and forefront efficiency will be analysed in detail as well as the development of market prices, focusing especially on the “boom and bust” cycle characteristics. This information will be used along with

information collected in WP 3 and WP4 as a basis for the development of robust simulation and forecasting models in WP5.

WP3 will focus on the main material flow in the supply-chain for the five chosen species based on publicly available data, including European catch/production as well as import and export to and from the EU. The mapping will cover catch or hatching/harvesting through the various stages of processing, distribution, retail and food-service marketing channels. Emphasis will be on evaluating impacts of mandatory and market-based regulatory regimes along with governance and power-relations within the supply-chain on risks, costs and rewards to participants. Non-market value associated with aquaculture and capture fisheries will be assessed. Special attention will be paid to the effects of different management systems.

WP4 will analyse the impact of consumer behaviour, market trends, innovation and product development in the seafood market using case studies. Specifically health, label and certification claims on one hand and negative press reports on the other hand will be analysed quantitatively where possible and compared with consumer acceptability of products. In this WP a database of successes and failures in product development and consumer behaviour will be used as a background material for trend research, yielding insights into product innovation and which product characteristics best fit consumers' preferences.


In WP5 the information and data collected on the case studies in WP2-WP4 as well as the Fisheries and Aquaculture Competitive index (FACI) developed in WP1 will be used to develop simulation and prediction models for "boom and bust" cycles; to evaluate the strategic placement within supply-chain s, to assess the likelihood of success for new seafood products and to help producers determine consumers' willingness to purchase products based on the attributes of new seafood products.

In WP6 a Decision Support Framework (PrimeDSF) is developed which contains the models from WP5 as well as method descriptions, assumptions and guidelines. PrimeDSF is thus the container for the main durable outputs generated in the project. A Decision Support Systems (PrimeDSS) will be developed as a set of software tools to be used by fishermen, producers and other stakeholders to understand and predict seafood market behaviour. The PrimeDSS will be validated in WP7 and the development will to through a number of iterations to ensure that the final version is acceptable, suitable and useful for the intended users.

In WP7 the IRG will verify the relevance and accuracy of the PrimeDSS, using knowledge and data accumulated in WP2, WP3 and WP4. Their feedback on added value and system shortcomings will feed the iterative development process of WP6. A particular task is to facilitate the IPR transition of the background/foreground in the PrimeFish project for commercial exploitation of PrimeDSS beyond the project lifetime.

Project Management based on lean management principles will be carried out in WP8.

**Table 2.3.1 Timing of the WPs and their components**

		DURATION																																																	
		1st year												2nd year												3rd year												4th year													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48		
<b>WP1: Method selection, configuration and harmonisation</b>		<b>DURATION 48 months</b>																																																	
T1.1	Selecting data collection sources and methods, developing	D																																																	
T1.2	Creating a Data Management plan (H2020 Open Research Pilot)	D																																																	
T1.3	Selecting , configuring and extending data analysis methods	D																																																	
	T1.3.1 Methods relating to economic performance and prices																																																		
	T1.3.2 Methods relating to supply chain relations																																																		
	T1.3.3 Methods relating to consumer and market trends																																																		
T1.4	Method testing, evaluation & comparison																																					D													
<b>MILESTONES</b>		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48		
M1.1	Identification of the type of data needed and granularity	M																																																	
M1.2	Harmonised data collection methods; data collection starts	M																																																	
	Interview and survey questionnaire for use in WPs harmonised and completed						M																																												
M1.4	Framework for FACI identified						M																																												
M1.5	Harmonised data analysis methods available; data analysis starts						M																																												
<b>WP2: Economic performance and prices</b>		<b>DURATION 48 months</b>																																																	
T2.1	Economic performance of selected individual sectors													D																								D													
	T2.1.1 Demersal (cod) fisheries																			D																															
	T2.1.2 North Atlantic pelagics (herring)																																																		
	T2.1.3 Freshwater trout																																																		
	T2.1.4 Atlantic salmon																																																		
	T2.1.5 Sea-bass and sea-bream																																																		
T2.2	European seafood market	D																																																	
T2.3	Identifying and characterising boom and bust cycles													D																								D													
	T2.3.1 Boom and bust cycles																																																		
	T2.3.2 Impact of macro-economic effects on boom and bust																																																		
	T2.3.3 Price transmission and market integration																																																		
<b>MILESTONES</b>		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48		
M2.1	Analysis of economic performance of selected European and Canadian fisheries completed																		M																																
M2.2	Analysis of economic performance of selected European and Vietnamese farmed species completed																				M																														
M2.3	Data for boom and bust price cycles collected													M				M																																	
M2.4	Analysis of boom and bust price cycles in European seafood markets completed																							M																											

WP3: Supply chain relations and regulation		DURATION 48 months																																																											
T3.1	Value chain analysis																								D																																				
T3.2	Market institutional analysis																								D																																				
T3.3	Labelling and certification schemes																								D																																				
T3.4	Industry dynamics and threats																								D																																				
T3.5	Assessment of non-market effects of aquaculture and captive																								D																																				
<b>MILESTONES</b>		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48												
M3.1	Framework for characterisation of informal market institution developed								M																																																				
M3.2	In-depth insutry dynamics survey tool developed and piloted											M																																																	
M3.3	Analysis of value chains and input-output structure completed																							M																																					
M3.4	Market institutional analysis completed																									M																																			
M3.5	Analysis of compliance costs and benefits completed																												M																																
M3.6	Evaluation of industry dynmaics an oppportunities completed																																		M																										
M3.7	Data collection for non-market value study completed																							M																																					
M3.8	Compiling and quantification of non-market values completed																																				M																								
WP4: Products consumers and seafood market trends		DURATION 48 months																																																											
T4.1	Industry study cases																D																																												
T4.2	Qualitative studies																			D																																									
T4.3	Quantitative studies																								D																																				
T4.3.1	Household purchases in France and Finland																								D																																				
T4.3.2	Impacts of increased fish consumption																								D																																				
T4.3.3	Frequency of purchases																								D																																				
T4.3.4	Demand stimulation/manipulation and negative press																								D																																				
T4.4	Choice modelling																								D																																				
<b>MILESTONES</b>		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48												
M4.1	Framework for characterisation of success on seafood markets Analysis of markets success and failures in the seafood market completed					M																																																							
M4.2	Analysis of consumer preferences completed																M																																												
M4.3	Data collection from consumers' surveys/interviews completed																							M																																					
M4.4	Analysis of social awareness, attempts to stimulate fish consumption and negative press completed																												M																																
M4.5	Analysis of innovative features and consumers' willingness to pay completed																													M																															
M4.6																														M																															
WP5: Development of robust simulation an prediction models		DURATION 48 months																																																											
T5.1	Development of FACI																													D																															
T5.2	Boom and bust analysis																																			D																									
T5.3	Strategic positioning model																																					D																							
T5.4	Success analysis model																																						D																						
T5.5	Innovation and price analysis model																																											D																	
<b>MILESTONES</b>		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48												
M5.1	Compilation of FACI completed																	55	M																																										
M5.2	Construction of prediction and simulation tools completed																																						M																						





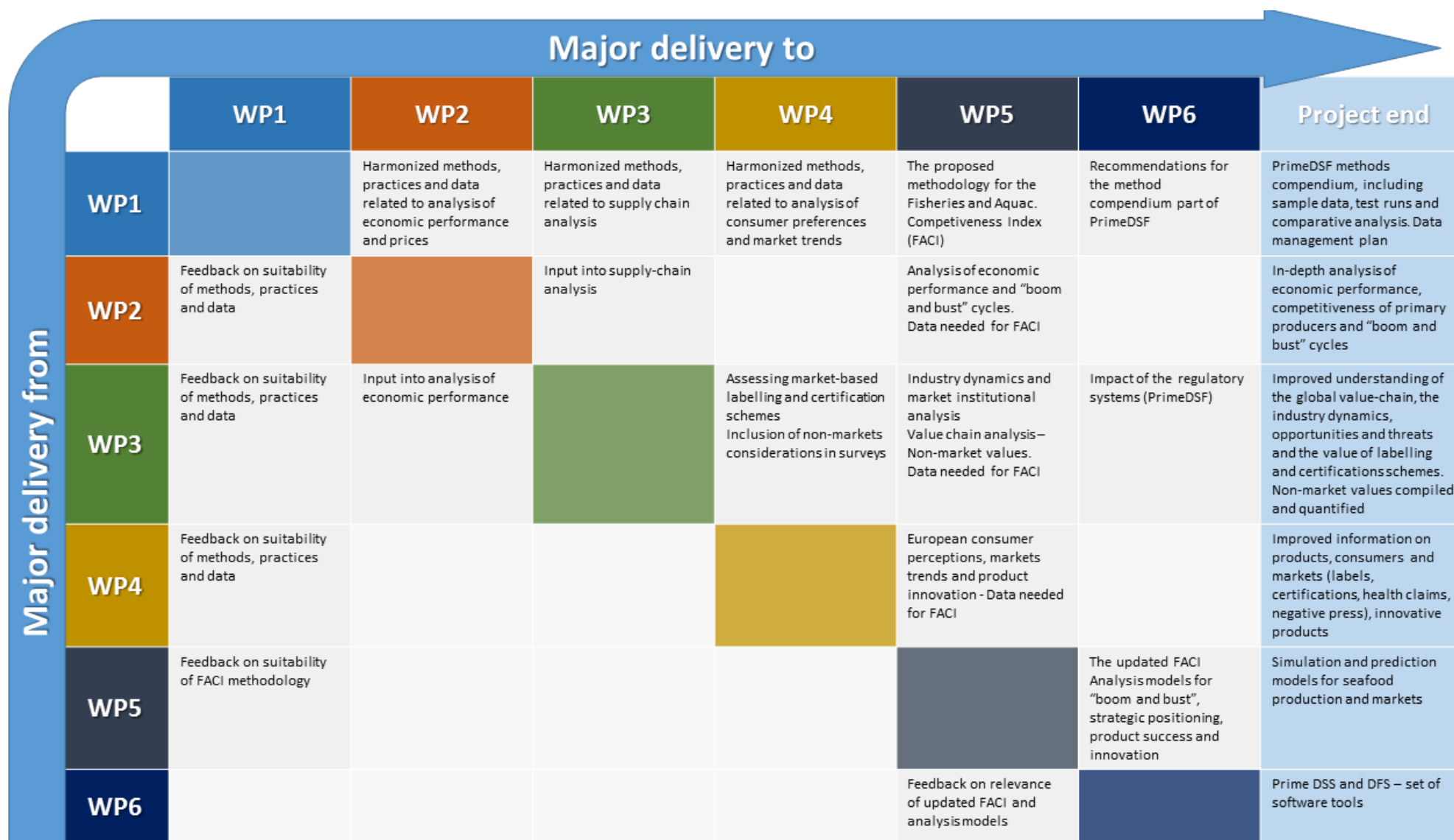


Figure 6. Graphical presentation of the components in PrimeFish and how they inter-relate

### 2.3.2 Management structure and procedures

The organisational structure and decision-making in PrimeFish has been constructed to match the scale of the project and will consist of the following five main groups (Figure 7):



Figure 7. PrimeFish management structure

- **Project Steering Group (PSG):** participants with coordination, administrative and legal experience including the Coordinator (CO), Administration Manager (AM), Technical Manager (TM) and Exploitation and Dissemination Manager (EDM). The CO will chair the SG
- **Project Support Team:** The operative and secretarial part of the project will be handled by the coordinating organisation, MATIS, supporting the CO and AM and other partners as necessary.
- **Technical Committee (TC):** CO, TM and WP leaders led by the TM
- **Exploitation and Dissemination Committee:** CO, EDM and key partners involved in exploitation, dissemination and training activities (TTZ, UNIPV, and Kontali; Table 2.3.3.1)
- **External Strategic Advisory Board (SAB):** Invited fisheries and aquaculture industry experts led by the CEO of MATIS.

Table 2.3.2.1: List of members of the project steering group (PSG)

Name of person in PMG	Participant No.	Short name	Role in the project	Role in organisation
Gudmundur Stefansson	1	MATIS	CO and leader of WP8	Research group leader
Oddur Már Gunnarsson	1	MATIS	AM	Dir. of Division
Ólavur Gregersen	3	SYN	WP6 leader	Managing Director
Sveinn Agnarsson	7	UICE	WP5 leader	Reader in fisheries science
Petter Olsen	11	NOFIMA	WP1 leader	Senior scientist
Rosa Chapela	13	CETMAR	WP7 leader	Head of department

Table 2.3.2.2: List of members of the Technical Committee (TC)

Name of person in SC	Participant No.	Short name	Role in the project	Role in organisation
Ólavur Gregersen	3	SYN	TM and leader of WP6	Managing director
Gudmundur Stefansson	1	MATIS	CO and leader of WP8	Research group leader
Stéphane Ganassali	5	UNIV-SAVOIE	WP4 leader	Professor

Sveinn Agnarsson	7	Ulce	WP5 leader	Associate professor
Paul Steinar Valle	10	Kontali	WP2 leader	Project & Dev. Manager
Petter Olsen	11	NOFIMA	WP1 leader	Senior scientist
Rosa Chapela	13	CETMAR	EDM and WP7 leader	Head of department
Francis Murray	14	U STIRLING	WP 3 leader	Senior research fellow

The responsibilities for project management tasks will be split between the Coordinator (CO) – Dr Gudmundur Stefánsson; Administration Manager (AM) – Oddur Már Gunnarsson; Technical Manager (TM) – Ólavur Gregersen and the Project Steering Group (PSG). The administration manager (AM) is responsible for project administrative and financial management tasks. The AM will be supported by the PSG and the Project support team. The AM is responsible for collecting reports and financial statements from the participants. Each participant has a representative person called “Partner Manager” (PM) who will be responsible for reports and financial statements. All partners will meet in conjunction with annual project meetings. The Project Technical Committee (TC) will be led by the Technical Manager (TM). A Project Exploitation and Dissemination Committee (EDC) has been set up led by the Exploitation and Dissemination Manager (EDM; Table 2.3.3.1).

### **Project Management role**

The CO has the overall responsibility, executes the overall management of the project and is the financially responsible body that receives all grant payments from the Commission. The TM is responsible for the overall technical and scientific quality and process of the project. The AM will manage the payments to the other partners. The AM will also collect cost statements and audit certificates from the partners, and ensure that the consortium is meeting all contract requirements. The CO and AM will be responsible for communication with the Commission (Research and Administrative Officers), and delivery of reports and other deliverables from the project to the Commission. MATIS has experience in coordinating a number of EU projects and will provide all the necessary administrative support for the project as well as project management software.

Each participant will have one Partner Manager (PM) who will be in charge of administrative relationships with the CO. The PM will be responsible for reports, financial reports and scientific progress within their organisations. The correspondence between the CO and PM will be through e-mail, Skype and phone. Every six months, the data generated by the PrimeFish project will be distributed to all participants. The CO will additionally provide for access at the project website newly generated data and results. The representative for Gender aspects of the project will be the EDM, Rosa Chapela, from CETMAR.

The CO will invite coordinators of relevant on-going projects to PrimeFish meetings for advice and consultation.

The CO, TM and AM have the overall responsibility of monitoring the work performed, reviewing the objectives and progress achieved towards sustained cooperation. They will do the overall follow up of the project activities directly through communication with the PM and WP leaders. They will be responsible for the preparation, organisation, reporting and follow up of all consortium meetings. They will follow up all horizontal issues, including the preparation of the PSG, TC and project meetings, the approval of documents, results and approaches relating to the projects activities to be decided upon by the PSG. They will also be responsible for all management decisions of the project related to the consortium/contract management, IP rights and the preparation of sustained cooperation. The administrative support to the management consortium will be used to prepare the reports, i.e. project progress reports every six months, the periodic progress reports, the periodic management report (including a financial report with audit certificates provided by each contractor) and the final report covering all the work, objectives, results and conclusions, and the distribution of the Community financial contribution between contractors.

The main role of the TC, led by the TM, is to review the PrimeFish progress reports and ensure high scientific and technical quality and the overall progress of PrimeFish. Also, identify and enhance cooperation with other related projects, discuss further collaborative funding opportunities, student exchange and participation, discuss publication strategies, management of IPs and project dissemination.

### **Decision making mechanism**

The PSG will be responsible for the decision making process between the scheduled meetings. It will be responsible for all management decisions of the project related to the consortium/contract management, and the preparation of sustained cooperation. Also all coordination of technical and RTD activities as well as legal, contractual and administrative activities at consortium level is performed by the PSG. The PSG will seek consensus regarding project

management; in case of a dispute, decisions will be made on a majority vote and formal voting procedures will be elaborated in the consortium agreement. Further arrangements (e.g. regarding representation, delegation etc.) will also be defined in the consortium agreement.

The management of the technical details of RTD activities will occur within each WP. Project progress will be monitored by deliverables and milestone control points. Strategic decisions will be taken as much as possible through a consensus of all the partners involved in a specific task. However, in order to assure optimal efficiency, the partners in charge of a specific WP will have the authority to propose new lines of action whenever necessary.

### **Project management and technological risks**

The project operation will manage potential risks of varying nature. The technological and scientific project risks have been addressed by the careful planning of the WPs themselves. The management role of the WP leaders will require them to regularly evaluate the status of the progress against the plans (deliverables and milestones) during the duration of the project, and bring deviations to the attention of other partners. Such occurrences will also be formally reviewed as a regular agenda point at the meetings of the PSG.

Deviations from the project schedule or serious cost overruns will be analysed for impact on the interrelated activities and appropriate recovery measures and/or corrective actions implemented. If the consequences of the deviation are relevant for the entire project and cannot be resolved by the CO, then the issue will be referred to the PSG for joint resolution.

### **Project Meetings**

Virtual PSG meetings using Skype, Messenger, conference calls, e-mail or other type of electronic communication will be held frequently, at least every six months. Electronic meetings, PC/Skype conferences, telephone conferences and electronic messaging will be used whenever possible rather than face-to-face meetings. There are five physical meetings planned during the 4 year duration of the project where PrimeFish PSG, TC, EDC and SAB will meet both in separate and common workshops around the same time as project meetings. This is done to minimise the travel in the project:

- One meeting to kick off the project activity (*Month 1*)
- Three Annual meetings (*Month 12, Month 24 and Month 36*)
- One Final meeting in conjugation with a Concluding Symposium in the end of project (*Month 48*)

The kick-off meeting is scheduled at MATIS in Reykjavík, Iceland, in the first month of the project. SAB members will be invited for advice and consultancy as well as for the remaining project meetings. Members of the SAB and selected members of IRG will be invited to attend each of the project meetings in accordance with the specific issues addressed.

The three Annual meetings will be used to monitor and discuss the progress and results in the project in context with the plan and will hence be used as quality control in the project. The project will be assessed against its milestones and deliverables. Actions will be taken at each time to certify that the progress according to the plan is valid. Meetings will be organised as mini-symposium and workshops allowing time for presentations, discussion of the results and future actions. The meeting notes/minutes will be used for monitoring progress and made available to the Commission, and to the partners on the partners' private zone on the project homepage. A representative of the European Commission will be invited to the project meetings. In addition to these formal overall project meetings, visits between partners are encouraged to discuss the results and to receive training in techniques used in the project.

The Final meeting will be held in the end of the project, in conjugation with a Concluding Symposium, to review the overall results, prepare the data for the final report and report on the dissemination and exploitation plan of the results from the project. At the meeting, the dissemination and implementation of findings towards the scientific community, the industry and policy makers will be discussed. The Concluding Symposium will be arranged for the external community and stakeholders.

### **Communication within the consortium**

Close contacts will be maintained by phone, e-mail and fax among partners to ensure a regular flow of technical and conceptual exchanges between the partners ensuring optimisation of the collaborative efforts. PrimeFish website will be available in *Month 1* of the project, including a site for the IRG. Part of the site will be open to the general public, while other parts will be restricted to project partners, SAB and IRG. The project website will be used for maintaining the project document archive, news and relevant links. Furthermore, in addition to the project meetings, the project

website, along with electronic communications between partners will be the main communication platform for the project and will be structured so that it will enable monitoring of progress of each WP.

### **WP Management and role of the partners**

The CO will lead WP8 and together with the AM, will follow up on the progress in the other WPs. The TM will be responsible for the overall scientific and technical quality and process of the project. The EDM will be responsible for the exploitation and dissemination activities. Each WP will be managed as a sub-project, and the designated WP leader will take the responsibility of coordinating all activities within a given WP. The WP leaders will be responsible for ensuring that the deliverables from their WPs are completed according to the global project work plan and achieve the necessary levels of quality. Each WP will be completed by submission of an internal WP report in which activities, results and progress will be detailed / listed. The main results will be summarised in the Annual reports. Reports and reference documents that have been defined as deliverables from the project will be annexed to the Annual reports sent to EC.

Each partner has clear objectives to reach in the short and medium term. Each partner will be responsible for their share of the work and WP leaders have been designated. They are required to immediately inform the CO of any event that may have an important impact on the project.

### **Monitoring and progress reporting**

All project participants will report on project and financial progress every six months. The PM and WP leaders will compile all reports defined (incl. Periodic and Annual progress reports) and the Final Report, with information on milestones, deliverables and plans for the subsequent periods within six months after expiration of the WP or the project. The Final Report should contain a critical evaluation of the results obtained according to the deliverables set, and it will be approved by the TC before distribution. In case of delays in reporting from participants, the issue will be brought to the PrimeFish PSG. The CO will present reports to the Commission and disseminate relevant communications received from the Commission to partners.

### **Liaison with other relevant national and international research initiatives**

The CO will be responsible for liaisons with other projects and to introduce other additional national and European funding to the consortium in collaboration with the TC. Information and knowledge resulting from this activity will be made available to PrimeFish's participants on a regular basis. See also Chapter 3.3.

Applying best practices in networking and collaborative research, Coordinators from on-going FP7 projects will be invited to the annual meetings, searching for synergies and joint actions both in research and dissemination.

### **Management of intellectual property**

The CO and EDC will ensure that the knowledge gained in the project will be exploited and disseminated for the benefit of the partners in the consortium and relevant stakeholders. Also be responsible for updating the exploitation plan. This will be reviewed regularly at the formal meetings of the PSG. Knowledge generated is potentially subject for Intellectual Property Rights (IPR) will be managed by the PSG. IPR issues will be defined in detail in the "Consortium Agreement" constructed in the beginning of the project. This agreement will also regulate the process of obtaining IP protection, exploitation and revenue sharing between partners for foreground IP generated in the project.

### **Consortium agreement**

The partners will sign the Consortium Agreement before the contract with the Commission enters into force.

### **Critical risks**

There are always some risks associated with a project of this size, where WPs are dependent on data availability and reliability and the progress of other WPs. Table 2.3.2.3 lists up possible critical risks in each WP that may affect the project's objectives may not be achieved and the proposed risk-mitigation measures.

**Table 2.3.2.3: Critical risks for implementation**

Description of risk	WPs	Proposed risk-mitigation measures
1. It may be difficult and time consuming to extend the methodology for evaluating competitiveness to cover countries, different fish species and individual companies.	1	1. The partners in WP1 have excellent scientific and technical experience and network connections. Participants within the WP leader's institute have worked extensively on the methodology used for the Fishery Competitive index and are therefore well suited to adapt and update the methodology.
2. A serious delay in preparing guidelines for data collection and/or analysing methods can lead to delays in WP2, WP3 and WP4	1	2. The time plan will be closely watched. The leader of WP1 has an excellent background in data and project management. He has worked closely together with the coordinating institute before and will, in collaboration with other partners of WP1, ensure that guidelines will be handed in timely.
1. The main risks associated with carrying out WP2 lie in the availability of reliable and appropriate data for the economic performance analysis to be undertaken..	2	1. By focusing on specific cases (Atlantic cod and herring, farmed salmon, trout, sea-bass and sea-bream) and having access to both public as well as in-house (Kontali) and private (IRG) data, access to the necessary information is ensured.
2. Companies may be hesitant to provide access to detailed information on their operation.	2	2. Maintain strict security procedures and guarantee absolute confidentiality. Code sensitive data. Publish no results that can be traced to individual companies, only aggregates.
3. Individuals may not want to be interviewed for fear of being quoted.	2	3. Guarantee anonymity to interviewed individuals. Publish no results that can be traced to individuals.
1. The main risks lie in obtaining reliable data and information from the industry sector (IRG). The companies may be hesitant to provide the project with information on the supply chain that they believe gives them an edge over a competitive company, locally or globally.	3	1. Data from companies on specific cases will be coded before using for analysis to ensure that it cannot be traced back to source.
2. Companies may be hesitant to provide access to detailed information on their operation.	3	2. Maintain strict security procedures and guarantee absolute confidentiality. Code sensitive data. Publish no results that can be traced to individual companies, only aggregates.
3. Individuals may not want to be interviewed for fear of being quoted directly.	3	3. Guarantee anonymity to interviewed individuals. Publish no results that can be traced to individuals.
4. The main risks concerning WP3 T3.5 is the access to data under the revealed preferences method. This includes using data on prices and quantities sold in ordinary market on goods and services associated with the case goods (farmed salmon and cod). Data must be gathered for comparable goods and services in several of the countries involved in the case studies. Although these are basic data which are usually accessible there might be exceptions.	3	4. Conduct a pre-study where possible associated market goods and services to be used when valuing non-market effects are set up. It will then be possible to ascertain for which of these there exist data on price and quantities sold across all involved countries.
5. When it comes to stated preferences, implementing a comparable survey across several countries demands a high degree of precision in the formulation of the survey.	3	5. Researchers from each of the countries where the survey is to be implemented will meet and jointly formulate the survey, and ascertain that all understand the same by each of the survey questions. The survey questions can then be translated from English into their mother tongue. Care must also be taken to ensure that the samples are comparable in each country.
1. Implementing a comparable survey across several countries demands a high degree of precision in the formulation of the survey.	4	1. Researchers from each of the countries where the survey is to be implemented will meet and jointly formulate the survey, and ascertain that all understand the same by each of the survey questions. The survey questions can then be translated from English into their mother tongue. Care must also be taken to ensure that the samples are comparable in each country.
2. Individuals may not want to be interviewed for fear of being quoted directly.	4	2. Guarantee anonymity to interviewed individuals. Publish no results that can be traced to individuals.

As WP 5 is dependent on input from WPs 1, 2, 3 and 4 it is crucial the data collection and analysis is delivered in time.	5	The time plan for tasks in WP1-4 will be monitored closely to ensure on-time delivery of deliverables. The leaders of the WP1-5 have good background in project management and have worked together previously with good success.
1. WP6 is the central point of the project, delivering the main outputs, PrimeDSF/PrimeDSS and at the same time dependant on input from WP5. Delays in WPs 1, 2, 3, 4 and/or 5 will seriously affect the timing/completion of this WP.	6	1. WP5 and WP6 will be to a large extent run in parallel. It is of utmost importance that the time plan is followed closely so these 2 WPs can start on time. Both leaders of the WPs have worked together on numerous occasions and they are both highly capable project managers
2. The statistical simulation and prediction models in WP5 may not or only partly be suitable for implementation into usable Decision Support System.	6	2. The PrimeDSS will be developed based on simple “what if” scenarios and using an iterative process with WP7 validated and expanded by adding more simulation/prediction models analysis and data
3. The software development of the prototype PrimeDSS may exceed the time allocated to the task.	6	3. The leader of WP6 will implement a hands-on project management based on SCRUM methods. In addition partner SYN will call upon associates for increased capacity.
Fisheries and aquaculture stakeholders have expressed that frequently their involvement in projects does not imply bidirectional communication; generally they are providers of information or receptors of outcomes, without establishing a real dialogue.	7	The sectors are lacking in competitiveness and have encountered problems e.g. in relation with “boom and bust” cycles. For this reason there is real interest by key industry & industry associates to actively take part in the IR Group, not only to provide data but also to ensure the requirements for the tool to be developed and to act as pilot users of the outcomes of project (PrimeDSS/DSF). Once the value of the tool has been established other stakeholders will effectively be engaged and trained as necessary
Budget issues are likely to prevail in a project with broad activities and technical risks. Activities might become more expensive than estimated. Furthermore, the consortium might involve communication and cultural differences causing challenges for the communication and collaboration. The monitoring and reporting of project progress can be delayed if deadlines for submitting information are not respected by partners. Legal disputes can occur in relation to IPR and other existing legislation.	8	The CO & AM have a project management system in place that enables updates on resource consumption and work progress according to planned timeline in close collaboration with the TM. A communication guideline will be developed by the EDM for SG and TC in order to avoid misunderstandings and lack of information among project partners and stakeholders. Procedures handling issues regarding IPR will be described in the Consortium Agreement.

### 2.3.3 Consortium as a whole

#### ***The participants' European and international dimension & type***

The PrimeFish consortium includes 14 RTD and 2 RTD-SME from 11 countries of which:

- 6 are from European Member States: Denmark, France, Germany, Italy, Spain and the United Kingdom
- 3 are from Associated Countries: Faroe Islands, Norway & Iceland (Iceland is in EU Accession negotiations)
- 1 is from non-EU country eligible for funding: Vietnam
- 1 is from non-EU developed country: Canada

Of these:

- 12 are from European RTD organisations (MATIS OHF (MATIS), Aalborg universitet (UA1b), INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (INRA), UNIVERSITE DE SAVOIE (UNIV-SAVOIE), VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (TTZ), HASKOLI ISLANDS (UIce), UNIVERSITA DEGLI STUDI DI PARMA (UNIPARMA), UNIVERSITA DEGLI STUDI DI PAVIA (UNIPV), NOFIMA AS (NOFIMA), UNIVERSITETET I TROMSOE (UTro), CENTRO TECNOLOGICO DEL MAR - FUNDACION CETMAR (CETMAR), UNIVERSITY OF STIRLING (U STIRLING))
- 2 are from European SMEs (SP/F SYNTESA (SYN), KONTALI ANALYSE AS (Kontali))
- 1 is from an International Developing country, TRUONG DAI HOC NHA TRANG (NTU)
- 1 is from an International Developed Country, Memorial University of Newfoundland (MemU)

The range of expertise was designed to meet the specific objectives of the work plan:

- |  |                                      |                                |
|--|--------------------------------------|--------------------------------|
| • economics                            | • economic statistics                | • fisheries management         |
| • marketing                            | • mathematics                        | • marine studies               |
| • marketing and international business | • engineering                        | • marine environmental science |
| • marketing research                   | • software engineering               | • food technology              |
| • business administration              | • aquaculture & development          | • political science            |
| • international trade                  | • aquaculture & fisheries management | • nutrition science            |
| • international finance                | • accounting                         | • natural science              |
| • supply chain management              | • international entrepreneurship     | • consumer studies             |
| • business strategies                  | • philology                          | • public administration        |
| • accounting                           | • operational research               | • marine resource management   |
| • food science                         | • media coverage                     | • law                          |
| • statistics                           |                                      |                                |

#### **SME industrial participation**

PrimeFish includes two SMEs participants, both of which are European (SYN and Kontali). The SMEs have important roles in PrimeFish and have established themselves as worthy players in this highly competitive forum. Both SMEs are WP leaders: Kontali leads WP2 and SYN leads WP6. Moreover Kontali has shown interest to commercially exploit PrimeDSS after the completion of the project. An innovative decision support system that can be used for “what if” analysis in a software tool for fishermen and aquaculture producers fits well into Kontali’s aim to be one of the World’s leading provider of statistics and analysis for the fisheries and aquaculture sectors.

#### ***The participants – consortium scientific excellence and complementarity***

The PrimeFish consortium was carefully selected to address the specific challenges in H2020-SC2-BG10 work programme; to cover a wide spectrum of scientific and technological expertise related to managing fisheries and aquaculture seafood production enterprises, including that of marketing, consumer analysis, economics, business administration and strategies, accounting, law, engineering, food technology and food science with wide European dimension as well as relevant international partners. Most participants have experience in working closely with the industry as consultants within strategic management, research, marketing, innovation



and product development and processing. The collective intelligence of PrimeFish has as main assets: scientific and technical capacity; proficiency in integrated projects and cross-sectoral issues; a proven competence in providing technical support for decision-makers; in-depth and on-going EU, sea-basin, regional and MS-level experience in stakeholders/platforms/networks interaction and dissemination; solid, successful and long-term working relationships between the Consortium partners; and a well-established management and working structure. In addition, sound expertise is combined with experience in developing innovative solutions to deal with critical issues in fisheries policy and fisheries management.

The PrimeFish consortium has a successful record of participating in European projects related to fisheries and fisheries management. PrimeFish consortium unique strength lies in the access to previous research and current research programmes being undertaken by the consortium partners. PrimeFish partners coordinate or participate in highly relevant on-going EU projects, such as: **MareFrame** (MATIS, UAlb, SYN, UIce, NOFIMA, UTro, CETMAR), **EcoFishMan** (MATIS, UIce, CETMAR, UTro, SYN), **MyFish** (UAlb), **BENTHIS** (SYN), **VECTORS** (UAlb) and **STAGES** (CETMAR), **GAP2** (UTro), **ODEMM** (UAlb), **SOCIOEC** (UIce), **DeepFishman** (UIce), **FAROS** (CETMAR), **ACCESS** (NOFIMA), **MEFEPO** (UTro), **MADE** (NOFIMA), **JAKFISH** (UTro, UAlb).



**Figure 8. Geographical representation of PrimeFish consortium**

The PrimeFish partners will also bring knowledge and lesson learned from earlier national and international project they participated in, such as TraceFish, Seafood Plus, Chill-on, IQ-Freshlabel, Fresh Label, Eumofa, WhiteFish, WhiteFishMaLL (Nordic Innovation), BrightAnimal, SustainAqua, CleanHatch, BioHatch, FishFermPlus, Chitofood, Enviguard, COBECOS, COSTAL FISHERIES (Nora), Sustaining Ethical Aquaculture Trade (SEAT), CONSENSUS, AQUAINNOVATION (CSN-INTRAN), GENESIS, AquaFlow, NovaMar, AralFutur, Profopescas STP, Xestpol, NSA Nicaragua, PO Cabo Verde, Subproductos Colombia,

CONSIDER, COBEREN, MUSING. Other relevant projects PrimeFish expects to liaise with or use results from include: [www.aquatnet.com](http://www.aquatnet.com), [www.asemaquaculture.org](http://www.asemaquaculture.org), [www.aqualabs.eu](http://www.aqualabs.eu), [www.pescalex.org](http://www.pescalex.org), [www.asemaquaculturehealth.net](http://www.asemaquaculturehealth.net), [www.aquaexcel.eu](http://www.aquaexcel.eu).

Additionally the project has access to a large Industry Reference Group (IRG) that will facilitate access to data both on micro and macro level in the five sectors chosen. The IRG will provide insights into production, economic performance and profitability and supply-chain relationships and they will also provide the requirements for the prediction and simulation tools to be developed in PrimeFish. They will also act as pilot users of the outputs from PrimeFish.

### **The role and tasks of participants in PrimeFish**

All participants have clear and specific roles in the project. Below is a summary of the relevant strengths of participants in the specific tasks of the project.

### **The coordinator qualifications and relevance**

The coordinating organisation is MATIS, which has expertise in managing and running multidisciplinary RTD projects. They include resource management, especially within the fisheries management sector and management of seafood value chains. MATIS has experience in international cooperation and leading EU funded projects in addition to strong and unique cooperation with the industry and other fisheries related stakeholders such as policy makers, etc. Experience gathered from the coordination and administration of previous projects will guarantee efficient and transparent project management. The knowledge MATIS has established in its close cooperation with the industry and other stakeholders will be transferred to other PrimeFish participants where relevant.

The PrimeFish project will be coordinated and managed by Dr. Gudmundur Stefánsson, research leader at MATIS ohf. He is a food scientist with 28 years of experience within research institutes, teaching establishments and international food production companies including that of project managing and coordinating national, Nordic and European RTD projects. He has held various roles within fish and food producing businesses such as project manager, operation manager, purchasing manager, vice managing director and Research and Development director. He has worked with many of the leading food retailers in Europe such as Carrefour, Auchan, Leclerc, Monoprix, Casino, System-U, Intermarche, Metro, Rewe, Sainsburys, Marks & Spencer, Tesco, Lidl, Aldi, Ica (Ahold), Bergendahls, Coop, Axfood, S-Group and Kesko in supplying fish and food products. His experience and his expertise on the competitive nature of the European/international retail and HoReCa food markets will facilitate the uptake of the outputs of PrimeFish.

The AM, Oddur Már Gunnarsson at MATIS was a coordinator of the EraNet SafeFoodEra and has in addition to coordination and management skills, valuable financial and administrative knowledge.

- ***WP1 – Method selection, configuration and harmonisation***

The partners in WP1 (NOFIMA, MATIS, SYN, INRA, UNIV-SAVOIE, UIce, UNIPARMA, UNIPV, Kontali, UTro, U STIRLING, NtHU and MemU) have the required expertise and competence for data management, method selection, configuration and harmonisation. NOFIMA, the WP leader, has extensive international experience in relevance to economics, marketing, logistics, rationalisation, decision support and traceability, particularly for seafood products. They have been involved in various international standardisation activities, especially related to traceability and development of sector-specific ontologies, good-practice guides, methodologies and tools.

- ***WP2 – Economic performance and prices***

The leader of WP2, Kontali, is one of the world's largest provider of statistics and analyses for the seafood sector. Their extensive expertise is especially strong within the farmed salmon and other aquaculture sectors such as freshwater trout, sea-bass and sea-bream. In the last few years they have additionally been focusing on the economic performance of the capture fisheries such as Atlantic cod and herring. They have a comprehensive in-house information storage and retrieval systems, which form the basis for their databases which is based on more than 150 sources from over 40 countries. The partners (UA1b, UIce, SYN, TTZ, UIce, UNIPARMA, UNIPV, NOFIMA, CETMAR, U STIRLING, NtHu and MemU) have strong expertise in evaluating the economic performance of food and seafood businesses especially regarding the specific case studies chosen. The partners also possess good skill in analysing time-series and other econometric tools necessary for the analysis of "boom and bust" cycles.

- ***WP3 – Supply chain relations and regulation***

The leader of WP3, U STIRLING, is one of the leading global centres of excellence in the field of aquaculture and fisheries science especially regarding sustainable aquaculture development and practice; aquatic animal health and welfare; nutrition, genetics and reproduction. They and other partners in the WP (MATIS, UALB, SYN, UNIV-SAVOIE, TTZ, UIce, Kontali, NOFIMA, UTro, CETMAR, NTU and MemU) have the required relevant expertise to carry out supply-chain analysis, market institutional analysis, on labelling and certifications schemes and the industry dynamics for their sectors and the case studies. UTro has excellent competence, facilities and equipment related to marine and fishery biology, including population structure and dynamics. They have strong expertise in bio-economic modelling and on ecosystem services and their valuation. UTro has the relevant expertise and competence to compile and quantify non market values of fisheries and aquaculture in cooperation with the other partners in the WP.

- ***WP4 – Products, consumers and seafood market trends***

The WP4 leader is UNIV-SAVOIE who has strong expertise and competence on survey methodologies and consumer behaviour especially regarding the food and drinks industry. The partners in the WP (MATIS, INRA, TTZ, UIce, UNIPARMA, UNIPV, Kontali, NOFIMA, CETMAR, U STIRLING, NTU and MemU) are all experts in research on consumer behaviour and preferences, including that of issues related to fish consumption, health, labelling and health claims. INRA has a database on food purchases including that of capture and farmed seafood products from about 20.000 households in France.

- ***WP5 – Development of robust simulation and prediction models***

The WP5 leader is UIce who has taken part in several European projects. UIce and other partners in WP5 (MATIS, SYN, UNIV-SAVOIE, UNIPARMA, UNIPV, Kontali, NOFIMA, U STIRLING, NtHU and MEMU) have the required expertise to compile the prediction and simulation models, on which PrimeDSS will be based. The partners also possess the necessary expertise to develop and extend the competitiveness index (FACI) to be used to compare the performance of European fisheries and aquaculture industries to each other, and to non-European competitors.

- ***WP6 – Development of PrimeDSF***

The WP6 leader is SYN who has experience in business administration, economics and International trade, fisheries policy, system and policy analysis and mathematics and has taken part in numerous European projects. SYN will get support from the other WP6 partners (MATIS, UAlb, UNIV-SAVOIE, TTZ, UIce, UNIPARMA, UNIPV, Kontali, NOFIMA, UTro, CETMAR, U STIRLING, NtHU and MemU) in developing the PrimeDSS. Together the partners will provide the interdisciplinary expertise necessary for the successful development the decision support system.

- ***WP7 – Creating shared value***

The WP7 leader, CETMAR will be assisted by all other partners in carrying out the necessary dissemination and stakeholder interaction. CETMAR is a coordination centre with interdisciplinary integration of all marine research and technology recourses in Galicia, Spain and has strong connection with a large group of stakeholders.

- ***WP8 – Project management***

The WP leader is MATIS that is supported in the execution of the tasks by the PSG and WP leaders (NOFIMA, Kontali, U STIRLING, UNIV-SAVOIE, UIce, SYN and CETMAR). MATIS has expertise in resource management, especially within the fisheries management sector. MATIS has long experience in international co-operations and leading EU funded projects in addition to strong and unique cooperation with the industry. Experience gathered from administrative work and previous projects will guarantee efficient and transparent project management. The PSG will deal with management issues that might occur. TC will ensure the scientific quality of the project and the EDC will ensure that the results and main outcomes of the project will reach the relevant stakeholders. The external strategic advisory board (SAB) will attend meetings and consult on decision making, implementation, monitoring, audit and control of PrimeFish.

**The Exploitation and Dissemination Committee (EDC), External Strategic Advisory Board (SAB) and Industry Reference group (IRG) and case studies.**

The role of the Exploitation and Dissemination Committee is to ensure that the results and outputs from PrimeFish reaches fishermen, SMEs, aquaculture and fish/food producers, industry association and other stakeholders. The EDC members have been identified and contacted for confirmation (Table 2.3.3.1). The members of EDC will be invited to the kick-off meeting and all annual meetings. Stakeholder meetings/workshops will be held during the project to ensure their active involvement and contribution to the

development of the new tools, how to implement the PrimeDSF/DSS and thus increase the chance of successful exploitation of the DSS and outputs from the project. In addition, PrimeFish will disseminate the results to other on-going projects and initiatives relevant for the project in order to create synergies and to increase the visibility of the project worldwide. In this sense, the communication results will be coordinated and assessed between the WPs and the EDC. The communication activities towards stakeholders are of the utmost importance to ensure that the PrimeDSS toolbox will actually be exploited by the European fisheries and aquaculture industries and thus improving their long term competitive edge.

To support the role of the coordinator and to further strengthen the industrial involvement in the project, a Strategic Advisory Board (SAB) has been formed and its members identified and contacted for confirmation and will be invited to the kick-off meeting, Annual meetings and concluding symposium for advice and consultancy. Its main role is to consult with the coordinator on a regular basis (every 3 months).

**Table 2.3.3.1: List of members of the Exploitation and Dissemination Committee (EDC)**

Name of person in SC	Participant No.	Short name	Role in the project	Role in organisation
Rosa Chapela	13	CETMAR	EDM and WP7 leader	Head of department
Gudmundur Stefánsson	1	MATIS	CO and leader of WP8	Research group leader
Birgit Hagen	9	UNIPV	Task leader	Technical director
Christian Colmer	6	TTZ	Expertise on herring	Chief biologist
Paul S. Valle	10	Kontali	WP2 leader	Development manager

**Table 2.3.3.2: List of members of the External Strategic Advisory Board (SAB)**

Name of person in SC	Participant No.	Short name	Role in the project	Role in organisation
Sveinn Margeirsson	1	MATIS	Chairman of SAB	CEO
Rosa Chapela	13	CETMAR	EDM and WP7 leader	Head of department
Johannes Pálsson	IRG 23	Skagen	Member of IRG	CEO
Javier Ojeda	IRG 21	APROMAR	Member of IRG	CEO
Mike Park	IRG 28	SSPO	Member of IRG	CEO

Members of the SAB will give advice during the developmental process of the project. They will contribute with their requirements for reliable tools and models for production planning and to ensure long term economic viability within the European fisheries and aquaculture.

PrimeFish will have a significant input from industry and industry organisations that form an “Industry Reference Group” (IRG) to the consortium which will facilitate access to data both on micro and macro level in the sectors chosen. The IRG will provide insight into production, profitability and supply-chain relationships on micro level and they will also provide requirements for the prediction and simulation tools developed in PrimeFish. Additionally they will act as the primary users of the PrimeDSF and the DSS software tool that will be the main innovative outputs from the project. The end users and target group in the project are thus closely connected with the scientists and will be in a good position to give feedback, add value and validate results and to directly benefit from the expected project outcomes.

The industrial companies and organizations that form IRG in PrimeFish have confirmed interest in these issues and willingness to provide data and their networks will be utilised to get data and other feedback needed to ensure relevance, representativeness and applicability of project models and outcomes. A list of members in the IRG can be found in Table 2.3.3.3. Interaction with the industry will not be limited to the PrimeFish IRG participants, but the group will have a key role in representing the industry in the project and in advising and providing context for the RTD participants.

**Table 2.3.3.3: List of Industry Reference Group members (IRG)**

IRG no	Industry Reference Group (IRG)	Type	Country	Contact person	Position in company
1	Bakkafrost	Industry	Faroe Islands	Árni Olsen	Managing director

2	Naturland e.V.	IndOrganis.	Germany	Dr. Stefan Bergleiter	Responsible for Org. fishery & aquac.
3	Frosta AG	Industry	Germany	Frank Gaida	Product Development
4	Fish-Fair International	Industry	Germany	Sabine Wedell	Project manager
5	Nordsee	Industry	Germany	Dietmar W. Hoffmann	Head of Quality Management
6	Bundesverband Aquakultur e.V.	IndOrganis.	Germany	Bela Buck	President
7	German Agricultural Society DLG e.V.	IndOrganis.	Germany	Dr. Birgit Schmidt-Puckhaber	Responsible for Aquaculture
8	Federation of Greek Mariculture	IndOrganis.	Greece	Yannis Pelekanakis	General manager
9	Icelandic Fish Meal Association	IndOrganis	Iceland	Jóhann P. Andersen	General manager
10	Federation of Icelandic fish processing plants	IndOrganis.	Iceland	Arnar Sigurmundsson	General manager
11	Iceland Seafood International	Industry	Iceland	Fridleifur Fridleifsson	Director frozen seafood sales
12	Sildarvinnslan hf.	Industry	Iceland	Sindri Sigurdsson	Development and project manager
13	Vísir hf.	Industry	Iceland	Erla Osk Petursdottir	Project manager
14	Federcoopesca	IndOrganis.	Italy	Gloria Cigliobianco	Public relations and legal affairs
15	Associazione Piscicoltori Italiani	IndOrganis.	Italy	Dr. Pier Antonio Salvador	President
16	Cosa Acquacolture	Industry	Italy	Marco Gilmozzi	President
17	Cosa Acquacolture Orbetello	Industry	Italy	Marco Gilmozzi	President
18	Hermes AS	Industry	Norway	Jan Roger Lerbukt	CEO
19	Norges Sildesalgslag	IndOrganis.	Norway	Jarle Hansen	CEO
20	Norges Råfisklag	IndOrganis.	Norway	Svein Ove Haugland	VP
21	Nordlaks produkter AS	Industry	Norway	Tor Anders Elvegaard	CEO
22	Asociación Nacional de Productores de Acuicultura Continental	IndOrganis.	Spain	Susana Portela	General manager
23	Asociación Empresarial de Productores de Cultivos Marinos de España	IndOrganis.	Spain	Javier Ojeda	Managing director
24	The Spanish Association of Cod Fishing Ship Owners	IndOrganis.	Spain	Ivan López	President
25	FF Skagen	Industry	Denmark	Jóhannes Pálsson	CEO
26	Danish Pelagic Producer Organisation	IndOrganis.	Denmark	Claus Reedtz Sparrevohn	Chief biologist
27	The Danish Aquaculture Org.	IndOrganis	Denmark	Brian Thomsen	Director
28	Scottish Salmon Producers' Org.	IndOrganis.	UK	John Webster	Technical Director
29	British Trout Association	IndOrganis	UK	David Bassett	Chief Executive Officer
30	Scottish Fishermen's Federation	IndOrganis	UK	Alan Coghil	President
31	Scottish Seafood Association	IndOrganis	UK	Moyra Patience	Development officer
32	Hung Ca Co. Ltd.	Industry	Vietnam	Mr. Tran Van Hung	Chairman
33	Vinh Hoan Corp	Industry	Vietnam	Mrs. Truong Thi Le Khanh	General manager
34	Vietnam Association of Seafood Exporters and Producers	IndOrganis	Vietnam	Ms. Ong Thi Kim Ngan	Trade promotion manager

35	Ocean Choice International	Industry	Canada	Guðjón Thorbjornsson	Managing director
36	Icewater Seafood	Industry	Canada	Alberto Wareham	CEO
37	Fish Food & Allied Workers U	IndOrganis	Canada	Earle McCurdy	President
38	Barry Group	Industry	Canada	Halldor Arnason	Managing director

Both the SAB and the IRG will link PrimeFish strongly to the European fisheries and aquaculture industrial sectors allowing for data collection. In addition the industrial sectors through IRG will provide the requirements for prediction and simulation tool and they will act as the pilot users of the outputs from the project. They will participate in the project meetings and will have access to outputs from the project. They will give advice relating to scientific challenges, provide outside view of the project activities and its dissemination, and room for improvement when it comes to how the project is proceeding. They will be invited to speak at the project meetings and workshops.

In PrimeFish five specific case studies are evaluated: Atlantic cod using data from Iceland, Norway, Spain and the UK in comparison with the corresponding fisheries in eastern Canada and with farmed pangasius from Vietnam. Atlantic herring using data from Denmark, Iceland, the Faroe Islands, Norway, Germany and the UK. Farmed salmon using data from Scotland, Norway and the Faroe Islands. Freshwater trout using data from Italy, Spain, UK and Denmark. And finally sea-bass and sea-bream using data from Greece, Italy and Spain and comparing with the sectors in Turkey and farmed pangasius from Vietnam. Fig. 9 shows the inter-relation of the case studies.

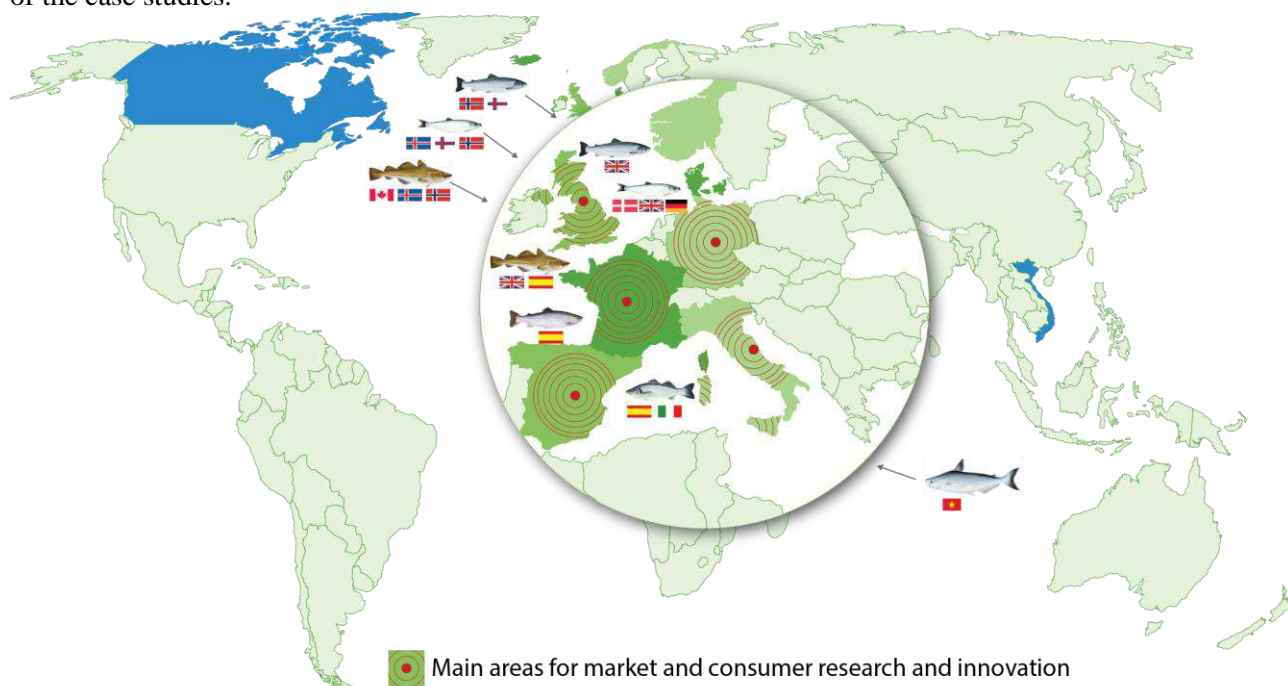


Figure 9. Graphical representation of case studies

**Liaise with other relevant national and international research initiatives**

The CO will be responsible for liaisons with other projects and to introduce other additional national and European funding to the consortium. Information and knowledge resulting from this activity will be made available to participants on a regular basis. All partners will contribute to this task, especially the PrimeFish partners that already coordinate or participate in **highly relevant** on-going EU projects.

**Other countries**

The PrimeFish consortium includes one partner from non EU country eligible for funding, Vietnam and one partner from non-EU developed country, Canada. NTU in Vietnam has strong expertise within the field of fisheries and aquaculture. Their key research areas include economics of fisheries and aquaculture, food marketing, agriculture development, tourism management, and industrial management.

MemU from Newfoundland, Canada is dedicated to education, training, applied research and industrial support of fisheries and maritime sectors. Their fisheries-based projects have been diverse and have included research on emerging fisheries, sustainable fisheries, gear technology, fisheries-based training, post-harvest processing, marine bioprocessing, education and training and community development. Projects have ranged from small-client centered research to large-scale, multi-year strategic initiatives. Collectively, these projects demonstrate extensive experience, a broad understanding of fisheries issues and insight into the challenges and opportunities facing the industry.

***Additional partners***

There are no unidentified additional participants in the project.

## 2.3.4 Capacity of participants and links to third parties

### 2.3.4.1 Participants (applicants)

Participant no.	Name of the Organisation	Short name
<b>1</b>	<b>MATIS ohf.</b>	<b>MATIS</b>
<p>MATIS is a public commercial food research company founded in Iceland in 2007, following the merger of three public food research institutes. The role of MATIS is to engage in food research, innovation and safety to increase the value of food through research, development, dissemination of knowledge and consultancy. MATIS specialised fields include fisheries research, fisheries management, traceability, markets, processing technology, environmental research, quality and safety of aquatic and marine catches, chemical and physical properties of food and feed, genetics, aquaculture, biotechnology, microbiological &amp; chemical and consulting. MATIS has state of the art facilities at its laboratories performing cutting edge research in close collaboration with various Universities, Institutes and Industry in Iceland and throughout the world. MATIS has coordinated and participated in numerous national, Nordic and EU funded projects. Over the last 5 years MATIS has successfully coordinated six FP6 and FP7 projects, including MareFrame FP7, EcoFishMan FP7, AMYLOMICS FP7 and QALIBRA FP6. In addition, MATIS has been a partner in 22 successful FP7 &amp; FP6 projects, five ERA-NET SAFEFOODERA projects and more projects in negotiation. MATIS therefore has great deal of experience of project management as well as the administrative capability to deliver successful European and international research projects. <a href="http://www.matis.is">http://www.matis.is</a></p>		
<b>Main tasks:</b>		
<p>Project Coordinator and therefore a WP 8 leader and Administrative Manager as well as part of the Project Steering Group (PSG) and Technical Committee (TC). MATIS is also contributing to T1.1 Selecting data sources. MATIS will work on T.3.1, and T3.3-4 in WP3 - Supply chain relations and regulations. MATIS will contribute to industry study cases in task T4.1 and to tasks T4.3-4 and lead Qualitative studies in T4.2 and development of Strategic positioning tool in T5.3. Also contribute to all the tasks in WP6 where PrimeDFS will be developed and utilized.</p>		
<b>Profile of Key Personnel and relevant expertise:</b>		
<p><b>Gudmundur Stefansson</b></p> <p><b>COORDINATOR</b> <b>PROJECT STEERING GROUP</b> <b>TECHNICAL COMMITTEE</b> <b>EXPLOITATION AND</b> <b>DISSEMINATION COMMITTEE</b></p>	<p>PhD in Food Science from University of Leeds. Dr. Gudmundur Stefansson (MATIS) has a background that will facilitate the uptake of the outcomes of PrimeFish within the fish business industry. His background is R&amp;D activities (1986-2000) including that of participating in national and European research projects, various roles in international fish businesses (2000-2012) such as project manager, operational manager, plant manager, vice MD and R&amp;D director and since 2012, a research group leader at MATIS focusing on food product development and innovation.</p>	
<p><b>Oddur M. Gunnarsson</b></p> <p><b>ADMINISTRATIVE MANAGER</b></p>	<p>BSc in Production Engineering, Odense University of Technology. Dir. of Scientific Development at MATIS since 2008. He has been Senior adviser at The Nordic Industrial Fund at the Nordic Innovation Centre (NiCE), responsible for the SME Forum, Nordic Research Area Net Programme in food and activities within food- and biotechnology. WP leader in the PROFORSAFE ERA-NET and Coordinator of the SAFEFOODERA ERA-NET. He is a member of the FP7 PC for the KBBE of the Cooperation Programme since 2006.</p>	
<p><b>Valur N. Gunnlaugsson</b></p>	<p>MSc in Food Science from the University of Leeds. He has worked in number of projects regarding food quality, processing and traceability. Is currently developing a software which assists captains and fisheries managers to evaluate the margins of various types of fishing activities and support decision making.</p>	
<p><b>Jónas R. Viðarsson</b></p>	<p>MSc in Environmental Science and Resource Management from HASKOLI ISLANDS . Research Group Leader at the Value Chain &amp; Processing Division. Main expertise is on-board handling, and dissemination, traceability systems, environmental impacts of fisheries and seafood production, socio-economic studies in regards to fisheries management, LCAs</p>	
<p><b>Sigríður Sigurðardóttir</b></p>	<p>MSc in Industrial Engineering from HASKOLI ISLANDS and currently working on her PhD in Industrial Engineering. Sigríður is a Research group leader of the IT department at MATIS and has been involved in several national and international research projects in the past. She will contribute to tasks within PrimeFish where</p>	



	data collection, data handling and data processing as well as other IT work is required.
<b>Emilía Martinsdóttir</b>	MSc in chemical engineering. Research in sensory and consumer field and fish chain studies (processing storage and transportation. Coordination and participation in EU research projects like “Evaluation of Fish Freshness”, Fish Quality Labelling and Monitoring Development and Implementation of a computerised sensory system for evaluating fish. Coordinator of EU-project Quality Index Method in the European fish processing and distribution and of EU FP6 project “Improved Seafood Sensory Quality for the consumer <a href="http://www.seafoodplus.org">http://www.seafoodplus.org</a> ). WP leader in EU-FP6 project “Developing and integrating novel technologies to improve safety, transparency and quality assurance of the chilled/frozen food supply chain-test case fish and poultry <a href="http://www.chill-on.com/">http://www.chill-on.com/</a> . Now in project administration EnRichMar (Convenience Food Enriched with Marine based Raw materials).
<b>Kolbrún Sveinsdóttir</b>	PhD Food Science, HASKOLI ISLANDS . Project manager at MATIS. Her main research expertise is in seafood quality, sensory evaluation and consumer studies. Coordination and participation in EU research projects: Convenience Food Enriched with Marine based Raw Materials EnRichMar (FP7-SME-2013: Research for the benefit of SMEs, <a href="http://www.enrichmar.eu">http://www.enrichmar.eu</a> ), Quality Index Method in the European fish processing and distribution chain (QLAM-2002-00152, <a href="http://www.qim-eurofish.com">http://www.qim-eurofish.com</a> ), Improved Seafood Sensory Quality for the consumer within the SEAFOODplus Integrated Programme (IP SEAFOODplus FOOD-2004-506359, <a href="http://www.seafoodplus.org">http://www.seafoodplus.org</a> ), Developing and integrating novel technologies to improve safety, transparency and quality assurance of the chilled/frozen food supply chain-test case fish and poultry (FP6-016333-2, <a href="http://www.chill-on.com/">http://www.chill-on.com/</a> ) and Nordic projects: Innovative concepts for culinary consumer oriented Nordic seafood products for easy use at home and for out-of-home consumption (MmmmmSeafood, NICE-P 06386), Enriched convenience seafood products (NICE-P 11057).

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Participant no.	Name of the Organisation	Short name
2	IFM, Aalborg University	UAib
<p>Aalborg University offers education and research within the fields of natural sciences, social sciences, humanities, technical and health sciences. Aalborg University currently consolidates and further develops its profile as a dynamic and innovative research and educational institution oriented towards the surrounding world. It is characterised by combining a keen engagement in local, regional, and national issues with an active commitment to international collaboration.</p> <p>IFM, Innovative Fisheries Management is a research centre within the Department of Planning at Aalborg University. IFM is a social science research and advisory centre working with fisheries and marine management and coastal community development. IFM is specialised in cross disciplinary collaboration and is frequently teaming up with institutions/colleagues from other disciplines in order to develop suitable solutions to the problems in question. The basis for IFM's work is the reciprocal relationship where advisory needs both guide and are informed by research and capacity building activities. IFM's current research interests focus on fisheries co-management, the social aspects of the knowledge base for marine management, social impact assessments, and the regional perspective on coastal community development. IFM has participated in numerous national, Nordic and EU funded projects as coordinators and WP coordinators. IFM has the last years participated in EU WP 7 projects as VECTORS, GAP 1 and GAP 2, JAKFISH, Socio-EC, MEFEP0 and MareFrame.</p>		
<b>Main tasks:</b>		
IFM will take lead on North Atlantic pelagics (herring) case study in T2.1.2 and contribute to Tasks T2.1 T2.2 and T6.3 and lead Market institutional analysis in T3.2.		
<b>Profile of Key Personnel and relevant expertise:</b>		
<b>Søren Qvist Eliassen,</b>	PhD in economic geography, Roskilde University on regional conditions for innovation in the fish processing industry. Functioned as advisor and researcher in market development for fishing and processing.	
<b>Jesper Raakjær</b>	Dr.s. in political economy, based on PhD and MSc in regional and business economics. Jesper Raakjær has a long record of advisory and research in governance and economic projects within the fisheries sector. Raakjær has among other things served as chairman of the Board of Directors in a Danish pelagic processing industry and today represents the Federation of National Organisations of Importers and Exporters of Fish (AIPCE-CEP) in the pelagic RAC.	

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Participant no.	Name of the Organisation	Short name
<b>3</b>	<b>SYNTESA Sp/f</b>	<b>SYN</b>
<p>Syntesa (FO) is a Faroese consulting company founded in 2004 by Ólavur Gregersen and provides advisory service on innovation processes, impact analysis and market development. The company is by past and present heavily involved in fishery and aquaculture related activities, be it through commercial or research projects. Syntesa Sp/f has partners and associates in the United Kingdom, Denmark, Spain, Germany and Belgium. Syntesa has been WP leader of evaluation and economic cost-benefit analysis in EcoFishMan, an EU project established in support of the reform of fishery management – in particular the Common Fisheries Policy. They are also a partner in FP7 project BENTHIS and task leader of stakeholder interaction, co-ordinator of Nordic Innovation project WhiteFishMaLL, Co-ordinator of the NORA project MacroBioTech on algae mariculture, coordinator of ALL-Smart-Pigs and WP leader of the Decision Support Framework in MareFrame, an EU project seeking to remove barriers preventing a more widespread use of an Ecosystem-based Approach to Fisheries Management. <a href="http://www.syntesa.fo">http://www.syntesa.fo</a></p>		
<b>Main tasks:</b>		
<p>Part of the Project Steering Group (PSG) and Technical Committee (TC) and leader of WP6, Develop of a decision support framework (PrimeDSF). SYN will be contributing to T1.1 and T1.3 in WP1 and also to T2.1 in WP2. SYN will work on Supply Chain Relations and regulation in tasks 3.1-2 and 3.4. SYN will work on model in T5.1 and T5.3-4 and while leading WP6, lead the tasks 6.1-2 and T6.5, Utilisation of PrimeDSF and PrimeDSS and contribute to task 6.3.</p>		
<b>Profile of Key Personnel and relevant expertise:</b>		
<p><b>Ólavur Gregersen</b>   <b>WP6 LEADER</b>   <b>PROJECT STEERING GROUP</b>  <b>TECHNICAL COMMITTEE MANAGER</b></p>	<p>MSc in Business Administration, Economics and International Trade from Aarhus University. Entrepreneur since 1993 and co-founder of various companies. He has several years of business experience as management consultant and business development adviser. His specialty is within market development, economic evaluation, impact assessment of technology and management innovation. Responsible for stakeholder interactions in several projects. He has been the project coordinator of FP6 project ALDA and FP7 project ALL-SMART-PIGS. WP leader of FP7 KBBE project BrightAnimal, EcoFishMan and EU-PLF.</p>	
<p><b>Lehr Heiner</b></p>	<p>PhD in Natural Science from the Technical University Berlin. Lead Consultant for the Thailand National Traceability Project for the Thailand National Bureau of Agricultural Commodity and Food Standards. He was the International Technical Supervisor for the Malaysia Food Information and Traceability (M-FIT) Project. Held the post of Enterprise Application Director for the EU TRACE project represented in Tracefood and co-ordinator of BrightAnimal.</p>	
<p><b>Katrin Gregersen</b></p>	<p>MSc in Supply Chain Management and a B.A. Economics and Business Language (English and German) from Copenhagen University. Administration Manager of Syntesa. She is an experienced corporate executive with a successful history in company administration, project management and administration, logistics, process documentation and quality control.</p>	
<p><b>Unn Laksá</b></p>	<p>PhD in Media Coverage of Climate Change and MA in Politics and Mass Media. Project Manager at Syntesa. She has experience in market research and project management and currently works on the EU FP7 project MareFrame, where she is responsible for the 'synthesis and training development' work package. She also runs social media marketing campaigns for some of Syntesa's clients.</p>	
<p><b>Durita R. Djurhuus</b></p>	<p>MSc in Business Administration, Economics and International Trade from Aarhus University. Project Manager at Syntesa. Jointly responsible for stakeholder analysis in BENTHIS and she is an experienced LivingLab facilitator and responsible for LivingLabs in the WhiteFishMaLL and the ALL-SMART-PIGS project, two current engagements of Syntesa.</p>	

Participant no.	Name of the Organisation	Short name
4	French National Institute for Agricultural Research	INRA
<p>The INRA-ALISS unit is a multidisciplinary research unit, bringing together economists and sociologists. The main themes of current research are the analysis of consumption behaviours, of their determinants and their effects on demand for food, on prices, on household expenditures and on exposure to health benefits and risks; the analysis of industrial and retail dynamics (business strategies, organization of the sectors, innovations, etc.) as determinants of the characteristics of the food products available to consumers (price, variety, quality, safety); the analysis of the interactions between the dynamics of the food supply and demand under the effect of public interventions such as actions to control retail prices, regulate product quality and control health effects related to consumption practices. A major area of the research currently being carried out by the INRA-ALISS unit is health-issues, relating to health safety and nutritional problems. In 2014, the INRA-ALISS is composed of 8 senior researchers, 14 researchers, 12 research engineers, 8 PhD students, and 2 post-doctoral associates. In the PrimeFish project, the INRA-ALISS unit will be involved in the WP dealing with consumers' behaviours. Professor Xavier IRX from MTT Finland will be a third party against payment (GA Art. 11) to INRA. The main focus will be on the economic analysis of diets and the health and environment impacts of recommendations to eat more fish.</p>		
<b>Main tasks:</b>		
<p>INRA is contributing to Selecting, configuring and extending the data analysis methods in T1.2. INRA will work on to T4.1 and T4.3, while leading the work on subtasks 4.3.1 Household purchases in Finland and France and T4.3.2 Impacts of increased fish consumption.</p>		
<b>Profile of Key Personnel and Relevant Expertise:</b>		
Name	Relevant Expertise	
<b>Louis-Georges Soler</b>	<p>Soler is an economist, specialized in industrial organization. He is the director of the Research Unit ALISS (Food and Social Sciences) of INRA composed of 50 permanent and temporary researchers. The main topics of this Research Unit are: (1) the determinants of food consumption, (2) food chain and firms' strategies analysis, (3) assessment of public policies related to food, health and environmental issues. L.G. Soler has been involved in many projects dealing with firms' strategies in the food chains, producers-retailers relationships, and food quality regulation. He has conducted several French and European research projects. He has been the coordinator of a multidisciplinary project dealing with nutritional policies in which economists, sociologists, food scientists and epidemiologists were involved. He is also engaged in research projects on the economical and health impacts of public policy instruments like consumers' information, food taxation and subsidizing, and labelling.</p>	
<b>Pascal Leroy</b>	<p>Pascal Leroy is a Research Engineer at INRA-ALISS. He is specialized in economic modelling and involved in many French research project. In the last years, he has been strongly involved in the design and the implementation of economic models of diet choices.</p>	
<b>Xavier Irz</b>	<p>Irz Xavier holds a PhD in Applied Economics from the University of Minnesota-Twin Cities. He is currently professor in the economic analysis of food markets at MTT Agrifood Research Finland. His primary research areas include applied economics and econometrics, in particular in relation to food, agriculture and the environment.</p>	

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Participant no.	Name of the Organisation	Short name
5	Université de Savoie	UNIV-SAVOIE
<p>With 12,500 students, a rich variety of multidisciplinary education and 19 research laboratories with an international reputation, the University of Savoie is an establishment on a human scale which combines proximity with its territories, founder membership of the University of Grenoble PRES and a wide perspective on Europe and the world. The University of Savoie is a public University, primarily financed by the French State (78 % of the 2012 budget of 101 million €; the remaining amount coming from own revenues and third-party funds). It offers short courses (university diplomas in technology, university diplomas) and long courses (generalist, specialist or vocational first degrees (licences), masters degrees by research or vocational masters degrees, engineering diplomas and doctorates), in both first level and continuing education, on a sandwich basis or including validation of experience.</p> <p>In support of research and education, the international aspect contributes to the identity, attractiveness, dynamism and general development of our establishment. The focus of the University of Savoie is, on the one hand to develop international projects, joint award qualifications, and programmes delivered in English, and on the other hand, wherever possible, to encourage mobility for students, lecturers and researchers as well as for administrative staff. Although present in 5 continents, with its 240 bilateral agreements, it has been able to take full advantage of its outstanding location on the borders of Switzerland and Italy to develop strong, special relationships with the higher education establishments of these two countries: Suisse Romande, Turin, Milan, the Aosta Valley a mixture of regions and university towns. See <a href="http://www.univ-savoie.fr/index.php?id=univiversite0">http://www.univ-savoie.fr/index.php?id=univiversite0</a></p>		
<b>Main tasks:</b>		
<p>Université de Savoie will lead WP4 - Products, consumers and seafood market trends and are in Technical Committee (TC). Also participating in T1.1-2, Leading subtask 1.2.3, Selecting, configuring and extending methods relating to products, consumer preferences and market trends. Contributing to T3.5 and T4.2 while leading Quantitative studies in T4.3 and the subtask Demand stimulation or manipulation in T4.3.4. Also contributing to T.4.4 and T5.4 and contributing Development of PrimeDSF in T6.1-3.</p>		
<b>Profile of Key Personnel and Relevant Expertise:</b>		
Name	Relevant Expertise	
<p><b>Stéphane Ganassali</b></p> <p><b>WP4 LEADER</b></p> <p><b>TECHNICAL COMMITTEE</b></p>	<p>Stéphane Ganassali was born in 1967. He's a professor of Marketing at the University of Savoie in France. He's the central coordinator of the European Master in Business Studies - a joint program developed by four partner Universities. He's an expert in survey methodologies and consumer behaviour. He has written books, chapters and many academic articles on the topic. He has been coordinating (or participating in) many European educational and research programs like Thematic Networks (Coberen) or intensive programs (Consider). He's also a scientific advisor for the Sphinx software company.</p>	

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Participant no.	Name of the Organisation	Short name
6	Technologie-Transfer-Zentrum Bremerhaven	TTZ
<p>The Verein zur Förderung des Technologie-Transfers an der Hochschule Bremerhaven e.V. (TTZ) is a an independent non-profit organization providing market oriented R&amp;D services to the business community, associations, ministries, district authorities and international organizations. Under the umbrella of ttz Bremerhaven, an international team of hundred experts is working in the areas of food, environment and health.</p> <p>TTZ has a long success track record of over 20 years in working with traditional handicraft branches, such as gastronomy or the local fish industry in Bremerhaven, handicraft bakeries, equipment manufacturers etc. TTZ's experience in the above topics has been built predominantly on a number of national and European projects where TTZ also acted frequently as project coordinator or coordination support. Since the year 2000, TTZ participated in 107 European projects of which 37 as coordinator. TTZ'S facilities offer 1.000 m2 laboratories and 1.000 m2 of food processing pilot plant, state-of-the-art wet-chemical and analytical laboratories, as well as an own sensory laboratory for suitable for sensory evaluation with expert panels and consumer testing for various product categories according to DIN/ISO standards</p>		
<b>Main tasks:</b>		
<p>TTZ is contributing to task 2.1 Economic performance of selected individual sectors. Also to market work in T3.2-3. TTZ will be involved in all tasks in WP4 - Products, consumers and seafood market trends. They will take part in Utilisation of PrimeDSF and PrimeDSS in T6.5 and will be leading the task T7.2, Training for target groups.</p>		
<b>Profile of Key Personnel and Relevant Expertise:</b>		
<b>Name</b>	<b>Relevant Expertise</b>	
<b>Björn Suckow</b>	Owing a diploma degree in Marine Environmental Science <b>Björn Suckow</b> is leading ttz Bremerhaven's interdisciplinary aquaculture group. He is also the initiator and head of the "Central Network for Aquaculture Germany". He is highly involved in the acquisition and management of new aquaculture related national and international (e.g. FP7-funded "EnviGuard") projects.	
<b>Imke Matullat</b>	<b>Imke Matullat</b> is nutrition scientist with over 6 years of experience in applied sensory science and team leader of sensory science department. She will contribute with her experience in nutrition and sensory perception/sensory preferences of consumers, as well as projects combining sensory and analytical data. Imke Matullat will work closely with the other team members Kathrin Mittag and Claudia Renken to carry out the sensory assessments.	
<b>Christian Colmer</b>  <b>EXPLOITATION AND DISSEMINATION COMMITTEE</b>	<b>Christian Colmer</b> is "Head of Communication" at ttz Bremerhaven. In addition to being responsible for media relations and communication with stakeholders from industry, SMEs and politics, he is working on research projects as Dissemination and Exploitation Manager. In particular through food, agriculture, fishery and biotechnology projects such as CHILL-ON (FP6), SO2SAY (FP7), HighTech Europe (FP7), IN-Food Quality (FP7), ComFABNet (CommNet) (FP7), Christian Colmer has gained broad experience in the area of technology transfer and international communication of research results.	
<b>Marie Shrestha</b>	<b>Marie Shrestha</b> is team leader of international project at ttz Bremerhaven. Marie Shrestha owns a MSc in Food Technology and has over 8 years experience in management of European and national research projects in the area of food technology and bioprocess. She was and is involved in BIOACTIVE-NET (FP6), BRAINHEALTHFOOD (FP7), NAFISPACK (FP7), IQ-FRESHLABEL (FP7), BREADGUARD (FP7), FLOURpower (FP7).	



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Participant no.	Name of the Organisation	Short name
<b>7</b>	<b>HASKOLI ISLANDS – School of Business</b>	<b>Ulce</b>
<p>The School of Business (also known as the Faculty of Business Administration) is the largest business school in Iceland, and the largest faculty within the HASKOLI ISLANDS . There are currently around 700 students pursuing their studies at undergraduate level, 600 master level students and 15 PhD students. The faculty is composed of 30 full time academic staff, whereof 8 full professors, as well as 20 part-time lecturers, staff associated with the Institute of Business Research and office staff. Key research areas include marketing, innovation, creative industries, the economic crisis, human resource management and labour market issues. Dr. Ögmundur Knútsson from University of Akureyri, will be a third party against payment (GA Art. 11) to Ulce.</p>		
<b>Main tasks:</b>		
<p>Part of the Project Steering Group (PSG) and Technical Committee (TC) leader of WP5, Development of robust simulation and prediction models. Ulce is contribution to tasks T1-1-2 and leading L1.3, Method testing, evaluation and comparison. Also participating in tasks T2.1-3, Leading T2.1.1, Selecting, configuring and extending methods relating to supply chain relationships. Ulce is contribution to tasks T3.1-2, T3.4-5 and T4.2-3. Ulce is also leading subtask T4.3.3, Frequency of purchases and T5.1, Development of Fisheries and Aquaculture Competitiveness Index (FACI). Ulce is also participating in tasks T5.2-4 and T6.1-6.4, while leading T5.5, Innovation and price analysis tool.</p>		
<b>Profile of Key Personnel and relevant expertise:</b>		
<p><b>Sveinn Agnarsson</b></p> <p><b>WP5 LEADER</b></p> <p><b>PROJECT STEERING GROUP</b></p> <p><b>TECHNICAL COMMITTEE</b></p>	<p>PhD in Economics from the University of Gothenburg. Associate professor in the School of Business within the School of Social Sciences He has been involved in several projects on fisheries, both domestic and international, including the FP7 projects Deepfishman, EcoFishMan and Socioec. Other research areas include applied microeconomics, productivity and efficiency analysis, cost-benefit analysis, impact assessment, bio-economic modelling, policy evaluation, econometrics.</p>	
<p><b>Kári Kristinsson</b></p>	<p>PhD in Industrial Economics from Aalborg University and an MSc degree in Economics and Business Administration from Copenhagen Business School. Assistant professor in the School of Business. Primary fields of interest are Behavioural Economics (dishonesty, locus of control, financial self-control) Innovation (through human capital diversity) and Experimental Game Theory.</p>	
<p><b>Ögmundur Knútsson</b></p>	<p>PhD in Business Administration from the University of Edinburgh. Research areas include value-chain analysis, role of fish markets, analysis strategic alliances and joint ventures.</p>	
<p><b>Auður Hermannsdóttir</b></p>	<p>MSc in Marketing and International Business from the HASKOLI ISLANDS , currently adjunct at the School of Business. She was a member of the CONSUMER BEHAVIOUR ERASMUS NETWORK (COBEREN) network of expert partners in Consumer Behaviour in Europe with the purpose of analysing and disseminating knowledge on Consumer Behaviour. She has also taken part in setting up CONSIDER – an international program for MSc students in marketing.</p>	

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Participant no.	Name of the Organisation	Short name
<b>8</b>	<b>University of Parma</b>	<b>UNIPARMA</b>
<p>The University of Parma (UNIPARMA) comprises three units, The Food Science Department, Unit of Agribusiness, and the Bioscience Department, that have experience in developing research in agribusiness system, economic analysis of food safety and quality standards with a supply chain perspective (e.g., GMO labelling, food traceability, etc.), and consumer behaviour analysis (e.g. consumers' acceptance and attitude, willingness to pay, etc.). The Department of Economics, Statistical unit has developed methodological tools for robust data analysis with a broad range of application like marketing research, antifraud and finance. All methods have a companion library (FSDA) that runs into MATLAB, developed with collaborators from the Joint Research Centre of Ispra (ITALY) (<a href="http://fsda.jrc.ec.europa.eu">http://fsda.jrc.ec.europa.eu</a>)</p>		
<b>Main tasks:</b>		
<p>UNIPARMA will be involved in T1.2-3 and is leading T1.2.1, Selecting, configuring and extending methods relating to economic performance and prices. In WP2 UNIPARMA will participate in T2.1-2 and lead T2.3 and subtask2.3.1 Identifying and characterising "boom and bust" cycles. UNIPARMA will be involved in T4.1 and lead Choice modelling in T4.4. UNIPARMA will be leading "Boom and bust" analysis in T5.2 and also participate in T5.1, T5.3-5. UNIPARMA will also work on PrimeDSS in T6.3-4.</p>		
<b>Profile of Key Personnel and Relevant Expertise:</b>		
<b>Name</b>	<b>Relevant Expertise</b>	
<b>Dr. Cristina Mora</b>	<p>Dr. Cristina Mora, Phd (scientific responsible), associate professor at the University of Parma in agricultural economics; she has been involved as senior researcher and project leader for national and European research projects since 2000. During her research activity she worked on topics about food marketing, with attention to the food safety standard, quality products, consumers' willingness to pay for safer food and GMO perceptions, supply chain management for quality food and analysis of vertical relationship.</p>	
<b>Dr. Andrea Cerioli</b>	<p>Dr. Andrea Cerioli, Phd, full professor at the University of Parma in Statistics; he is involved in several national project both as participant and as leader. His research is currently focused on developing new methodological tools for robust data analysis, with emphasis on multivariate modelling. He is author of about 50 publications in International peer-reviewed journals and Editor of the journal Statistical Methods and Applications.</p>	
<b>Dr. Marco Riani</b>	<p>Dr. Marco Riani, Phd, full professor at the University of Parma in Statistics; he is currently head of a local unit of a national project on economic risk management, but involved in recent years in both national and international projects. His main research topic is the development of new robust models and software for generalized linear and non linear models for antifraud spotting. Within this framework he has published about 50 papers in International peer-reviewed journals. Currently heading the team developing the toolbox FSDA for Matlab.</p>	
<b>Dr. Davide Menozzi</b>	<p>Dr. Davide Menozzi, Phd, assistant professor at the University of Parma in agricultural economics, has been involved in national and European research projects since 2003. His main interests are in the areas of economic analysis of food safety and quality standards with a supply chain perspective, and consumer's behaviour study.</p>	
<b>Dr. Fabrizio Laurini</b>	<p>Dr. Fabrizio Laurini, Phd, assistant professor at the University of Parma in Economic Statistics; he has been involved in several national projects and funded by the European Science Foundation. His research is focused in non-linear models for time series and extreme values theory for financial econometrics, where he has published more than 20 International publications.</p>	
<b>Dr. Michele Donati</b>	<p>Dr. Michele Donati, PhD, assistant professor at the University of Parma in Environmental Economics, has been involved in national and European research projects since 2001. His main research area is related to the application of</p>	

	quantitative methods, mainly based on mathematical programming, for modelling and evaluating agro-environmental policies.
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Participant no.	Name of the Organisation	Short name						
9	University of Pavia	UNIPV						
<p>The University of Pavia, which has a centuries-old tradition of study, is considered both in Italy and abroad to be a university of excellence. The quality of education is guaranteed by ample equipment and services which are constantly being improved (didactic laboratories, computerised libraries etc.) and by the opportunities offered for the students' cultural development. Fortunately, the University of Pavia does not suffer the overcrowding which penalizes other universities and thus can guarantee an excellent teacher-student ratio yielding very positive results on completion of the students' professional training and placement outcomes. The University of Pavia enjoys a strong tradition of international student and teacher exchanges: together with the Universities of Bologna and Siena, it was the first to implement the ERASMUS programme for international students. As of today a multitude of agreements regard, among others, the historic universities of Coimbra, many European universities which participate in the Socrates-Erasmus project, some top American and Chinese universities and many others.</p> <p>Using its numerous academic contacts that have been established over the years, UNIPV has been able to create a network of international collaborations which has led to prestigious recognition within international and national academia in both, teaching and research. According to recent Italian Rankings the University of Pavia is ranked 1<sup>st</sup> among the large universities or 4<sup>th</sup> among public University. Research activities have recently gone through a National Research Assessment Exercise (called VQR and managed by an independent body, ANVUR): overall, the University of Pavia is one of the Top Ten Italian universities. The Department of Economics and Management, in particular Management/International Business, and the area of statistics, contributed to this excellent result with rank 6 and 1, respectively. The Department currently offers a doctoral programme in Economics, Management and Technology (DREAMT) and two Master programmes (International Business and Economics, Economics and International Finance) fully taught in English.</p>								
<p><b>Main tasks:</b></p> <p>UNIPV is involved in T1.2-3 in WP1 and tasks 2.1-3 in WP2. UNIPV will lead the research into economic performance of Freshwater trout in subtask 2.3.1 and subtask 2.3.3 where UNIPV will lead research into Price transmission and market integration. UNIPV will participate in tasks 4.1-4.4 and 5.1-5.3 and T5.5 while leading Task 5.4. UNIPV is involved in T5.5 and in tasks 6.3-4.</p>								
<p><b>Profile of Key Personnel and Relevant Expertise:</b></p> <table border="1"> <thead> <tr> <th>Name</th> <th>Relevant Expertise</th> </tr> </thead> <tbody> <tr> <td> <p><b>Birgit Hagen, PhD</b></p> <p><b>EXPLOITATION AND DISSEMINATION COMMITTEE</b></p> </td> <td> <p>Since Dec 2010 Assistant Professor at the Department of Economics and Management, University of Pavia. PhD from the University of Pavia (Business strategies - strategic orientations of international SMEs); PhD from the Vienna University of Economics and Business in the field of International Marketing/International Finance. Visiting Fellow: University of Sussex, Brighton, and University of Valencia, Spain. National, international and strategic marketing positions in multinational corporation (headquarters and subsidiary level) in Vienna, Paris and Milan. <b>Research areas:</b> international marketing, international entrepreneurship, SME internationalization, strategic orientations. Local project leader CONSIDER March 2012 and February 2013 Member of Pavia research group in COBEREN – <b>CO</b>nsumer <b>BE</b>haviour <b>RE</b>search <b>Network</b> Project. Member of Pavia research group MUSING.</p> </td> </tr> <tr> <td> <p><b>Prof. Maria Sassi</b></p> </td> <td> <p>Maria Sassi, PhD in agricultural economics, is an Associate Professor at the Department of Economics and Management, University of Pavia. She a member of the:</p> <ul style="list-style-type: none"> <li>• Centre for International Cooperation and Development of the University of Pavia;</li> <li>• CTS of the Master Programme in Cooperation and Development;</li> <li>• Centre for Agricultural and Agrifood Cooperation and Development.</li> <li>• Center for Studies on Economic Policies, Rural and Environmental (SPERA).</li> </ul> <p>She has promoted the:</p> <ul style="list-style-type: none"> <li>• Centre for Agro-food and Environmental Development and Cooperation and co-ordinates the Unit of Pavia on Food Safety and Development of Agricultural Economies;</li> </ul> </td> </tr> </tbody> </table>			Name	Relevant Expertise	<p><b>Birgit Hagen, PhD</b></p> <p><b>EXPLOITATION AND DISSEMINATION COMMITTEE</b></p>	<p>Since Dec 2010 Assistant Professor at the Department of Economics and Management, University of Pavia. PhD from the University of Pavia (Business strategies - strategic orientations of international SMEs); PhD from the Vienna University of Economics and Business in the field of International Marketing/International Finance. Visiting Fellow: University of Sussex, Brighton, and University of Valencia, Spain. National, international and strategic marketing positions in multinational corporation (headquarters and subsidiary level) in Vienna, Paris and Milan. <b>Research areas:</b> international marketing, international entrepreneurship, SME internationalization, strategic orientations. Local project leader CONSIDER March 2012 and February 2013 Member of Pavia research group in COBEREN – <b>CO</b>nsumer <b>BE</b>haviour <b>RE</b>search <b>Network</b> Project. Member of Pavia research group MUSING.</p>	<p><b>Prof. Maria Sassi</b></p>	<p>Maria Sassi, PhD in agricultural economics, is an Associate Professor at the Department of Economics and Management, University of Pavia. She a member of the:</p> <ul style="list-style-type: none"> <li>• Centre for International Cooperation and Development of the University of Pavia;</li> <li>• CTS of the Master Programme in Cooperation and Development;</li> <li>• Centre for Agricultural and Agrifood Cooperation and Development.</li> <li>• Center for Studies on Economic Policies, Rural and Environmental (SPERA).</li> </ul> <p>She has promoted the:</p> <ul style="list-style-type: none"> <li>• Centre for Agro-food and Environmental Development and Cooperation and co-ordinates the Unit of Pavia on Food Safety and Development of Agricultural Economies;</li> </ul>
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	<ul style="list-style-type: none"> <li>• International Research Network on Natural Resources, Agricultural Development and Food Security with the University of Pretoria.</li> </ul> <p>She is Editor of the NAF - International Research Centre International Working Paper Series (<a href="http://economia.unipv.it/naf/">http://economia.unipv.it/naf/</a>) and member of Editorial Board of the scientific journal "Economia e diritto agroalimentare".</p>
<p><b>Antonella Zucchella</b></p>	<p>Full Professor of Marketing and of International Entrepreneurship, Faculty of Economics, University of Pavia since 2001. Senior Research fellow, Anglia-Ruskin University, Cambridge. Vice-Rector for administration and finance, University of Pavia:</p> <ul style="list-style-type: none"> <li>• Member of the Italian Academy of Business Studies, of the Academy of International Business Studies, of the European International Business Academy.</li> <li>• Member of the editorial Board of the Journal of Management and Governance</li> <li>• Member of the Scientific Boards of the Alma Mater Ticinensis Foundation, the University of Pavia Research Foundation, Banca del Monte di Lombardia Foundation, one of the major Italian bank foundations.</li> <li>• Local coordinator of the European research project on consumer behaviour (COBEREN)</li> </ul> <p>Research Interests: International business and international marketing, international entrepreneurship, SMEs internationalisation processes, industrial districts and high tech clusters, entrepreneurship and local development.</p>

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Participant no.	Name of the Organisation	Short name
10	Kontali Analyse	Kontali
<p><b>Kontali Analyse AS</b> is a private, independent research company specializing in sector analysis within the global aquaculture and fisheries industry. Kontali Analyse was founded in 1993, and has since then developed to become one of the world’s leading providers of statistics and analysis for the seafood sector. The core area of expertise has always been within the salmon segment, but for the past 10 years, several new areas have been incorporated in the coverage of Kontali Analyse. Regular surveillance of the pelagic sector, including the fishmeal/-oil sector is in place. And lately the focus has been expanded into the whitefish fisheries (groundfish) sector, including also a strengthening of the data- and analysis capacity on seabass/seabream, and other whitefish species in aquaculture, i.e. the larger commercial clusters in Asia and Latin America.</p> <p>The work of Kontali Analyse is founded on professional expertise and comprehensive information storage and retrieval systems, which form the basis for their databases. The management of this data involves regular contact with more than 150 sources, in more than 40 countries. The harmonization of product codes and categories, and the application of weight conversion factors for processed products is an important task in updating and amending databases for an easy extraction of information. In addition, strong ties to key industry leaders and important seafood companies have been established, both through the wide range of subscriptions and the associated consultations between Kontali Analyse employees and the readers on covered topics. Through numerous projects, speeches, and workshops, where Kontali Analyse has been engaged to provide information and analysis beyond the scope of ordinary reports, sector expertise is gained and maintained.</p> <p>Kontali has and are, taking part in several projects of relevance for the current project such as <i>European Market Observatory for fisheries and aquaculture products” (EUMOFA)</i>, <i>Global Study – Pelagic Fish availability</i>, (Pelagic Fish Forum), <i>An Industry Handbook – Groundfish</i> (Aker Seafoods; the largest Norwegian whitefish company), The potential for enhanced value creation in the Norwegian salmon industry (Norwegian Ministry of Fisheries and Coastal Affairs) and <i>An investigation of the cost structure and international competitiveness of the salmon growing industry in Scotland</i> (Scottish Executive, KPMG).</p> <p>In addition to the competence carried into the partnership a major contribution from Kontali and benefit to the project is the <i>systematically collected panel/sector data</i> regarding production/catch, market (price and volume) and productivity (cost structure data) since long for salmon and large trout (1992). For the other main species followed (cod, herring and bass and bream) similar information has been collected since early/mid 2000. In addition, Kontali has established advanced <i>market and production models</i> for the global <i>salmon sector</i> as well as production models for <i>the Mediterranean sea bass and sea bream sector</i>.</p>		
<b>Main tasks:</b>		
<p>Kontali is a member of the Technical Committee (TC). Kontali is contributing to tasks T1.1-2 In WP1. Kontali is leading WP2 Economic performance and prices. Kontali is also leading task 2.1 where Economic performance of selected individual sectors are estimated, in that task they are leading the work on Atlantic salmon in T2.1.4 and Sea-bass and Sea-bream in T2.1.5. Kontali will also lead the work on European Sefood market in T2.2 and work on Identifying and characterising “boom and bust” cycles in T2.3. Kontali will work on Value chain analysis in task 3.1 and lead the work on Industry study cases in T4.1. They will contribute to work on Innovation and price analysis tool in T5.5 and contribute to T6.1-3 and T6.5.</p>		
<b>Profile of Key Personnel and Relevant Expertise:</b>		
Name	Relevant Expertise	
<p><b>Paul Steinar Valle</b></p> <p><b>WP 2 LEADER</b></p> <p><b>TECHNICAL COMMITTEE EXPLOITATION AND DISSEMINATION COMMITTEE</b></p>	<p><b>Paul</b> has been project and development manager of Kontali since March 2013. He has experience from education, research and management within higher education from Norwegian School of Veterinary Science and Molde University (business) college, and holds a professor qualification within the area of health management and animal health economics. Since engaged in Kontali he has primarily worked towards the Mediterranean sea bass and sea bream sector enforcing the quality of data collection, analysis and reporting, and has among other issues established a price benchmarking system for Greece that currently is being expanded to the entire Mediterranean bass and bream sector.</p>	



<b>Ragnar Nystøyl</b>	Managing Director of Kontali Analyse, Ragnar has since 2000 held senior positions in the company, and thereby gained a broad experience as analyst and consultant within the world aquaculture- and seafood sector. He has experience from the industry as Sales- and Export Manager in a commercial seafood company. He is regarded as an expert on the aquaculture industry, with special competence within Aquaculture Global Trends, trade flows and future perspectives, feed and feed consumption and production development in general. He is holding a Bachelor in Business Administration from the Trondheim Business School, and has also an international course in Export Marketing from the Suffolk University, Madrid.
<b>Gunn Strandheim</b>	Gunn has since 2000 held a position as an analyst in Kontali Analyse, and has thereby acquired broad experience as a price and market analyst in the pelagic and whitefish sector. She is also regarded as an expert on the global fish meal and fish oil market. She is educated as a computer scientist from Molde University College.
<b>Lars Daniel Garshol</b>	Lars joined Kontali Analyse in late 2012 as an economic and industry analyst covering the aquaculture sector, particularly the global salmon farming industry. He has a special focus on industry and cost structure, as well as market analysis, and is e.g. well familiar with extracting and using key figures available through financial databases. Lars has an economic degree specializing in finance, from Norwegian Business School BI, Oslo.

**References:**

Kontali Monthly Salmon Report is published since 1992, and covers the most important salmon and trout producing countries (Chile, Canada, Faroe Islands, Norway, UK and USA), and follows the consumption of salmon and large trout in the most relevant markets. The most relevant import and export statistics are also systemized and included.

Kontali Monthly Cod Report is published since 2006, and covers catches, supplies and market development for fresh and frozen cod – Atlantic as well as Pacific. The market development covers first-hand prices, export prices, wholesale prices and supermarket prices.

Kontali Seabass & Seabream Monthly Report is published since 2006, and covers the recent market trends and price development in the main markets, and production and supply from the main producing countries. The report also includes estimates for juvenile release, harvest forecast and fish feed consumption by country, for the main producers of seabass and seabream (Greece, Turkey, Spain and Italy).

Kontali Monthly Pelagic Report is published since 2003, and covers all relevant information related to quotas, catches/landings, prices and markets for pelagic fish species. The focus in the report is on species for human consumption such as herring, mackerel and capelin, and the report contains a separate section for fish meal and fish oil.

Salmon World is published since 2005, and covers the world salmon market i.e. production, catch, demand, trade and prices of farmed and wild salmon on a global basis. All salmon producing countries are covered with key figures such as harvesting quantity and value. Supply figures for all important markets are provided, along with a presentation of the largest global salmon farming companies (stakeholders), ranked by harvesting quantity, and value created through aquaculture in Chile and Norway is analysed.

Participant no.	Name of the Organisation	Short name
11	Norwegian Institute of Food, Fishery and Aquaculture	NOFIMA
<p>Nofima is the fusion of various Norwegian food research institutes and covers all food sectors and links in the value chain. Nofima is Europe’s largest institute for applied research within the fields of fisheries, aquaculture and food. The research group involved in PrimeFish are from the department of industrial economics and strategic management and have extensive international experience from relevant projects the food and seafood sector, and carries out RTD related to economics, marketing, logistics, rationalisation, decision support and traceability, particularly of seafood products. Nofima has led and participated in numerous international projects and initiatives, and has had a central role in international standardisation activities, especially related to traceability and development of sector-specific ontologies, good-practice guides, methodologies and tools.</p> <p><a href="http://www.Nofima.no/en/forskningsomrade/industrial-economics-and-strategic-management">http://www.Nofima.no/en/forskningsomrade/industrial-economics-and-strategic-management</a></p>		
<b>Main tasks:</b>		
<p>Nofima is in the Project Steering Group (PSG) and Technical Committee (TC). Nofima is leading WP1, Method selection, configuration and harmonisation where they ensure data consistency in the project. They are also leading the work on T1.1-2 where data sources and analysis methods are selected and configured and work on method testing in T1.3. Nofima contributes to T2.1 and T3.1-4. They will work on T4.1-2 in WP4 and contribute to T5.1 and T5.3-4 in Developing robust simulation and prediction models in WP5. They will also contribute to work in tasks 6.1-4 where PrimeDSF is developed in WP6.</p>		
<b>Profile of Key Personnel and Relevant Expertise:</b>		
<b>Name</b>	<b>Relevant Expertise</b>	
<b>Petter Olsen</b>  <b>WP1 LEADER</b>  <b>PROJECT STEERING GROUP</b> <b>TECHNICAL COMMITTEE</b>	<p>MSc in software engineering, applied mathematics and operational research from University of Strathclyde, Glasgow, 1986. Senior scientist at NOFIMA Market since 1993, working with applications of ICT especially related to traceability, production management, simulation, sustainability and decision support systems. Serves as an adviser to the EU, to several EU-funded projects, to the Nordic Council of Ministers and to the Nordic Industrial Fund on these subjects. Co-ordinator of the EU 5FP TraceFish project, the EU 7FP WhiteFish project; leader or WP leader in numerous other national and international projects. Author or co-author of 3 European standards (CWAs), 2 ISO standards (ISO 12875 and 12877) and more than 15 peer-refereed scientific publications.</p>	
<b>Audun Iversen</b>	<p>MSc in Business and Cand. Oecon from Norwegian School of Economics and Business Administration. Researcher at Nofima (prev. Fiskeriforskning) since 1998, with a broad range of projects regarding the competitiveness and innovative capacity of the seafood and fish farming industry. WP leader in the FEUFAR EU-funded project.</p>	
<b>Øystein Hermansen</b>	<p>MSc in Fisheries Science from University of Tromsø, Norway. Scientist at Norwegian Institute of Food, Fisheries and Aquaculture Research since 2006. Research focuses on profitability and competitiveness of firms in the seafood sector, behaviour of fishermen in terms of catch strategies and choice of seasonality and economics of capture-based aquaculture. Participant in EU 5FPs TEMEC – Technical efficiency in EU fisheries and EU 7FP ACCESS – Arctic climate change, economics and society and co-author of the “The Fisheries Competitiveness Index 2004-2005”.</p>	

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Participant no.	Name of the Organisation	Short name
12	University of Tromsø	UiT (UTro)
<p>The Norwegian College of Fisheries Science (NFH), which is an institute at the Faculty of Biosciences, Fisheries and Economics at the University of Tromsø, Norway, is responsible for development of scientific knowledge within all areas of marine research in Norway. NFH has systematically developed competence, facilities and equipment related to marine and fishery biology, including population structure and dynamics. During the last 30 years NFH also has developed knowledge in bio-economic modelling during the more recent year knowledge about ecosystem services and their valuation. Teaching and research is primarily focused on the fields of biological oceanography, fisheries biology, assessment, resource management and marine governance and aquaculture. The faculty hosts competence in multidisciplinary studies and in implementing results.</p> <p>Relevant projects Researchers affiliated to the Norwegian College of Fisheries Science have taken part in several research projects, both at national, EU and other international level. Especially relevant experiences for PrimeFish is the participation in the EU financed projects MEFEO (Making European Ecosystem Fisheries Plans Operationable), which describes in detail selected European fisheries in terms of biological and societal/economic characteristics. In turn this is used as input in the discussion of how the fisheries may meet requirements for European fisheries activities as stated in the CFP (Common Fisheries Policy) and the Marine Strategy Framework Directive (MSFD). In the projects CoralFish, financed by the EU, and CoralValue, financed by the Norwegian research Council the main tasks concern assessment of deep sea resources (corals) and their importance for commercial fish stocks. The latter encompass a valuation survey of the willingness to pay for protecting cold water corals, although this may hamper fisheries activities. In the project RecreationValue, financed by the Norwegian research Council, private (non-market) recreational services in the coastal zone, which may conflict with marine industrial activities, are assessed and valued. For more information see: <a href="http://en.uit.no/ansatte/organisasjon/hjem?p_dimension_id=88163&amp;p_menu=42374">http://en.uit.no/ansatte/organisasjon/hjem?p_dimension_id=88163&amp;p_menu=42374</a></p>		
<b>Main tasks:</b>		
<p>University of Tromsø is participating in T1.2-3 in WP1. UTro is leading the work on Task 3.5, Assessment and valuation of non-market effects of aquaculture and captive fisheries. UTro is also involved in T6.4 Evaluation of added value.</p>		
<b>Profile of Key Personnel and Relevant Expertise:</b>		
Name	Relevant Expertise	
<b>Margrethe Aanesen</b>	PhD in Economics from the University of Tromsø. Associate Professor in Environment and Resource Economics at Norwegian College of Fisheries Science/UiT. Her research covers a wide range of scientific projects; ecosystem based fisheries management, optimal regulations in the presence of multiple interests, e.g. environmental considerations. The valuation of non-market effects of marine industrial activities and other activities in the coastal zone has been one of the main research fields the last 3 years.	
<b>Petter Holm</b>	Holm holds a PhD in social science from University of Tromsø and is a professor at Norwegian College of Fisheries Science, University of Tromsø. Has participated in several EU-projects, as well as national and other international projects regarding fisheries management. Of special relevance for PrimeFish is the EU-financed projects "Bridging the Gap Between Science and Stakeholders in Fisheries Management" GAP, and Results Based Management to Contribute to the Reform of the Common Fisheries Policy EcoFishMan. Holm works especially on the management of marine resources, with an emphasis on institutions and institutional processes of change.	

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Participant no.	Name of the Organisation	Short name
<b>13</b>	<b>Centro Tecnológico del Mar-Fundación - Fundación CETMAR</b>	<b>CETMAR</b>
<p>CETMAR is an inter-institutional coordination centre with an interdisciplinary integration of all marine research and technology resources, and was created to channel and reinforced the connection between RTD agents and sea-produce industries The role of CETMAR covers education and training, scientific research and technological development and innovation. CETMAR is integrated by 7 broad subject-based divisions: Marine environment/resources control &amp; management, Fisheries Technology, Seafood Technology, Fisheries socio-economics, Technology promotion &amp; transfer, Training and International Cooperation. The staff is skilled in participating in EU programmes such as Research Framework Programmes, INTERREG (A,B and C), ESF, EFF, etc. Over the last 5 years CETMAR has successfully coordinated and participated in the following projects; EcoFishMan (FP7), MAREFRAME (FP7), STAGES (FP7), OYSTERECOVER (FP7), PARASITES (FP7) and CRUSTASEA (FP6), as well as the tender MARE/2012/07 Framework contract for support to the implementation of the Integrated Maritime Policy of the EU, the tender MARE/2012/10. Knowledge base for growth and innovation in ocean economy: assembly and dissemination of marine data for seabed mapping. LOT NO: 7 – HUMAN ACTIVITIES, PRESPO (Atlantic Area – Priority 2), GEPETO (Atlantic Area – Priority 1), ACRUNET (Atlantic Area – Priority 1).</p>		
<b>Main tasks:</b>		
<p>The leader of WP7, Creating Shared Value and member of the Project Steering Group and chairing the Exploitation and Dissemination Committee (EDC). CETMAR will be assisted by all other partners in carrying out the necessary dissemination and stakeholder interaction. CETMAR will participating in assessing economic performance of selected sectors in T2.1 and in T3.1-3 in WP3 where Supply Chain Relations and regulation are assessed. CETMAR will be involved in all tasks in WP4 and contribute to development of PrimeDSF in T6.1-6.5. CETMAR will lead the Task 7.1 Shared value through stakeholders' interaction and Dissemination Activities in T7.3.</p>		
<b>Profile of Key Personnel and relevant expertise:</b>		
<p><b>Rosa Chapela</b>  <b>WP7 LEADER</b>  <b>PROJECT STEERING GROUP TECHNICAL COMMITTEE EXPLOITATION AND DISSEMINATION MANAGER</b></p>	<p>PhD in Law from the University of Santiago de Compostela. Head of the Fisheries Socioeconomic Department at CETMAR. Legal expert in fisheries &amp; aquaculture. Coordinator of research projects at European and National level related to fisheries and maritime issues. Work Package leader (6th and 7th Framework Programme, EC Trans-national Programmes, etc.). 15 years' experience in the fisheries sector, focused on socioeconomic issues, stakeholders interaction and developing innovative tools (ECOFISHMAN, www.ecofishman.com) and co-creation projects (GEPETO project). Geographic Expert of FARNET- European Fisheries Areas Network, support Unit for European Commission.</p>	
<p><b>Marta A. Ballesteros</b></p>	<p>D. in Political Science and Public Administration, University of Santiago de Compostela, Spain. Master in Fisheries Management and Fisheries Economy in 1999. Visiting Scholar at the Indiana University, United States in 2001. Research topics include governance, stakeholders interaction and fisheries management.</p>	
<p><b>María Armesto</b></p>	<p>D. in Philology from University of Santiago de Compostela and Executive Secretary Degree from the Aloya Center, Vigo. Specialist in fisheries &amp; aquaculture. Expertise in legal, financial and administrative advice regarding EU funding programmes. She has managed several trans-national cooperation programmes with large consortiums of partners and masters organisational and logistical planning.</p>	
<p><b>Jose Luis Santiago</b></p>	<p>MSc in Economy, evaluation and management of marine environment and fisheries resources, from the University of Vigo. Degree in Administration and Business Management, USC. PhD student in Marine Science, Technology and Management at University of Vigo. Research topics: marine socio-economic valuation and fisheries management.</p>	

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Participant no.	Name of the Organisation	Short name
<b>14</b>	<b>University of Stirling</b>	<b>U STIRLING</b>
<p>The Institute of Aquaculture at the University of Stirling is internationally recognized as one of the leading global centres of excellence in the field of aquaculture and fisheries science with over 75 staff, 80 PhD students and 45 MSc students. Core research areas are in sustainable aquaculture development and practice; aquatic animal health and welfare; nutrition, genetics and reproduction. There are also closely linked groups on aquatic food security and marine biotechnology. Staff of the Institute have extensive experience of coordinating and participating in EU research projects with recent examples including SEAT (FP7), PROteINSECT (FP7), ARRAINA (FP7), SALMOTRIP (FP7), AqASEM09 (FP7), and AQUAEXCEL (FP7). The Institute of Aquaculture has also coordinated significant knowledge networks such as AQUA-TNET (LLP) and SARNISSA (FP7). Involved staff have also been closely involved in the Institute of Aquaculture’s consultancy activities including sector and market studies for the European Commission and European Parliament.</p> <p><a href="http://www.stir.ac.uk">http://www.stir.ac.uk</a> &amp; <a href="http://www.aqua.stir.ac.uk">http://www.aqua.stir.ac.uk</a></p>		
<p><b>Main tasks:</b></p>		
<p>University of Stirling is leading the work on WP 3 - Supply Chain Relations and regulation and are involved in the Technical Committee. U STIRLING is also contributing to tasks T1.1-3 and is leading the work on subtask 1.2.2, Selecting, configuring and extending methods relating to supply chain relationships. U STIRLING will work on T2.1, Economic performance of selected individual sectors and the European seafood market in T2.2. In addition of leading WP3, U STIRLING will lead Value chain analysis in T3.1, Labelling and certification schemes in T3.3 and access Industry dynamics, opportunities and threats in T3.4 and contribute to T3.5. In WP4, U STIRLING will work on T4.1-4 and on Strategic positioning tool in T5.3. U STIRLING are involved in development of PrimeDFS in T6.1-4.</p>		
<p><b>Profile of Key Personnel and relevant expertise:</b></p>		
<p><b>Francis Murray</b></p> <p><b>WP3 LEADER</b></p> <p><b>TECHNICAL COMMITTEE</b></p>	<p>PhD in Aquaculture &amp; Development and MSc in Aquaculture from the University of Stirling. Senior Research Fellow with responsibilities for project management and consultancy. Was co-principle investigator on the EU-FP7 large-scale collaborative project; Sustaining Ethical Aquaculture Trade (SEAT), and co-author on European Parliament Study on Competitiveness in the European aquaculture industry. His 24yrs of industry, academic research and consultancy experience have gained him a broad inter-disciplinary perspective on the aquaculture sector and a detailed understanding of the interaction of market, technology, management, and the physical, social and economic environment. He has skills in structured survey and relational database design, parametric and non-parametric multivariate statistical techniques, participatory impact monitoring &amp; evaluation, PRA practitioner, application of rural livelihoods and rights-based development frameworks, market and global value chain analyses, seafood eco-labelling and certification.</p>	
<p><b>John Bostock</b></p>	<p>MSc in Aquaculture and Fisheries Management and Senior Consultant/Manager of the Institute of Aquaculture’s consultancy arm “Stirling Aquaculture”. Currently Coordinator of the EU Lifelong Learning Programme Erasmus Thematic Network in Aquaculture, Fisheries and Aquatic Resources Management, which has 91 partners. Coordinator of the Workpackage on Transnational Access in the AQUAEXCEL Research Infrastructures project and previous workpackage coordinator in the ASEM Aquaculture Platform project linking aquaculture research and training in Asia and Europe. In his role as consultant he has led studies for the European Parliament on Competitiveness in the European Aquaculture industry and on emerging aquaculture systems for the EC JRC IPTS. He has also worked for the UK and Scottish Governments as well as other international organisations such as the International Finance Corporation of the World Bank.</p>	



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Participant no.	Name of the Organisation	Short name
15	Nha Trang University – Faculty of Economics	NTU
<p>Nha Trang University (NTU), a former name as Nha Trang Fisheries University, is an oldest and specialized institute in Vietnam has research and education in fisheries and aquaculture. With more than half a century of history, NTU has become a prestigious multi-disciplinary and multi-level institution with a strong foundation of fisheries and aquaculture. It has been and continues to be a leading university in the field of fisheries and aquaculture science at the national level, playing a significant role both in driving the development of marine economy in Vietnam and generating the necessary human resources that can accommodate the inevitable integration process of the nation. Economic Faculty is the one of core units of NTU focusing on education and research in fisheries and aquaculture economics and management, marketing and trading management, and tourism management. The Faculty consists 5 departments and enrolls 58 members (staffs, lecturer and researchers). The Economic Faculty has a strong group of experts in fisheries and aquaculture that have got educations from developed countries (e.g., USA, Norway, Denmark, and France). The Faculty currently has about 150 undergraduate and 500 postgraduate students. The key research areas include economics of fisheries and aquaculture, food marketing, agriculture development, tourism management, and industrial management.</p>		
<p><b>Main Task</b></p>		
<p>Nha Trang University is contributing to work in WP1 - Selecting, configuring and extending the data analysis methods in T1.2 and Method testing, evaluation and comparison in T1.3. NTU will work on T2.1 and T2.1 where they will lead the subtask 2.3.2 Impact of macro-economic effects on “boom-and-bust” cycles. NTU will contribute to T3.1 and T3.3-5 on supply chain relations and regulations in WP3. They will be involved in T4.1 and T4.4 and all the tasks in model development in WP5. NTU will take part in development and utilization of PrimeDFS in tasks 6.4-5.</p>		
<p><b>Profile of key personnel and relevant expertise</b></p>		
<p><b>Thong Tien Nguyen</b></p>	<p>PhD in business administration, focusing on seafood marketing, from University of Southern Denmark (Denmark), and MSc in fisheries economics and management from Trømsø University (Norway), and diplomat in applied economics for public policy from Fulbright Teaching Program in Vietnam. He is current a research group leader in Faculty of Economics, NTU and a national consultant for Ministry of Industry and Trade and Ministry of Agriculture and Rural Development. He has participated in international and national projects, including MarBioShell (Denmark), FSPS 1 &amp; 2 (DANIDA, Denmark), Norad (Norway), and EPA-VIETTRADE (Switzerland). He is interested in marketing research, demand analysis, price formation, and consumer behaviour, fisheries economics and management, rural development, and export potential assessment and strategy.</p>	
<p><b>Vinh Thanh Do</b></p>	<p>PhD in business administration, focusing on supply train management in fisheries and aquaculture industry, from University of New Caledonia (France). She is current the Dean of Economic Faculty, NTU, and a visiting professor of University Institutes of Technology, IUT Aurillac (France). She has involved in national and local projects in areas of fisheries &amp; aquaculture development, human resource management, and tourism.</p>	
<p><b>Tu Ho Huy</b></p>	<p>PhD in marketing research, focusing on consumer behaviour and seafood, and MSc in fisheries and aquaculture economics and management, from Trømsø University (Norway), current the vice-dean of Economic Faculty, NTU, and the research group leader in consumer behaviour study. He has involved in projects funded by national and international governments. His research focuses on consumers’ attitude and consumption food seafood, marketing management and brand management.</p>	
<p><b>Giang Van Nguyen</b></p>	<p>PhD in agricultural economics, Auburn University (USA), MSc in probability &amp; statistics, Auburn University (USA), and M.A. in rural development studies, Institute of Social Studies, (Netherlands). His research interests are price and demand analysis, market power and imperfect competitions, competitiveness analysis, international trade, value chain analysis, marketing research. He has involved in a number of national and international research projects on agriculture, fisheries and aquaculture.</p>	

<b>Ngoc Van Nguyen</b>	PhD in national economics and management from Oryol State University (Russia), currently the head of department of fisheries economics, NTU. His research areas are industry management, fisheries and aquaculture management, trade and marketing.
<b>Long Kim Le</b>	PhD in fisheries Economics, Trømso University (Norway), and MSc in agriculture economics and management, Wageningen University (The Netherlands), vice-dean and responsible for research collaboration and international relationship of the Economic Faculty, NTU. His research interests are fisheries economics, competitive analysis, and production efficiency.
<b>Ngoc Thi Khanh Quach</b>	PhD in natural research economics, Tromsø University (Norway), research group leader in the Economic Faculty, NTU. Her research and teaching interests are natural resource and environmental economics, marine protected areas, climate change, bio-economics, microeconomics, applied econometrics.
<b>Nguyen Do Hung</b>	MSc in Fisheries and aquaculture economics and management, Trømso University, currently a full-time lecturer and research assistant in Economic Faculty, NTU. She is interested in non-market valuation and value chain management.

**References:**

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- Thong, N.T.,** Solgaard, H.S., Wolfgang, H., Roth, E., Lars., R.J. (in press) Consumer Willingness reference and Quality
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- Hanson, T., **G. Nguyen**, and C.M. Jolly (2013). "Comparative Advantages of the U.S. Farm-Raised Catfish Industry: A Cross-Regional Analysis." *Journal of Aquaculture Economics and Management* Vol. 17(1):87-101.

Participant no.	Name of the Organisation	Short name
16	<b>Memorial University – School of Fisheries Canadian Centre for Fisheries Innovation</b>	MemU
<p>The Fisheries and Marine Institute of Memorial University of Newfoundland is dedicated to education, training, applied research and industrial support of fisheries and maritime sectors. The Institute currently has three schools: the School of Fisheries, the School of Maritime Studies and the School of Ocean Technology. Within these Schools are specialized Centres which provide training and research and development support to industrial clients. The School of Fisheries houses the Centre for Aquaculture and Seafood Development (CASD) and the Centre for Sustainable Aquatic Resources (CSAR) and the Centre for Fisheries Ecosystems Research (CFER). The mandate of CASD and CSAR is to promote the economic development of the fisheries and aquaculture sectors through industrially relevant and applied research, whereas CFER’s mandate is to better understand fish stocks and marine ecosystem productivity through fisheries research.</p> <p>The School of Fisheries has completed more than 2000 projects locally, nationally, and internationally in support of the fisheries and aquaculture sectors. Fisheries-based projects have been diverse and have included research on emerging fisheries, sustainable fisheries, gear technology, fisheries-based training, post-harvest processing, marine bioprocessing, education and training and community development. Projects have ranged from small-client centered research to large-scale, multi-year strategic initiatives. Collectively, these projects demonstrate extensive experience, a broad understanding of fisheries issues and insight into the challenges and opportunities facing the industry.</p> <p>Overall the School employs more than 80 full time scientists, faculty research and technical personnel engaged in education, training and research and it manages 10 academic programs at the diploma, degree and masters level. In the most recent fiscal year the school led approximately 100 applied research initiatives with industry and government agencies at a total research value of approximately \$7.4 million CAN. It was also responsible for the delivery of industrial training programs to more than 1000 industry participants.</p> <p>The Canadian Centre for Fisheries Innovation is a not-for-profit corporation owned by Memorial University with a mandate to facilitate access by the aquaculture, harvesting, and processing sectors to the capabilities provided by the people and facilities of the University and other academic institutions. CCFI works with industry to understand its opportunities and needs, creates projects around them that draw on institutional capabilities, and provides assistance with financing and management of the projects. In doing so, CCFI also works closely with the Marine Institute and other organizations in doing both short-term problem-solving assignments and longer-term commercially-focused research and development.</p>		
<b>Main Task</b>		
Contribution to:	MemU is contributing to work in WP1 - Selecting, configuring and extending the data analysis methods in T1.2 and Method testing, evaluation and comparison in T1.3. MemU will also work on economic performances in T2.1 and “boom and bust” cycles in T2.3. In WP3 - Supply Chain Relations and Regulation, MemU will contribute to T3.1 and T3.3-5. They will also be involved in Industry study cases in T4.1 and all tasks in models development in WP5. MemU will also take part in development and utilization of PrimeDFS in tasks 6.4-5.	
<b>Profile of key personnel and relevant expertise</b>		
<b>Carey Bonnell</b>	MSc in Marine Studies in Fisheries Resource Management from Fisheries and Marine Institute of Memorial University. He has held the position of Head, School of Fisheries at the Fisheries and Marine Institute of Memorial University since 2010 and is responsible for the overall leadership and strategic direction of the School.	
<b>Heather Manuel</b>	MSc in Food Science and MBA from Memorial University of Newfoundland. She has held the position of Director, Centre for Aquaculture and Seafood Development at the Fisheries and Marine Institute of Memorial University since 2005. She leads a multi-disciplinary team of 15 scientific and technical researchers and manages 40+ applied research projects per year for the aquaculture, seafood processing and marine bioprocessing industries.	
<b>Robert Verge</b>	Professional Engineer (B. Eng. in Industrial Engineering), MBA from York University in Toronto, Chartered Accountant, Certified Management Consultant. Most of his career has been as a management consultant, working in the fishing industry to improve productivity and profitability through better management practices and introduction	

	of new technologies and work methods. He has been Managing Director of CCFI since 2010.
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**References:**

**Manuel, H.**, Thompson, M., Carroll, K. (2011). Emerging trends in seafood processing technologies. Journal of Ocean Technology, Vol. 6 No. 4, 15-20.

**Manuel, H.** (2010). Processing aquaculture by-products. Journal of Ocean Technology, vol. 5, No. 2, 16-22.

### 2.3.4.2 Third parties involved

Please complete, for each participant, the following table (or simply state "No third parties involved", if applicable):

7. Haskoli Islands	
Does the participant plan to subcontract certain tasks (please note that core tasks of the project should not be sub-contracted)	No
Does the participant envisage that part of its work is performed by linked third parties <sup>2</sup>	No
<i>If yes, please describe the third party, the link of the participant to the third party, and describe and justify the foreseen tasks to be performed by the third party.</i>	
Does the participant envisage the use of contributions in kind provided by third parties (Articles 11 and 12 of the General Model Grant Agreement)	YES
<i>Dr Ögmundur Knutsson from the University of Akureyri, Iceland, will act as a third party according to GA Art.11 to UIce (P7). Dr Knutsson is an expert in the evaluation of supply chain relationships especially for the captive species, cod and herring. He will strengthen the overall expertise in supply chain evaluation in PrimeFish. Direct personnel cost € 15.187, Indirect cost € 3.797, Total cost € 18.984.</i>	

4. INRA	
Does the participant plan to subcontract certain tasks (please note that core tasks of the project should not be sub-contracted)	No
Does the participant envisage that part of its work is performed by linked third parties <sup>2</sup>	No
<i>If yes, please describe the third party, the link of the participant to the third party, and describe and justify the foreseen tasks to be performed by the third party.</i>	
Does the participant envisage the use of contributions in kind provided by third parties (Articles 11 and 12 of the General Model Grant Agreement)	YES
<i>Dr. Xavier Irz from MTT Agrifood Research, Finland will act as a third party according to GA Art.11 to INRA (P4). Dr Irz is a professor in economic analysis of food markets. His expertise will be valuable for the study on the comparison on household purchases between France and Finland. Direct personnel cost € 60.414, Indirect cost € 15.104, Total cost € 75.518.</i>	

<sup>2</sup> A third party that is an affiliated entity or has a legal link to a participant implying a collaboration not limited to the action. (Article 14 of the Model Grant Agreement).

### 2.3.5 Planned use of resources

The PrimeFish project covers a complex set of activities organised to explore and enhance the competitiveness of the European aquaculture and fisheries sector. This effort requires involvement of European and non-European partners of multiple levels; research organisations, universities, SMEs and industry partners, with expertise throughout the fisheries catching/hatching and processing chain to end users. The project assembles a whole range of relevant partners, establishing an intellectual, knowledgeable critical mass and allocating sufficient resources to address this effort successfully.

The duration of the PrimeFish project is 48 months and includes 16 partners that contribute 541 person-months to the project, with a total budget of € 5.275 million and EU contribution of almost € 5 million. The total request for funding from the European Commission is necessary and sufficient to address the topic in an efficient and coherent way.

The budget allocation in terms of person month’s effort for the proposed work plan, organised into 8 Work Packages is well balanced as indicated on Figure 10. WPs 1-6 are focused on TRD (with 76% of the allocated person months), WP7 on OTHER i.e. stakeholder participation, training and dissemination (with 14% of the allocated person months) and WP8 on MGT (with 10% of the allocated person months).

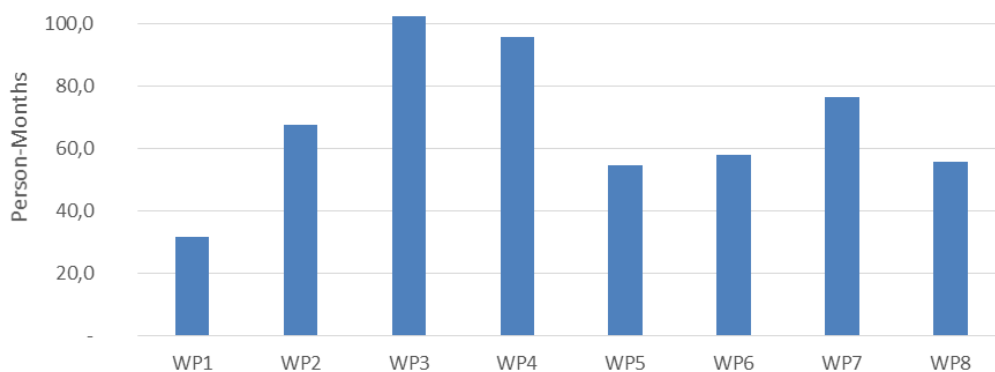
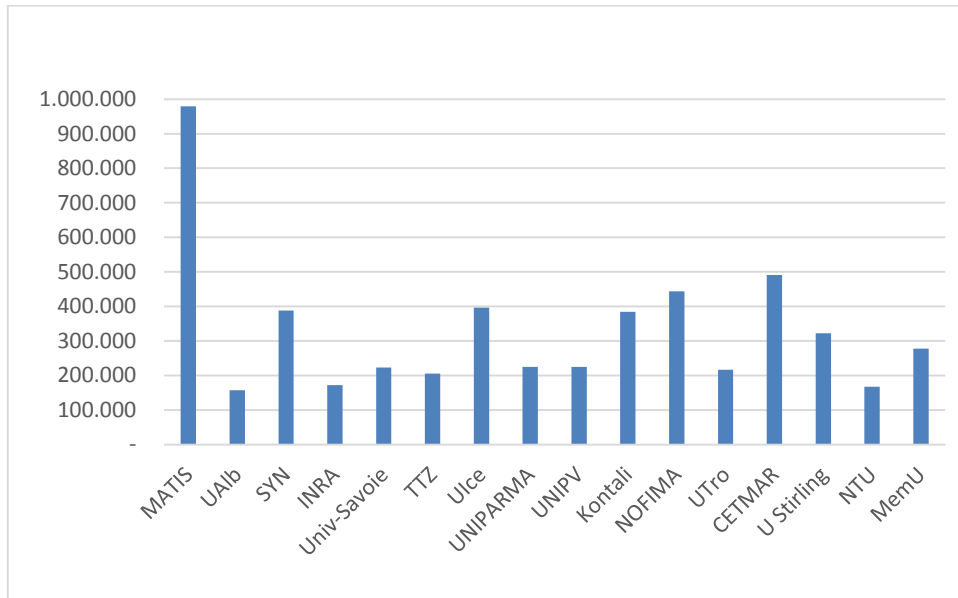


Figure 10. Staff effort per WP

The total estimated personnel cost in the project is € 4.432 thousand (incl. OH) or 84% of the total budget, travel & subsistence is estimated at € 376 thousand (incl. OH) or 7% of the total budget, and the rest (9%) is allocated for “other goods and services”. “Other goods and services” include reserves of € 70 thousand for conducting consumer studies, € 34 thousand for the purchasing of data, € 75 thousand for covering direct costs of industry partners (IRG) for case studies on the North Atlantic species, cod, herring and salmon, and € 75 thousand to cover the cost of SAB; all of which totals at €254 thousand (incl. OH) or 5% of the total budget and is safeguarded by the coordinator, i.e. included in the budget of MATIS. “Other goods and services” include as well € 75 thousand reserves (incl. OH) to cover costs associated with stakeholder participation, training and dissemination and € 75 thousand to cover direct costs of industry partners (IRG) for case studies on sea-bream, sea-bass and trout in total € 150 thousand, or 3% of the total budget; these funds are safeguarded by the WP7 leader i.e. hosted under the budget of CETMAR. Additionally, the “other goods and services” category includes € 43 thousand to cover costs of leasing research infrastructure and € 6 thousand for consumables. Included in “other goods and services” are estimated costs of € 14 thousand (incl. OH) to cover Certificates on the Financial Statements (CFS) for partners receiving funds from the EU in excess of € 325 thousand.

As stated in section 2.3.4.2: € 95 thousand (incl. OH) will cover third party personnel cost (in-kind contribution against payment, GA Art. 11) or about 2% of the total budget, thereof € 76 thousand safeguarded by INRA and € 19 thousand by UIce.

Budget wise, the 16 partners can be broken into three categories i.e. the coordinator, who has an estimated total costs of € 1 million, but 25% of that amount is though only safeguarded by the coordinator to be allocated to external costs. Then there are 6 partners with total estimated costs around € 400 thousand and the remaining 9 partners have total estimated costs around € 200 thousand, as can be seen in Figure 11.



**Figure 11. Total estimated costs for each partner**

Two of the partners are outside of Europe (neither member countries nor associated countries) i.e. NTU in Vietnam and MemU of Newfoundland in Canada. Vietnam is an ICPC country, and is as such eligible for funding from the EC. Canada is however not eligible for funding under H2020 rules and subsequently has to fund their own work through other means. The Galway statement on Atlantic Ocean Cooperation, between EU, Canada and USA highlights the importance of trans-Atlantic cooperation and is meant to facilitate cooperation between researchers in these countries. The PrimeFish is a good example of that. The Canadians are confident that they can secure the necessary national funding for their tasks in the project through funding bodies such as ERA-Can, which is a federal fund established for supporting partnership with European partners on Horizon 2020 proposals. There are also several other national funds available, such as RDC, CCFI, FTNOP.

Sum of the costs for ‘travel’, ‘equipment’, and ‘goods and services’ exceeds 15% of the personnel costs for 4 partners, i.e. MATIS, CETMAR and NTU. This is largely explained by the fact that MATIS and CETMAR safeguard funds that are to cover direct “external” costs. The high costs of NTU is explained by moderated personnel costs and relatively high travel & subsistence costs, i.e. travel expenses from Vietnam are considerable. Large ‘Other direct cost’ items are further explained in Table 2.3.5.1.

**Table 2.3.5.1: ‘Other direct cost’ items (travel, equipment, other goods and services, large research infrastructure)**

<b>1 MATIS</b>	<b>Cost<sup>3</sup> (€)</b>	<b>Justification</b>
<b>Travel</b>	<b>48.750</b>	Travel includes CO, AM and scientists attending meetings and other events in the project and for interaction with IRG
<b>Equipment</b>	<b>0</b>	
<b>Other goods and services</b>	<b>300.975</b>	Covers cost of inviting industry partners (IRG) and other stakeholders to project events and meetings and their interaction with the project (€ 75 thousand), cost for inviting SAB for project meetings and events (€ 75 thousand), cost of conducting interviews and survey in WP2, WP3 and WP4 (€ 70.000), purchasing of data for analysis (€ 33.750), rental of research infrastructure and consumables (€ 43.225) and to cover financial audits (€ 4.000).
<b>Total</b>	<b>349.725</b>	

<b>13 CETMAR</b>	<b>Cost<sup>3</sup> (€)</b>	<b>Justification</b>
<b>Travel</b>	<b>33.750</b>	Travel includes WP leader and EDC chair and other scientists attending project meetings, workshops, and dissemination and training activities.
<b>Equipment</b>		
<b>Other goods and services</b>	<b>152.000</b>	Other goods and services include cost of inviting stakeholders to participate in meeting, events and training activities and to cover direct cost of IRG for case studies on sea bream, sea bass and trout.
<b>Total</b>	<b>185.750</b>	

<sup>3</sup> Cost shown with 25% overhead



<b>15 NTU</b>	<b>Cost<sup>3</sup> (€)</b>	<b>Justification</b>
<b>Travel</b>	<b>22.500</b>	Includes cost of attending project meetings and other events in PrimeFish
<b>Equipment</b>		
<b>Other goods and services</b>		
<b>Total</b>	<b>22.500</b>	

<b>Other goods and services (without 25% overhead)</b>	<b>1. MATIS</b>	<b>3. SYN</b>	<b>4. INRA</b>	<b>7. Ulce</b>	<b>10. Kontali</b>	<b>11. NOFIMA</b>	<b>12. UTro</b>	<b>13. CETMAR</b>	<b>Other partners</b>	<b>Total</b>
Rental/lease of the research infrastructure (for the period of its actual use for the action)	20.748									<b>20.748</b>
Maintenance and repair contracts (including calibrating and testing) specifically awarded to the functioning of the research infrastructure	3.458									<b>3.458</b>
Consumables, materials and spare parts specifically used for the research infrastructure							5.000			<b>5.000</b>
Facility management contracts including security fees, insurance costs, quality control and certification, upgrading to national and/or EU quality, safety or security standards (if not capitalised), specifically awarded for the functioning of the research infrastructure	10.116	1.600		1.600	1.600	1.600		1.600		<b>18.116</b>
Energy and water specifically supplied for the research infrastructure	3.458									<b>3.458</b>
Cost of conducting consumer studies (WP4); 7 studies in total	56.000									<b>56.000</b>
Purchasing of data (GNPD-Mintel )	27.000									<b>27.000</b>
Invited stakeholders								60.000		<b>60.000</b>
Reserves for industry partners	60.000							60.000		<b>120.000</b>
SAB cost	60.000									<b>60.000</b>
TRAVEL (208 trips)	39.000	21.000	9.600	24.000	19.500	24.000	13.500	27.000	123.500	<b>301.100</b>
	<b>279.780</b>	<b>22.600</b>	<b>9.600</b>	<b>25.600</b>	<b>21.100</b>	<b>25.600</b>	<b>18.500</b>	<b>148.600</b>	<b>123.500</b>	<b>674.880</b>

## 2.3.6 Ethics and Security

### 2.3.6.1 Ethics

#### **Protection on personal data:**

Information on consumer behaviour and preferences will be collected within WP 3 (task 3.5) and WP 4. This will involve collection of survey data from adult volunteers. Ethical clearance from local ethical committees regarding the consumer science issues (more specifically informed consent procedures, data protection and privacy) will be obtained. The data collection within these WPs (3 and 4) will not be started before completing deliverable 1.6 Ethical Clearance in Month 2. The collected data will pertain to consumption behaviour, fish consumption patterns and consumer acceptability of fish products and socio-demographic characteristics. No sensitive personal data related to a person's health status or religion will be collected within these surveys. The consumer studies will fully comply with Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 (amending acts Directive 2006/24/EC in Official Journal OJ L 105 of 13.04.2006 and Directive 2009/136/EC in Official Journal OJ L 337 of 18.12.2009) concerning the collection and processing of personal data and the protection of privacy. Specifically, the researchers will obtain, prior to any data collection, informed consent from all participants in the interviews and surveys. No person unable to provide consent will be included in the study. All data will be handled and stored in a non-identifiable (anonymous) format, i.e. the data entries cannot be linked to the personal identity of the study participants.

#### **Non-EU countries:**

I the co-ordinator of PrimeFish and on behalf of MATIS (the co-ordinating institute) and all the participants in the project, including those of Vietnam and Canada, hereby confirm that the ethical standards and guidelines of Horizon2020 will be rigorously applied, regardless of the country in which the research is carried out.

### 2.3.6.2 Security<sup>4</sup>

#### **Please indicate if your project will involve:**

- activities or results raising security issues: NO
- 'EU-classified information' as background or results: NO

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<sup>4</sup> Article 37.1 of Model Grant Agreement. *Before disclosing results of activities raising security issues to a third party (including affiliated entities), a beneficiary must inform the coordinator — which must request written approval from the Commission/Agency; Article 37. Activities related to 'classified deliverables' must comply with the 'security requirements' until they are declassified; Action tasks related to classified deliverables may not be subcontracted without prior explicit written approval from the Commission/Agency.; The beneficiaries must inform the coordinator — which must immediately inform the Commission/Agency — of any changes in the security context and — if necessary — request for Annex 1 to be amended (see Article 55)*

## ESTIMATED BUDGET FOR THE ACTION (page 1 of 4)

Estimated eligible* costs (per budget category)									
A. Direct personnel costs				B. Direct costs of subcontracting		[C. Direct costs of fin. support]	D. Other direct costs	E. Indirect costs	Total costs
A.1 Personnel		A.2 Natural persons under direct contract		A.3 Seconded persons [A.6 Personnel for providing access to research infrastructure]		A.4 SME owners without salary		A.5 Beneficiaries that are natural persons without salary	
Form of costs****	Actual	Unit (1)	Unit (2)		Actual	Actual	Actual	Flat-rate (3)	
			EUR/hour						
	(a)	Total (b)	No hours	Total (c)	(d)	(e)	(f)	(g)=0,25x ((a)+(b)+ (c)+(f)-(m))	(i)= (a)+(b)+(c)+ (d)+(e)+(f)+ (g)
1. MATIS	503880.00	.00			.00	.00	279780.00	195915.00	979575.00
2. UA1b	116177.00	.00			.00	.00	9600.00	31444.25	157221.25
3. SYN	287872.00	.00	0.00	.00	.00	.00	22600.00	77618.00	388090.00
4. INRA	128265.00	.00			.00	.00	9600.00	34466.25	172331.25
5. UNIV-SAVOIE	163997.00	.00			.00	.00	14400.00	44599.25	222996.25
6. TTZ	152222.00	.00			.00	.00	12000.00	41055.50	205277.50
7. UIce	291721.00	.00			.00	.00	25600.00	79330.25	396651.25
8. UNIPARMA	167965.00	.00			.00	.00	12000.00	44991.25	224956.25
9. UNIPV	167942.00	.00			.00	.00	12000.00	44985.50	224927.50
10. Kontali	286381.00	.00	0.00	.00	.00	.00	21100.00	76870.25	384351.25
11. NOFIMA	329715.00	.00			.00	.00	25600.00	88828.75	444143.75
12. UTro	154826.00	.00			.00	.00	18500.00	43331.50	216657.50
13. CETMAR	244134.00	.00			.00	.00	148600.00	98183.50	490917.50
14. U STIRLING	239773.00	.00			.00	.00	18000.00	64443.25	322216.25

**ESTIMATED BUDGET FOR THE ACTION (page 2 of 4)**

Estimated eligible* costs (per budget category)									
A. Direct personnel costs			B. Direct costs of subcontracting		[C. Direct costs of fin. support]	D. Other direct costs	E. Indirect costs	Total costs	
A.1 Personnel A.2 Natural persons under direct contract A.3 Seconded persons [A.6 Personnel for providing access to research infrastructure]			A.4 SME owners without salary A.5 Beneficiaries that are natural persons without salary				D.1 Travel D.2 Equipment D.3 Other goods and services D.4 Costs of large research infrastructure		
Form of costs****	Actual	Unit (1)	Unit (2)		Actual	Actual	Actual	Flat-rate (3)	
			EUR/hour						
	(a)	Total (b)	No hours	Total (c)	(d)	(e)	(f)	(g)=0,25x ((a)+(b)+ (c)+(f)-(m))	(i)= (a)+(b)+(c)+ (d)+(e)+(f)+ (g)
15. NTU	116080.00	.00			.00	.00	18000.00	33520.00	167600.00
16. MemU	194511.00	.00			.00	.00	27500.00	55502.75	277513.75
<b>Total Consortium</b>	<b>3545461.00</b>	<b>.00</b>		<b>.00</b>	<b>.00</b>	<b>.00</b>	<b>674880.00</b>	<b>1055085.25</b>	<b>5275426.25</b>

## ESTIMATED BUDGET FOR THE ACTION (page 3 of 4)

	EU contribution			Additional information		
	Total costs	Reimbursement rate %	Maximum EU contribution ***	Maximum grant amount	Information for indirect costs	Information for auditors
	(i)= (a)+(b)+(c)+ (d)+(e)+(f)+ (g)+(h1)+(h2)	(j)	(k)	(l)	Costs of in-kind contributions not used on premises	Declaration of costs under Point D.4
				(m)	Yes/No	
1. MATIS	979575.00	100.00	979575.00	979575.00	.00	No
2. UAlb	157221.25	100.00	157221.25	157221.25	.00	No
3. SYN	388090.00	100.00	388090.00	388090.00	.00	No
4. INRA	172331.25	100.00	172331.25	172331.25	.00	No
5. UNIV-SAVOIE	222996.25	100.00	222996.25	222996.25	.00	No
6. TTZ	205277.50	100.00	205277.50	205277.50	.00	No
7. UIce	396651.25	100.00	396651.25	396651.25	.00	No
8. UNIPARMA	224956.25	100.00	224956.25	224956.25	.00	No
9. UNIPV	224927.50	100.00	224927.50	224927.50	.00	No
10. Kontali	384351.25	100.00	384351.25	384351.25	.00	No
11. NOFIMA	444143.75	100.00	444143.75	444143.75	.00	No
12. UTro	216657.50	100.00	216657.50	216657.50	.00	No
13. CETMAR	490917.50	100.00	490917.50	490917.50	.00	No
14. U STIRLING	322216.25	100.00	322216.25	322216.25	.00	No
15. NTU	167600.00	100.00	167600.00	167600.00	.00	No
16. MemU	277513.75	0.00	.00	.00	.00	No
<b>Total Consortium</b>	<b>5275426.25</b>		<b>4997912.50</b>	<b>4997912.50</b>	<b>.00</b>	

## ESTIMATED BUDGET FOR THE ACTION (page 4 of 4)

\* See Article 6 for conditions for costs to be eligible

\*\* Depending on its type, this cost will or will not include indirect costs.

Costs that include indirect costs are: costs of energy efficiency measures in buildings, costs of providing trans-national access to research infrastructure and costs of clinical studies.

\*\*\* This is the theoretical amount of EU contribution if the reimbursement rate is applied to all the budgeted costs. The theoretical amount of EU contribution for the action is capped by the maximum grant amount.

\*\*\*\* See Article 5 for forms of costs

(1) unit : hours worked on the action; costs per unit (hourly rate) : calculated according to beneficiary's usual accounting practice

(2) unit : hours worked on the action; cost per unit : XX EUR

(3) flat rate : 25% of eligible direct costs, from which are excluded: direct costs of subcontracting, costs of in-kind contributions not used on premises, direct costs of financial support, and unit costs declared under Point F if they include indirect costs

(4) unit : ... ; costs per unit : XX EUR

(5) unit : ..... costs per unit ..... (the units, the costs per unit and the estimated number of units will be agreed with the beneficiaries in a separate document that becomes part of Annex 2 of their grant agreement)

(6) only unit costs not including indirect costs to be added

## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**AALBORG UNIVERSITET (UAib)** DK9, 29102384, established in FREDRIK BAJERS VEJ 5, AALBORG 9220, Denmark, DK29102384, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** ('2')

**in Agreement No 635761** ('the Agreement')

**between** MATIS OHF **and** *the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission'),*

**for the action entitled** 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**SP/F SYNTESA (SYN)** SPF, 3827, established in FYRI OMAN BRUGV 2, SYORUGOTA 513, Faroe Islands, FO538531, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** ('3')

**in Agreement No 635761** ('the Agreement')

**between** MATIS OHF **and** *the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission')*,

**for the action entitled** 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary

## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (INRA)**, 180070039, established in Rue De L'Universite 147, PARIS CEDEX 07 75338, France, FR57180070039, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** ('4')

**in Agreement No 635761** ('the Agreement')

**between** MATIS OHF **and** *the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission'),*

**for the action entitled** 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary

## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**UNIVERSITE DE SAVOIE (UNIV-SAVOIE)**, 197308588, established in RUE MARCOZ 27, CHAMBERY 73011, France, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** ('5')

**in Agreement No 635761** ('the Agreement')

**between** MATIS OHF **and** *the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission')*,

**for the action entitled** 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary

## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (TTZ) EV**, VR839, established in AN DER KARLSTADT 10, BREMERHAVEN 27568, Germany, DE114708969, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary ('6')**

**in Agreement No 635761 ('the Agreement')**

**between MATIS OHF and the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission'),**

**for the action entitled 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'**.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary

## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**HASKOLI ISLANDS (Uice)**, 600169-2039, established in Sudurgata, REYKJAVIK IS 101, Iceland, IS19133, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** ('7')

**in Agreement No 635761** ('the Agreement')

**between** MATIS OHF **and** *the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission')*,

**for the action entitled** 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary

## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**UNIVERSITA DEGLI STUDI DI PARMA (UNIPARMA)**, 137773CF00308780345, established in VIA UNIVERSITA 12, PARMA 43100, Italy, IT00308780345, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** ('8')

**in Agreement No 635761** ('the Agreement')

**between** MATIS OHF **and** *the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission')*,

**for the action entitled** 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary

## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**UNIVERSITA DEGLI STUDI DI PAVIA (UNIPV)**, 80007270186, established in STRADA NUOVA 65, PAVIA 27100, Italy, IT00462870189, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** ('9')

**in Agreement No 635761** ('the Agreement')

**between** MATIS OHF **and** *the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission'),*

**for the action entitled** 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary

## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**KONTALI ANALYSE AS (Kontali)** AS, 959056951, established in INDUSTRIVEIEN 18, KRISTIANSUND N 65177, Norway, NO959056951MVA, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** ('10')

**in Agreement No 635761** ('the Agreement')

**between** MATIS OHF **and** *the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission'),*

**for the action entitled** 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**NOFIMA AS (NOFIMA)** AS, 989278835, established in MUNINBAKKEN 9-13, TROMSO 9291, Norway, NO989278835MVA, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** ('11')

**in Agreement No 635761** ('the Agreement')

**between** MATIS OHF **and** *the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission'),*

**for the action entitled** 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary

## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**UNIVERSITETET I TROMSOE (UTro)**, 970422528, established in HANSINE HANSENS VEG 14, TROMSO 9019, Norway, NO970422528MVA, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** ('12')

**in Agreement No 635761** ('the Agreement')

**between** MATIS OHF **and** *the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission')*,

**for the action entitled** 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary

## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**CENTRO TECNOLOGICO DEL MAR - FUNDACION CETMAR (CETMAR )**, 2001/15, established in Eduardo Cabello s/n, VIGO 36208, Spain, ESG36885853, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** ('13')

**in Agreement No 635761** ('the Agreement')

**between** MATIS OHF **and** *the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission')*,

**for the action entitled** 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary

## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**THE UNIVERSITY OF STIRLING (U STIRLING)**, RC000669/CHSC011159, established in , STIRLING FK9 4LA, United Kingdom, GB261483657, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** ('14')

**in Agreement No 635761** ('the Agreement')

**between** MATIS OHF **and** *the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission')*,

**for the action entitled** 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary

## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**TRUONG DAI HOC NHA TRANG (NTU)**, established in NGUYEN DINH CHIEU STREET 2, NHA TRANG KHANH HOA -, Viet Nam, VN4200433424, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** ('15')

**in Agreement No 635761** ('the Agreement')

**between MATIS OHF and the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission'),**

**for the action entitled** 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary

## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**Memorial University of Newfoundland (MemU)**, n/a, established in ELIZABETH AVENUE, ST JOHN S AIC 5SZ, Canada, n/a, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** ('16')

**in Agreement No 635761** ('the Agreement')

**between** MATIS OHF **and** *the Research Executive Agency (REA) ('the Agency'), under the power delegated by the European Commission ('the Commission')*,

**for the action entitled** 'Developing Innovative Market Orientated Prediction Toolbox to Strengthen the Economic Sustainability and Competitiveness of European Seafood on Local and Global markets (PrimeFish)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement the action in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary

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MODEL ANNEX 4 FOR GENERAL MGA - MULTI-BENEFICIARY

FINANCIAL STATEMENT FOR [BENEFICIARY [name]/ LINKED THIRD PARTY [name]]

Eligible* costs (per budget category)												Receipts	EU contribution			Additional information		
A. Direct personnel costs				B. Direct costs of subcontracting	[C. Direct costs of fin. support]	D. Other direct costs		E. Indirect costs	[F. Costs of ... ]			Total costs	Receipts	Reimbursement rate %	Maximum EU contribution ***	Requested EU contribution	Information for indirect costs :	
A.1 Personnel		A.4 SME owners without salary				D.1 Travel	D.4 Costs of large research infrastructure		[F.1 Costs of ... ] **		[F.2 Costs of ... ] **		Receipts of the action, to be reported in the last reporting period, according to Article 5.3.3				Costs of in-kind contributions not used on premises	
A.2 Natural persons under direct contract		A.5 Beneficiaries that are natural persons without salary				D.2 Equipment												
A.3 Seconded persons						D.3 Other goods and services												
[A.6 Personnel for providing access to research infrastructure]																		
Form of costs****		Actual	Unit ①	Unit ②	Actual	Actual	Actual	Actual	Flat-rate ③	Unit ④	Unit ⑤							
				XX EUR/hour					25%	XX EUR/unit								
	(a)	Total (b)	No hours	Total (c)	(d)	(e)	(f)	(g)	(h)=0,25x((a)+(b)+(c)+(f)+(g)+((i1)) <sup>⑤</sup> +((i2)) <sup>⑥</sup> -(o))	No units	Total (i1)	Total (i2)	(j) = (a)+(b)+(c)+(d)+(e)+(f)+(g)+(h)+(i1)+(i2)	(k)	(l)	(m)	(n)	(o)

The beneficiary/linked third party hereby confirms that:  
 The information provided is complete, reliable and true.  
 The costs declared are eligible (see Article 6).  
 The costs can be substantiated by adequate records and supporting documentation that will be produced upon request or in the context of checks, reviews, audits and investigations (see Articles 17, 18 and 22).  
 For the last reporting period: that all the receipts have been declared (see Article 5.3.3).

① The beneficiary/linked party must declare all eligible costs, even if - for actual costs, unit costs and flat-rate costs - they exceed the amounts indicated in the estimated budget (see Annex 2). Amounts not declared in the individual financial statement will not be taken into account by the [Commission][Agency]

\* See Article 6 for conditions for costs to be eligible

\*\* Depending on its type, this cost will or will not include indirect costs.

Costs that include indirect costs are: costs of energy efficiency measures in buildings, costs of providing trans-national access to research infrastructure and costs of clinical studies.

\*\*\* This is the theoretical amount of EU contribution if the reimbursement rate is applied to all the reported costs. At the payment of the balance, the theoretical amount of EU contribution for the action is capped by the maximum grant amount.

\*\*\*\* See Article 5 for forms of costs

① unit : hours worked on the action; costs per unit (hourly rate) : calculated according to beneficiary's usual accounting practice

② unit : hours worked on the action; cost per unit : XX EUR

③ flat rate : 25% of eligible direct costs, from which are excluded: direct costs of subcontracting, costs of in-kind contributions not used on premises, direct costs of financial support, and unit costs declared under Point F if they include indirect costs

④ unit : ... ; costs per unit : XX EUR

⑤ unit : ..... costs per unit ..... (the units and the costs per unit are set out in Annex 2 of the grant agreement)

⑥ only unit costs **not including indirect costs** to be added

## ANNEX 5

### MODEL FOR THE CERTIFICATE ON THE FINANCIAL STATEMENTS

- For options [*in italics in square brackets*]: choose the applicable option. Options not chosen should be deleted.
- For fields in [grey in square brackets]: enter the appropriate data

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<u>TERMS OF REFERENCE FOR AN INDEPENDENT REPORT OF FACTUAL FINDINGS ON COSTS DECLARED UNDER A GRANT AGREEMENT FINANCED UNDER THE HORIZON 2020 RESEARCH FRAMEWORK PROGRAMME.....</u>	<u>2</u>
<u>INDEPENDENT REPORT OF FACTUAL FINDINGS ON COSTS DECLARED UNDER A GRANT AGREEMENT FINANCED UNDER THE HORIZON 2020 RESEARCH FRAMEWORK PROGRAMME .....</u>	<u>5</u>



H2020 Model Grant Agreements: Mono-beneficiary General MGA: December 2013

**Terms of Reference for an Independent Report of Factual Findings on costs declared under a Grant Agreement financed under the Horizon 2020 Research and Innovation Framework Programme**

This document sets out the ‘**Terms of Reference (ToR)**’ under which

[*OPTION 1: [insert name of the beneficiary] (‘the Beneficiary’) [OPTION 2: [insert name of the linked third party] (‘the Linked Third Party’), third party linked to the Beneficiary [insert name of the beneficiary] (‘the Beneficiary’)]*]

agrees to engage

**[insert legal name of the auditor]** (‘the Auditor’)

to produce an independent report of factual findings (‘the Report’) concerning the Financial Statement(s)<sup>47</sup> drawn up by the [Beneficiary] [Linked Third Party] for the Horizon 2020 grant agreement [insert number of the grant agreement, title of the action, acronym and duration from/to] (‘the Agreement’), and

to issue a Certificate on the Financial Statements’ (‘CFS’) referred to in Article 20.4 of the Agreement based on the compulsory reporting template stipulated by the Commission.

The Agreement has been concluded under the Horizon 2020 Research and Innovation Framework Programme (H2020) between the Beneficiary and [*OPTION 1: the European Union, represented by the European Commission (‘the Commission’)] [OPTION 2: the European Atomic Energy Community (Euratom,) represented by the European Commission (‘the Commission’)] [OPTION 3: the [Research Executive Agency (REA)] [European Research Council Executive Agency (ERCEA)] [Innovation and Networks Executive Agency (INEA)] [Executive Agency for Small and Medium-sized Enterprises (EASME)] (‘the Agency’), under the powers delegated by the European Commission (‘the Commission’).*]

The [Commission] [Agency] is mentioned as a signatory of the Agreement with the Beneficiary only. The [European Union][Euratom][Agency] is not a party to this engagement.

### **1.1 Subject of the engagement**

The coordinator must submit to the [Commission][Agency] the final report within 60 days following the end of the last reporting period which should include, amongst other documents, a CFS for each beneficiary and for each linked third party that requests a total contribution of EUR 325 000 or more, as reimbursement of actual costs and unit costs calculated on the basis of its usual cost accounting practices (see Article 20.4 of the Agreement). The CFS must cover all reporting periods of the beneficiary or linked third party indicated above.

The Beneficiary must submit to the coordinator the CFS for itself and for its linked third party(ies), if the CFS must be included in the final report according to Article 20.4 of the Agreement..

The CFS is composed of two separate documents:

- The Terms of Reference (‘the ToR’) to be signed by the [Beneficiary] [Linked Third Party] and the Auditor;

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<sup>47</sup> By which costs under the Agreement are declared (see template ‘Model Financial Statements’ in Annex 4 to the Grant Agreement).

## H2020 Model Grant Agreements: Mono-beneficiary General MGA: December 2013

- The Auditor's Independent Report of Factual Findings ('the Report') to be issued on the Auditor's letterhead, dated, stamped and signed by the Auditor (or the competent public officer) which includes the agreed-upon procedures ('the Procedures') to be performed by the Auditor, and the standard factual findings ('the Findings') to be confirmed by the Auditor.

If the CFS must be included in the final report according to Article 20.4 of the Agreement, the request for payment of the balance relating to the Agreement cannot be made without the CFS. However, the payment for reimbursement of costs covered by the CFS does not preclude the [Commission,] [Agency,] the European Anti-Fraud Office and the European Court of Auditors from carrying out checks, reviews, audits and investigations in accordance with Article 22 of the Agreement.

### 1.2 Responsibilities

The [Beneficiary] [Linked Third Party]:

- must draw up the Financial Statement(s) for the action financed by the Agreement in compliance with the obligations under the Agreement. The Financial Statement(s) must be drawn up according to the [Beneficiary's] [Linked Third Party's] accounting and book-keeping system and the underlying accounts and records;
- must send the Financial Statement(s) to the Auditor;
- is responsible and liable for the accuracy of the Financial Statement(s);
- is responsible for the completeness and accuracy of the information provided to enable the Auditor to carry out the Procedures. It must provide the Auditor with a written representation letter supporting these statements. The written representation letter must state the period covered by the statements and must be dated;
- accepts that the Auditor cannot carry out the Procedures unless it is given full access to the [Beneficiary's] [Linked Third Party's] staff and accounting as well as any other relevant records and documentation.

The Auditor:

- [Option 1 by default: is qualified to carry out statutory audits of accounting documents in accordance with Directive 2006/43/EC of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts, amending Council Directives 78/660/EEC and 83/349/EEC and repealing Council Directive 84/253/EEC or similar national regulations].
- [Option 2 if the Beneficiary or Linked Third Party has an independent Public Officer: is a competent and independent Public Officer for which the relevant national authorities have established the legal capacity to audit the Beneficiary].
- [Option 3 if the Beneficiary or Linked Third Party is an international organisation: is an [internal] [external] auditor in accordance with the internal financial regulations and procedures of the international organisation].

The Auditor:

- must be independent from the Beneficiary [and the Linked Third Party], in particular, it must not have been involved in preparing the [Beneficiary's] [Linked Third Party's] Financial Statement(s);
- must plan work so that the Procedures may be carried out and the Findings may be assessed;
- must adhere to the Procedures laid down and the compulsory report format;
- must carry out the engagement in accordance with this ToR;
- must document matters which are important to support the Report;
- must base its Report on the evidence gathered;
- must submit the Report to the [Beneficiary] [Linked Third Party].

## H2020 Model Grant Agreements: Mono-beneficiary General MGA: December 2013

The Commission sets out the Procedures to be carried out by the Auditor. The Auditor is not responsible for their suitability or pertinence. As this engagement is not an assurance engagement, the Auditor does not provide an audit opinion or a statement of assurance.

### 1.3 Applicable Standards

The Auditor must comply with these Terms of Reference and with<sup>48</sup>:

- the International Standard on Related Services ('ISRS') 4400 *Engagements to perform Agreed-upon Procedures regarding Financial Information* as issued by the International Federation of Accountants (IFAC);
- the *Code of Ethics for Professional Accountants* issued by the IFAC. Although ISRS 4400 states that independence is not a requirement for engagements to carry out agreed-upon procedures, the [Commission] [Agency] requires that the Auditor also complies with the Code's independence requirements.

The Auditor's Report must state that there is no conflict of interests in establishing this Report between the Auditor and the Beneficiary [and the Linked Third Party], and must specify - if the service is invoiced - the total fee paid to the Auditor for providing the Report.

### 1.4 Reporting

The Report must be written in the language of the Agreement (see Article 20.7).

Under Article 22 of the Agreement, the [Commission] [Agency], the European Anti-Fraud Office and the Court of Auditors have the right to audit any work that is carried out under the action and for which costs are declared from [the European Union] [Euratom]. This includes work related to this engagement. The Auditor must provide access to all working papers (e.g. recalculation of hourly rates, verification of the time declared for the action) related to this assignment if the [Commission] [Agency], the European Anti-Fraud Office or the European Court of Auditors requests them.

### 1.5 Timing

The Report must be provided by [dd Month yyyy].

### 1.6 Other terms

[The [Beneficiary] [Linked Third Party] and the Auditor can use this section to agree other specific terms, such as the Auditor's fees, liability, applicable law, etc. Those specific terms must not contradict the terms specified above.]

[legal name of the Auditor]	[legal name of the [Beneficiary][Linked Third Party]]
[name & function of authorised representative]	[name & function of authorised representative]
[dd Month yyyy]	[dd Month yyyy]
Signature of the Auditor	Signature of the [Beneficiary][Linked Third Party]

<sup>48</sup> Supreme Audit Institutions applying INTOSAI-standards may carry out the Procedures according to the corresponding International Standards of Supreme Audit Institutions and code of ethics issued by INTOSAI instead of the International Standard on Related Services ('ISRS') 4400 and the Code of Ethics for Professional Accountants issued by the IFAC.

H2020 Model Grant Agreements: Mono-beneficiary General MGA: December 2013

**Independent Report of Factual Findings on costs declared under Horizon 2020 Research and Innovation Framework Programme**

*(To be printed on the Auditor's letterhead)*

To  
[ name of contact person(s)], [Position]  
[ [Beneficiary's] [Linked Third Party's] name ]  
[ Address]  
[ dd Month yyyy]

Dear [Name of contact person(s)],

As agreed under the terms of reference dated [dd Month yyyy]

with [OPTION 1: [insert name of the beneficiary] ('the Beneficiary')] [OPTION 2: [insert name of the linked third party] ('the Linked Third Party'), third party linked to the Beneficiary [insert name of the beneficiary] ('the Beneficiary')],

we

[name of the auditor] ('the Auditor'),  
established at [full address/city/state/province/country],  
represented by [name and function of an authorised representative],

have carried out the procedures agreed with you regarding the costs declared in the Financial Statement(s)<sup>49</sup> of the [Beneficiary] [Linked Third Party] concerning the grant agreement [insert grant agreement reference: number, title of the action and acronym] ('the Agreement'),

with a total cost declared of [total amount] EUR,

and a total of actual costs and 'direct personnel costs declared as unit costs calculated in accordance with the [Beneficiary's] [Linked Third Party's] usual cost accounting practices' declared of

[sum of total actual costs and total direct personnel costs declared as unit costs calculated in accordance with the [Beneficiary's] [Linked Third Party's] usual cost accounting practices] EUR

and **hereby provide our Independent Report of Factual Findings ('the Report')** using the compulsory report format agreed with you.

**The Report**

Our engagement was carried out in accordance with the terms of reference ('the ToR') appended to this Report. The Report includes the agreed-upon procedures ('the Procedures') carried out and the standard factual findings ('the Findings') examined.

<sup>49</sup> By which the Beneficiary declares costs under the Agreement (see template 'Model Financial Statement' in Annex 4 to the Agreement).

## H2020 Model Grant Agreements: Mono-beneficiary General MGA: December 2013

The Procedures were carried out solely to assist the [Commission] [Agency] in evaluating whether the [Beneficiary's] [Linked Third Party's] costs in the accompanying Financial Statement(s) were declared in accordance with the Agreement. The [Commission] [Agency] draws its own conclusions from the Report and any additional information it may require.

The scope of the Procedures was defined by the Commission. Therefore, the Auditor is not responsible for their suitability or pertinence. Since the Procedures carried out constitute neither an audit nor a review made in accordance with International Standards on Auditing or International Standards on Review Engagements, the Auditor does not give a statement of assurance on the Financial Statements.

Had the Auditor carried out additional procedures or an audit of the [Beneficiary's] [Linked Third Party's] Financial Statements in accordance with International Standards on Auditing or International Standards on Review Engagements, other matters might have come to its attention and would have been included in the Report.

### **Not applicable Findings**

We examined the Financial Statement(s) stated above and considered the following Findings not applicable:

*Explanation (to be removed from the Report):*

*If a Finding was not applicable, it must be marked as 'N.A.' ('Not applicable') in the corresponding row on the right-hand column of the table and means that the Finding did not have to be corroborated by the Auditor and the related Procedure(s) did not have to be carried out.*

*The reasons of the non-application of a certain Finding must be obvious i.e.*

- i) if no cost was declared under a certain category then the related Finding(s) and Procedure(s) are not applicable;*
- ii) if the condition set to apply certain Procedure(s) are not met the related Finding(s) and those Procedure(s) are not applicable. For instance, for 'beneficiaries with accounts established in a currency other than euro' the Procedure and Finding related to 'beneficiaries with accounts established in euro' are not applicable. Similarly, if no additional remuneration is paid, the related Finding(s) and Procedure(s) for additional remuneration are not applicable.*

**List here all Findings considered not applicable for the present engagement and explain the reasons of the non-applicability.**

....

### **Exceptions**

Apart from the exceptions listed below, the [Beneficiary] [Linked Third Party] provided the Auditor all the documentation and accounting information needed by the Auditor to carry out the requested Procedures and evaluate the Findings.

*Explanation (to be removed from the Report):*

- If the Auditor was not able to successfully complete a procedure requested, it must be marked as 'E' ('Exception') in the corresponding row on the right-hand column of the table. The reason such as the inability to reconcile key information or the unavailability of data that prevents the Auditor from carrying out the Procedure must be indicated below.*
- If the Auditor cannot corroborate a standard finding after having carried out the corresponding procedure, it must also be marked as 'E' ('Exception') and, where possible, the reasons why the Finding was not fulfilled and its possible impact must be explained here below.*

**List here any exceptions and add any information on the cause and possible consequences of each exception, if known. If the exception is quantifiable, include the corresponding amount.**

....

## H2020 Model Grant Agreements: Mono-beneficiary General MGA: December 2013

*Example (to be removed from the Report):*

- 1. The Beneficiary was unable to substantiate the Finding number 1 on ... because ....*
- 2. Finding number 30 was not fulfilled because the methodology used by the Beneficiary to calculate unit costs was different from the one approved by the Commission. The differences were as follows: ...*
- 3. After carrying out the agreed procedures to confirm the Finding number 31, the Auditor found a difference of \_\_\_\_\_ EUR. The difference can be explained by ...*

### **Further Remarks**

In addition to reporting on the results of the specific procedures carried out, the Auditor would like to make the following general remarks:

*Example (to be removed from the Report):*

- 1. Regarding Finding number 8 the conditions for additional remuneration were considered as fulfilled because ...*
- 2. In order to be able to confirm the Finding number 15 we carried out the following additional procedures: ....*

### **Use of this Report**

This Report may be used only for the purpose described in the above objective. It was prepared solely for the confidential use of the [Beneficiary] [Linked Third Party] and the [Commission] [Agency], and only to be submitted to the [Commission] [Agency] in connection with the requirements set out in Article 20.4 of the Agreement. The Report may not be used by the [Beneficiary] [Linked Third Party] or by the [Commission] [Agency] for any other purpose, nor may it be distributed to any other parties. The [Commission] [Agency] may only disclose the Report to authorised parties, in particular to the European Anti-Fraud Office (OLAF) and the European Court of Auditors.

This Report relates only to the Financial Statement(s) submitted to the [Commission] [Agency] by the [Beneficiary] [Linked Third Party] for the Agreement. Therefore, it does not extend to any other of the [Beneficiary's] [Linked Third Party's] Financial Statement(s).

There was no conflict of interest<sup>50</sup> between the Auditor and the Beneficiary [and Linked Third Party] in establishing this Report. The total fee paid to the Auditor for providing the Report was EUR [ ] (including EUR [ ] of deductible VAT).

We look forward to discussing our Report with you and would be pleased to provide any further information or assistance.

[legal name of the Auditor]

[name and function of an authorised representative]

[dd Month yyyy]

Signature of the Auditor

<sup>50</sup> A conflict of interest arises when the Auditor's objectivity to establish the certificate is compromised in fact or in appearance when the Auditor for instance:

- was involved in the preparation of the Financial Statements;
- stands to benefit directly should the certificate be accepted;
- has a close relationship with any person representing the beneficiary;
- is a director, trustee or partner of the beneficiary; or
- is in any other situation that compromises his or her independence or ability to establish the certificate impartially.

**Agreed-upon procedures to be performed and standard factual findings to be confirmed by the Auditor**

The European Commission reserves the right to i) provide the auditor with additional guidance regarding the procedures to be followed or the facts to be ascertained and the way in which to present them (this may include sample coverage and findings) or to ii) change the procedures, by notifying the Beneficiary in writing. The procedures carried out by the auditor to confirm the standard factual finding are listed in the table below.

If this certificate relates to a Linked Third Party, any reference here below to ‘the Beneficiary’ is to be considered as a reference to ‘the Linked Third Party’.

The ‘result’ column has three different options: ‘C’, ‘E’ and ‘N.A.’:

- ‘C’ stands for ‘confirmed’ and means that the auditor can confirm the ‘standard factual finding’ and, therefore, there is no exception to be reported.
- ‘E’ stands for ‘exception’ and means that the Auditor carried out the procedures but cannot confirm the ‘standard factual finding’, or that the Auditor was not able to carry out a specific procedure (e.g. because it was impossible to reconcile key information or data were unavailable),
- ‘N.A.’ stands for ‘not applicable’ and means that the Finding did not have to be examined by the Auditor and the related Procedure(s) did not have to be carried out. The reasons of the non-application of a certain Finding must be obvious i.e. i) if no cost was declared under a certain category then the related Finding(s) and Procedure(s) are not applicable; ii) if the condition set to apply certain Procedure(s) are not met then the related Finding(s) and Procedure(s) are not applicable. For instance, for ‘beneficiaries with accounts established in a currency other than the euro’ the Procedure related to ‘beneficiaries with accounts established in euro’ is not applicable. Similarly, if no additional remuneration is paid, the related Finding(s) and Procedure(s) for additional remuneration are not applicable.

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
A	<b>ACTUAL PERSONNEL COSTS AND UNIT COSTS CALCULATED BY THE BENEFICIARY IN ACCORDANCE WITH ITS USUAL COST ACCOUNTING PRACTICE</b>		
	<p>The Auditor draws a sample of persons whose costs were declared in the Financial Statement(s) to carry out the procedures indicated in the consecutive points of this section A.</p> <p><i>(The sample should be selected randomly so that it is representative. Full coverage is required if there are fewer than 10 people (including employees, natural persons working under a direct contract and personnel seconded by a third party), otherwise the sample should have a minimum of 10 people, or 10% of the total, whichever number is the highest)</i></p> <p>The Auditor sampled [ ] people out of the total of [ ] people.</p>		

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
A.1	<p><b>PERSONNEL COSTS</b></p> <p><u>For the persons included in the sample and working under an employment contract or equivalent act (general procedures for individual actual personnel costs and personnel costs declared as unit costs)</u></p> <p>To confirm standard factual findings 1-5 listed in the next column, the Auditor reviewed following information/documents provided by the Beneficiary:</p> <ul style="list-style-type: none"> <li>○ a list of the persons included in the sample indicating the period(s) during which they worked for the action, their position (classification or category) and type of contract;</li> <li>○ the payslips of the employees included in the sample;</li> <li>○ reconciliation of the personnel costs declared in the Financial Statement(s) with the accounting system (project accounting and general ledger) and payroll system;</li> <li>○ information concerning the employment status and employment conditions of personnel included in the sample, in particular their employment contracts or equivalent;</li> <li>○ the Beneficiary's usual policy regarding payroll matters (e.g. salary policy, overtime policy, variable pay);</li> <li>○ applicable national law on taxes, labour and social security and</li> <li>○ any other document that supports the personnel costs declared.</li> </ul> <p>The Auditor also verified the eligibility of all components of the retribution (see Article 6 GA) and recalculated the personnel costs for employees included in the sample.</p>	<p>1) The employees were i) directly hired by the Beneficiary in accordance with its national legislation, ii) under the Beneficiary's sole technical supervision and responsibility and iii) remunerated in accordance with the Beneficiary's usual practices.</p> <p>2) Personnel costs were recorded in the Beneficiary's accounts/payroll system.</p> <p>3) Costs were adequately supported and reconciled with the accounts and payroll records.</p> <p>4) Personnel costs did not contain any ineligible elements.</p> <p>5) There were no discrepancies between the personnel costs charged to the action and the costs recalculated by the Auditor.</p>	
	<p><i>Further procedures if 'additional remuneration' is paid</i></p> <p>To confirm standard factual findings 6-9 listed in the next column, the Auditor:</p> <ul style="list-style-type: none"> <li>○ reviewed relevant documents provided by the Beneficiary (legal form, legal/statutory</li> </ul>	<p>6) The Beneficiary paying "additional remuneration" was a non-profit legal entity.</p>	



Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<p>obligations, the Beneficiary's usual policy on additional remuneration, criteria used for its calculation...);</p> <ul style="list-style-type: none"> <li>○ recalculated the amount of additional remuneration eligible for the action based on the supporting documents received (full-time or part-time work, exclusive or non-exclusive dedication to the action, etc.) to arrive at the applicable FTE/year and pro-rata rate (see data collected in the course of carrying out the procedures under A.2 'Productive hours' and A.4 'Time recording system').</li> </ul> <p><i>IF ANY PART OF THE REMUNERATION PAID TO THE EMPLOYEE IS NOT MANDATORY ACCORDING TO THE NATIONAL LAW OR THE EMPLOYMENT CONTRACT ("ADDITIONAL REMUNERATION") AND IS ELIGIBLE UNDER THE PROVISIONS OF ARTICLE 6.2.A.1, THIS CAN BE CHARGED AS ELIGIBLE COST TO THE ACTION UP TO THE FOLLOWING AMOUNT:</i></p> <p>(A) <i>IF THE PERSON WORKS FULL TIME AND EXCLUSIVELY ON THE ACTION DURING THE FULL YEAR: UP TO EUR 8 000/YEAR;</i></p> <p>(B) <i>IF THE PERSON WORKS EXCLUSIVELY ON THE ACTION BUT NOT FULL-TIME OR NOT FOR THE FULL YEAR: UP TO THE CORRESPONDING PRO-RATA AMOUNT OF EUR 8 000, OR</i></p> <p>(C) <i>IF THE PERSON DOES NOT WORK EXCLUSIVELY ON THE ACTION: UP TO A PRO-RATA AMOUNT CALCULATED IN ACCORDANCE TO ARTICLE 6.2.A.1.</i></p>	7) The amount of additional remuneration paid corresponded to the Beneficiary's usual remuneration practices and was consistently paid whenever the same kind of work or expertise was required.	
		8) The criteria used to calculate the additional remuneration were objective and generally applied by the Beneficiary regardless of the source of funding used.	
		9) The amount of additional remuneration included in the personnel costs charged to the action was capped at EUR 8,000 per FTE/year (up to the equivalent pro-rata amount if the person did not work on the action full-time during the year or did not work exclusively on the action).	
	<p><i>Additional procedures in case "unit costs calculated by the Beneficiary in accordance with its usual cost accounting practices" is applied:</i></p> <p>Apart from carrying out the procedures indicated above to confirm standard factual findings 1-5 and, if applicable, also 6-9, the Auditor carried out following procedures to confirm standard</p>	10) The personnel costs included in the Financial Statement were calculated in accordance with the Beneficiary's usual cost accounting practice. This methodology was consistently	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<p>factual findings 10-13 listed in the next column:</p> <ul style="list-style-type: none"> <li>○ obtained a description of the Beneficiary's usual cost accounting practice to calculate unit costs;</li> <li>○ reviewed whether the Beneficiary's usual cost accounting practice was applied for the Financial Statements subject of the present CFS;</li> <li>○ verified the employees included in the sample were charged under the correct category (in accordance with the criteria used by the Beneficiary to establish personnel categories) by reviewing the contract/HR-record or analytical accounting records;</li> <li>○ verified that there is no difference between the total amount of personnel costs used in calculating the cost per unit and the total amount of personnel costs recorded in the statutory accounts;</li> <li>○ verified whether actual personnel costs were adjusted on the basis of budgeted or estimated elements and, if so, verified whether those elements used are actually relevant for the calculation, objective and supported by documents.</li> </ul>	<p>used in all H2020 actions.</p> <p>11) The employees were charged under the correct category.</p> <p>12) Total personnel costs used in calculating the unit costs were consistent with the expenses recorded in the statutory accounts.</p> <p>13) Any estimated or budgeted element used by the Beneficiary in its unit-cost calculation were relevant for calculating personnel costs and corresponded to objective and verifiable information.</p>	
	<p><u>For natural persons included in the sample and working with the Beneficiary under a direct contract other than an employment contract, such as consultants (no subcontractors).</u></p> <p>To confirm standard factual findings 14-18 listed in the next column the Auditor reviewed following information/documents provided by the Beneficiary:</p> <ul style="list-style-type: none"> <li>○ the contracts, especially the cost, contract duration, work description, place of work, ownership of the results and reporting obligations to the Beneficiary;</li> <li>○ the employment conditions of staff in the same category to compare costs and;</li> <li>○ any other document that supports the costs declared and its registration (e.g. invoices,</li> </ul>	<p>14) The natural persons reported to the Beneficiary (worked under the Beneficiary's instructions).</p> <p>15) They worked on the Beneficiary's premises (unless otherwise agreed with the Beneficiary).</p> <p>16) The results of work carried out belong to the Beneficiary.</p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	accounting records, etc.).	17) Their costs were not significantly different from those for staff who performed similar tasks under an employment contract with the Beneficiary.	
		18) The costs were supported by audit evidence and registered in the accounts.	
	<p><u>For personnel seconded by a third party and included in the sample (not subcontractors)</u></p> <p>To confirm standard factual findings 19-22 listed in the next column, the Auditor reviewed following information/documents provided by the Beneficiary:</p> <ul style="list-style-type: none"> <li>○ their secondment contract(s) notably regarding costs, duration, work description, place of work and ownership of the results;</li> <li>○ if there is reimbursement by the Beneficiary to the third party for the resource made available (in-kind contribution against payment): any documentation that supports the costs declared (e.g. contract, invoice, bank payment, and proof of registration in its accounting/payroll, etc.) and reconciliation of the Financial Statement(s) with the accounting system (project accounting and general ledger) as well as any proof that the amount invoiced by the third party did not include any profit;</li> <li>○ if there is no reimbursement by the Beneficiary to the third party for the resource made available (in-kind contribution free of charge): a proof of the actual cost borne by the Third Party for the resource made available free of charge to the Beneficiary such as a statement of costs incurred by the Third Party and proof of the registration in the Third Party's accounting/payroll;</li> <li>○ any other document that supports the costs declared (e.g. invoices, etc.).</li> </ul>	19) Seconded personnel reported to the Beneficiary and worked on the Beneficiary's premises (unless otherwise agreed with the Beneficiary).	
		20) The results of work carried out belong to the Beneficiary.	
		<i>If personnel is seconded against payment:</i> 21) The costs declared were supported with documentation and recorded in the Beneficiary's accounts. The third party did not include any profit.	
		<i>If personnel is seconded free of charge:</i> 22) The costs declared did not exceed the third party's cost as	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
		recorded in the accounts of the third party and were supported with documentation.	
<b>A.2</b>	<p><b>PRODUCTIVE HOURS</b></p> <p>To confirm standard factual findings 23-28 listed in the next column, the Auditor reviewed relevant documents, especially national legislation, labour agreements and contracts and time records of the persons included in the sample, to verify that:</p> <ul style="list-style-type: none"> <li>○ the annual productive hours applied were calculated in accordance with one of the methods described below,</li> <li>○ the full-time equivalent (FTEs) ratios for employees not working full-time were correctly calculated.</li> </ul> <p>If the Beneficiary applied method B, the auditor verified that the correctness in which the total number of hours worked was calculated and that the contracts specified the annual workable hours.</p> <p>If the Beneficiary applied method C, the auditor verified that the ‘annual productive hours’ applied when calculating the hourly rate were equivalent to at least 90 % of the ‘standard annual workable hours’. The Auditor can only do this if the calculation of the standard annual workable hours can be supported by records, such as national legislation, labour agreements, and contracts.</p> <p><i>BENEFICIARY'S PRODUCTIVE HOURS' FOR PERSONS WORKING FULL TIME SHALL BE ONE OF THE FOLLOWING METHODS:</i></p> <p><i>A. 1720 ANNUAL PRODUCTIVE HOURS (PRO-RATA FOR PERSONS NOT WORKING FULL-TIME)</i></p> <p><i>B. THE TOTAL NUMBER OF HOURS WORKED BY THE PERSON FOR THE BENEFICIARY IN THE YEAR (THIS METHOD IS ALSO REFERRED TO AS ‘TOTAL NUMBER OF HOURS WORKED’ IN THE NEXT COLUMN). THE CALCULATION OF THE TOTAL NUMBER OF HOURS WORKED WAS DONE AS</i></p>	<p>23) The Beneficiary applied method [<i>choose one option and delete the others</i>]</p> <p>[A: 1720 hours]</p> <p>[B: the ‘total number of hours worked’]</p> <p>[C: ‘annual productive hours’ used correspond to usual accounting practices]</p> <p>24) Productive hours were calculated annually.</p> <p>25) For employees not working full-time the full-time equivalent (FTE) ratio was correctly applied.</p> <p><i>If the Beneficiary applied method B.</i></p> <p>26) The calculation of the number of ‘annual workable hours’, overtime and absences was verifiable based on the documents provided by the Beneficiary.</p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<p><i>FOLLOWS: ANNUAL WORKABLE HOURS OF THE PERSON ACCORDING TO THE EMPLOYMENT CONTRACT, APPLICABLE LABOUR AGREEMENT OR NATIONAL LAW PLUS OVERTIME WORKED MINUS ABSENCES (SUCH AS SICK LEAVE OR SPECIAL LEAVE).</i></p> <p><i>C. THE STANDARD NUMBER OF ANNUAL HOURS GENERALLY APPLIED BY THE BENEFICIARY FOR ITS PERSONNEL IN ACCORDANCE WITH ITS USUAL COST ACCOUNTING PRACTICES (THIS METHOD IS ALSO REFERRED TO AS 'TOTAL ANNUAL PRODUCTIVE HOURS' IN THE NEXT COLUMN). THIS NUMBER MUST BE AT LEAST 90% OF THE STANDARD ANNUAL WORKABLE HOURS.</i></p> <p><i>'ANNUAL WORKABLE HOURS' MEANS THE PERIOD DURING WHICH THE PERSONNEL MUST BE WORKING, AT THE EMPLOYER'S DISPOSAL AND CARRYING OUT HIS/HER ACTIVITY OR DUTIES UNDER THE EMPLOYMENT CONTRACT, APPLICABLE COLLECTIVE LABOUR AGREEMENT OR NATIONAL WORKING TIME LEGISLATION.</i></p>	<p><i>If the Beneficiary applied method C.</i></p> <p>27) The calculation of the number of 'standard annual workable hours' was verifiable based on the documents provided by the Beneficiary.</p> <p>28) The 'annual productive hours' used for calculating the hourly rate were consistent with the usual cost accounting practices of the Beneficiary and were equivalent to at least 90 % of the 'annual workable hours'.</p>	
A.3	<p><b>HOURLY PERSONNEL RATES</b></p> <p><u>D) For unit costs calculated in accordance to the Beneficiary's usual cost accounting practice (unit costs):</u></p> <p>If the Beneficiary has a "Certificate on Methodology to calculate unit costs " (CoMUC) approved by the Commission, the Beneficiary provides the Auditor with a description of the approved methodology and the Commission's letter of acceptance. The Auditor verified that the Beneficiary has indeed used the methodology approved. If so, no further verification is necessary.</p> <p>If the Beneficiary does not have a "Certificate on Methodology" (CoMUC) approved by the Commission, or if the methodology approved was not applied, then the Auditor:</p>	<p>29) The Beneficiary applied [<i>choose one option and delete the other</i>]:</p> <p>[Option I: "Unit costs (hourly rates) were calculated in accordance with the Beneficiary's usual cost accounting practices"]</p> <p>[Option II: Individual hourly rates were applied]</p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<ul style="list-style-type: none"> <li>○ reviewed the documentation provided by the Beneficiary, including manuals and internal guidelines that explain how to calculate hourly rates;</li> <li>○ recalculated the unit costs (hourly rates) of staff included in the sample following the results of the procedures carried out in A.1 and A.2.</li> </ul> <p><u>II) For individual hourly rates:</u></p> <p>The Auditor:</p> <ul style="list-style-type: none"> <li>○ reviewed the documentation provided by the Beneficiary, including manuals and internal guidelines that explain how to calculate hourly rates;</li> <li>○ recalculated the hourly rates of staff included in the sample following the results of the procedures carried out in A.1 and A.2.</li> </ul>	<p><i>For option I concerning unit costs and if the Beneficiary applies the methodology approved by the Commission (CoMUC):</i></p> <p>30) The Beneficiary used the Commission-approved methodology to calculate hourly rates. It corresponded to the organisation's usual cost accounting practices and was applied consistently for all activities irrespective of the source of funding.</p>	
	<p><u>“UNIT COSTS CALCULATED BY THE BENEFICIARY IN ACCORDANCE WITH ITS USUAL COST ACCOUNTING PRACTICES”:</u></p> <p><i>IT IS CALCULATED BY DIVIDING THE TOTAL AMOUNT OF PERSONNEL COSTS OF THE CATEGORY TO WHICH THE EMPLOYEE BELONGS VERIFIED IN LINE WITH PROCEDURE A.1 BY THE NUMBER OF FTE AND THE ANNUAL TOTAL PRODUCTIVE HOURS OF THE SAME CATEGORY CALCULATED BY THE BENEFICIARY IN ACCORDANCE WITH PROCEDURE A.2.</i></p> <p><u>HOURLY RATE FOR INDIVIDUAL ACTUAL PERSONAL COSTS:</u></p> <p><i>IT IS CALCULATED BY DIVIDING THE TOTAL AMOUNT OF PERSONNEL COSTS OF AN EMPLOYEE VERIFIED IN LINE WITH PROCEDURE A.1 BY THE NUMBER OF ANNUAL PRODUCTIVE HOURS VERIFIED IN LINE WITH PROCEDURE A.2.</i></p>	<p><i>For option I concerning unit costs and if the Beneficiary applies a methodology not approved by the Commission:</i></p> <p>31) The unit costs re-calculated by the Auditor were the same as the rates applied by the Beneficiary.</p>	
		<p><i>For option II concerning individual hourly rates:</i></p> <p>32) The individual rates re-calculated by the Auditor were the same as the rates applied by the Beneficiary.</p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
A.4	<p><b>TIME RECORDING SYSTEM</b></p> <p>To verify that the time recording system ensures the fulfilment of all minimum requirements and that the hours declared for the action were correct, accurate and properly authorised and supported by documentation, the Auditor made the following checks for the persons included in the sample that declare time as worked for the action on the basis of time records:</p> <ul style="list-style-type: none"> <li>○ description of the time recording system provided by the Beneficiary (registration, authorisation, processing in the HR-system);</li> <li>○ its actual implementation;</li> <li>○ time records were signed at least monthly by the employees (on paper or electronically) and authorised by the project manager or another manager;</li> <li>○ the hours declared were worked within the project period;</li> <li>○ there were no hours declared as worked for the action if HR-records showed absence due to holidays or sickness (further cross-checks with travels are carried out in B.1 below) ;</li> <li>○ the hours charged to the action matched those in the time recording system.</li> </ul> <p><i>ONLY THE HOURS WORKED ON THE ACTION CAN BE CHARGED. ALL WORKING TIME TO BE CHARGED SHOULD BE RECORDED THROUGHOUT THE DURATION OF THE PROJECT, ADEQUATELY SUPPORTED BY EVIDENCE OF THEIR REALITY AND RELIABILITY (SEE SPECIFIC PROVISIONS BELOW FOR PERSONS WORKING EXCLUSIVELY FOR THE ACTION WITHOUT TIME RECORDS).</i></p>	33) All persons recorded their time dedicated to the action on a <b>daily/ weekly/ monthly</b> basis using a <b>paper/computer-based</b> system. <i>(delete the answers that are not applicable)</i>	
		34) Their time-records were authorised at least monthly by the project manager or other superior.	
		35) Hours declared were worked within the project period and were consistent with the presences/absences recorded in HR-records.	
		36) There were no discrepancies between the number of hours charged to the action and the number of hours recorded.	
	<p><u>If the persons are working exclusively for the action and without time records</u></p> <p>For the persons selected that worked exclusively for the action without time records, the Auditor verified evidence available demonstrating that they were in reality exclusively dedicated to the action and that the Beneficiary signed a declaration confirming that they have worked exclusively for the action.</p>	37) The exclusive dedication is supported by a declaration signed by the Beneficiary's and by any other evidence gathered.	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
<b>B</b>	<b>COSTS OF SUBCONTRACTING</b>		
<b>B.1</b>	<p><b>The Auditor obtained the detail/breakdown of subcontracting costs and sampled cost items selected randomly</b> <i>(full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 item, or 10% of the total, whichever number is highest).</i></p> <p>To confirm standard factual findings 38-42 listed in the next column, the Auditor reviewed the following for the items included in the sample:</p> <ul style="list-style-type: none"> <li>○ the use of subcontractors was foreseen in Annex I;</li> <li>○ subcontracting costs were declared in the subcontracting category of the Financial Statement;</li> <li>○ supporting documents on the selection and award procedure were followed;</li> <li>○ the Beneficiary ensured best value for money (key elements to appreciate the respect of this principle are the award of the subcontract to the bid offering best price-quality ratio, under conditions of transparency and equal treatment. In case an existing framework contract was used the Beneficiary ensured it was established on the basis of the principle of best value for money under conditions of transparency and equal treatment).</li> </ul> <p>In particular,</p> <ol style="list-style-type: none"> <li>i. if the Beneficiary acted as a contracting authority within the meaning of Directive 2004/18/EC or of Directive 2004/17/EC, the Auditor verified that the applicable national law on public procurement was followed and that the subcontracting complied with the Terms and Conditions of the Agreement.</li> <li>ii. if the Beneficiary did not fall under the above-mentioned category the Auditor verified that the Beneficiary followed their usual procurement rules and respected the Terms and</li> </ol>	<p>38) The use of claimed subcontracting costs was foreseen in Annex I and costs were declared in the Financial Statements under the subcontracting category.</p> <p>39) There were documents of requests to different providers, different offers and assessment of the offers before selection of the provider in line with internal procedures and procurement rules. Subcontracts were awarded in accordance with the principle of best value for money.</p> <p><i>(When different offers were not collected the Auditor explains the reasons provided by the Beneficiary under the caption “Exceptions” of the Report. The Commission will analyse this information to evaluate whether these costs might be accepted as eligible)</i></p>	



Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<p>Conditions of the Agreement..</p> <p>For the items included in the sample the Auditor also verified that:</p> <ul style="list-style-type: none"> <li>○ the subcontracts were not awarded to other Beneficiaries in the consortium;</li> <li>○ there were signed agreements between the Beneficiary and the subcontractor;</li> <li>○ there was evidence that the services were provided by subcontractor;</li> </ul>	40) The subcontracts were not awarded to other Beneficiaries of the consortium.	
		41) All subcontracts were supported by signed agreements between the Beneficiary and the subcontractor.	
		42) There was evidence that the services were provided by the subcontractors.	
<b>C</b>	<b>COSTS OF PROVIDING FINANCIAL SUPPORT TO THIRD PARTIES</b>		
<b>C.1</b>	<p><b>The Auditor obtained the detail/breakdown of the costs of providing financial support to third parties and sampled [REDACTED] cost items selected randomly</b> <i>(full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 item, or 10% of the total, whichever number is highest).</i></p> <p>The Auditor verified that the following minimum conditions were met:</p> <ul style="list-style-type: none"> <li>a) the maximum amount of financial support for each third party did not exceed EUR 60 000, unless explicitly mentioned in Annex I;</li> <li>b) the financial support to third parties was agreed in Annex I of the Agreement and the other provisions on financial support to third parties included in Annex I were respected.</li> </ul>	43) All minimum conditions were met	
<b>D</b>	<b>OTHER ACTUAL DIRECT COSTS</b>		
<b>D.1</b>	<b>COSTS OF TRAVEL AND RELATED SUBSISTENCE ALLOWANCES</b>		
	<b>The Auditor sampled [REDACTED] cost items selected randomly</b> <i>(full coverage is required if there</i>	44) Costs were incurred, approved	
		and reimbursed in line with the	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<p><i>are fewer than 10 items, otherwise the sample should have a minimum of 10 item, or 10% of the total, whichever number is the highest).</i></p> <p>The Auditor inspected the sample and verified that:</p> <ul style="list-style-type: none"> <li>○ travel and subsistence costs were consistent with the Beneficiary's usual policy for travel. In this context, the Beneficiary provided evidence of its normal policy for travel costs (e.g. use of first class tickets, reimbursement by the Beneficiary on the basis of actual costs, a lump sum or per diem) to enable the Auditor to compare the travel costs charged with this policy;</li> <li>○ travel costs are correctly identified and allocated to the action (e.g. trips are directly linked to the action) by reviewing relevant supporting documents such as minutes of meetings, workshops or conferences, their registration in the correct project account, their consistency with time records or with the dates/duration of the workshop/conference;</li> <li>○ no ineligible costs or excessive or reckless expenditure was declared.</li> </ul>	<p>Beneficiary's usual policy for travels.</p> <p>45) There was a link between the trip and the action.</p> <p>46) The supporting documents were consistent with each other regarding subject of the trip, dates, duration and reconciled with time records and accounting.</p> <p>47) No ineligible costs or excessive or reckless expenditure was declared.</p>	
<b>D.2</b>	<p><b>DEPRECIATION COSTS FOR EQUIPMENT, INFRASTRUCTURE OR OTHER ASSETS</b></p> <p><b>The Auditor sampled [REDACTED] cost items selected randomly</b> <i>(full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 item, or 10% of the total, whichever number is the highest).</i></p> <p>For “equipment, infrastructure or other assets” [from now on called “asset(s)”] selected in the sample the Auditor verified that:</p> <ul style="list-style-type: none"> <li>○ the assets were acquired in conformity with the Beneficiary's internal guidelines and procedures;</li> <li>○ they were correctly allocated to the action (with supporting documents such as delivery</li> </ul>	<p>48) Procurement rules, principles and guides were followed.</p> <p>49) There was a link between the grant agreement and the asset charged to the action.</p> <p>50) The asset charged to the action was traceable to the accounting records and the underlying documents.</p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<p>note invoice or any other proof demonstrating the link to the action)</p> <ul style="list-style-type: none"> <li>○ they were entered in the accounting system;</li> <li>○ the extent to which the assets were used for the action (as a percentage) was supported by reliable documentation (e.g. usage overview table);</li> </ul> <p>The Auditor recalculated the depreciation costs and verified that they were in line with the applicable rules in the Beneficiary's country and with the Beneficiary's usual accounting policy (e.g. depreciation calculated on the acquisition value).</p> <p>The Auditor verified that no ineligible costs such as deductible VAT, exchange rate losses, excessive or reckless expenditure were declared (see Article 6.5 GA).</p>	<p>51) The depreciation method used to charge the asset to the action was in line with the applicable rules of the Beneficiary's country and the Beneficiary's usual accounting policy.</p> <p>52) The amount charged corresponded to the actual usage for the action.</p> <p>53) No ineligible costs or excessive or reckless expenditure were declared.</p>	
<b>D.3</b>	<p><b>COSTS OF OTHER GOODS AND SERVICES</b></p> <p><b>The Auditor sampled [REDACTED] cost items selected randomly</b> (<i>full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 item, or 10% of the total, whichever number is highest</i>).</p> <p>For the purchase of goods, works or services included in the sample the Auditor verified that:</p> <ul style="list-style-type: none"> <li>○ the contracts did not cover tasks described in Annex 1;</li> <li>○ they were correctly identified, allocated to the proper action, entered in the accounting system (traceable to underlying documents such as purchase orders, invoices and accounting);</li> <li>○ the goods were not placed in the inventory of durable equipment;</li> </ul>	<p>54) Contracts for works or services did not cover tasks described in Annex 1.</p> <p>55) Costs were allocated to the correct action and the goods were not placed in the inventory of durable equipment.</p> <p>56) The costs were charged in line with the Beneficiary's accounting policy and were adequately supported.</p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<ul style="list-style-type: none"> <li>○ the costs charged to the action were accounted in line with the Beneficiary’s usual accounting practices;</li> <li>○ no ineligible costs or excessive or reckless expenditure were declared (see Article 6 GA).</li> </ul> <p>In addition, the Auditor verified that these goods and services were acquired in conformity with the Beneficiary's internal guidelines and procedures, in particular:</p> <ul style="list-style-type: none"> <li>○ if Beneficiary acted as a contracting authority within the meaning of Directive 2004/18/EC or of Directive 2004/17/EC, the Auditor verified that the applicable national law on public procurement was followed and that the procurement contract complied with the Terms and Conditions of the Agreement.</li> <li>○ if the Beneficiary did not fall into the category above, the Auditor verified that the Beneficiary followed their usual procurement rules and respected the Terms and Conditions of the Agreement.</li> </ul> <p>For the items included in the sample the Auditor also verified that:</p> <ul style="list-style-type: none"> <li>○ the Beneficiary ensured best value for money (key elements to appreciate the respect of this principle are the award of the contract to the bid offering best price-quality ratio, under conditions of transparency and equal treatment. In case an existing framework contract was used the Auditor also verified that the Beneficiary ensured it was established on the basis of the principle of best value for money under conditions of transparency and equal treatment);</li> </ul> <p><i>SUCH GOODS AND SERVICES INCLUDE, FOR INSTANCE, CONSUMABLES AND SUPPLIES, DISSEMINATION (INCLUDING OPEN ACCESS), PROTECTION OF RESULTS, SPECIFIC EVALUATION OF THE ACTION IF IT IS REQUIRED BY THE AGREEMENT, CERTIFICATES ON THE FINANCIAL STATEMENTS IF THEY ARE REQUIRED BY THE AGREEMENT AND CERTIFICATES ON THE METHODOLOGY, TRANSLATIONS, REPRODUCTION.</i></p>	<p>57) No ineligible costs or excessive or reckless expenditure were declared. For internal invoices/charges only the cost element was charged, without any mark-ups.</p> <p>58) Procurement rules, principles and guides were followed. There were documents of requests to different providers, different offers and assessment of the offers before selection of the provider in line with internal procedures and procurement rules. The purchases were made in accordance with the principle of best value for money.</p> <p><i>(When different offers were not collected the Auditor explains the reasons provided by the Beneficiary under the caption “Exceptions” of the Report. The Commission will analyse this information to evaluate whether these costs might be accepted as eligible)</i></p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
D.4	<p><b>AGGREGATED CAPITALISED AND OPERATING COSTS OF RESEARCH INFRASTRUCTURE</b></p> <p>The Auditor ensured the existence of a positive ex-ante assessment (issued by the EC Services) of the cost accounting methodology of the Beneficiary allowing it to apply the guidelines on direct costing for large research infrastructures in Horizon 2020.</p> <p><i>In the cases that a positive ex-ante assessment has been issued (see the standard factual findings 59-60 on the next column),</i> The Auditor ensured that the beneficiary has applied consistently the methodology that is explained and approved in the positive ex ante assessment;</p> <p><i>In the cases that a positive ex-ante assessment has NOT been issued (see the standard factual findings 61 on the next column),</i> The Auditor verified that no costs of Large Research Infrastructure have been charged as direct costs in any costs category;</p> <p><i>In the cases that a draft ex-ante assessment report has been issued with recommendation for further changes (see the standard factual findings 61 on the next column),</i></p> <ul style="list-style-type: none"> <li>The Auditor followed the same procedure as above (when a positive ex-ante assessment has NOT yet been issued) and paid particular attention (testing reinforced) to the cost items for which the draft ex-ante assessment either rejected the inclusion as direct costs for Large Research Infrastructures or issued recommendations.</li> </ul>	<p>59) The costs declared as direct costs for Large Research Infrastructures (in the appropriate line of the Financial Statement) comply with the methodology described in the positive ex-ante assessment report.</p> <p>60) Any difference between the methodology applied and the one positively assessed was extensively described and adjusted accordingly.</p> <p>61) The direct costs declared were free from any indirect costs items related to the Large Research Infrastructure.</p>	
E	<b>USE OF EXCHANGE RATES</b>		
E.1	<p>a) <u>For Beneficiaries with accounts established in a currency other than euros</u></p> <p><b>The Auditor sampled [REDACTED] cost items selected randomly and verified that the exchange rates used for converting other currencies into euros were in accordance with the following rules established in the Agreement ( full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 item, or 10% of the total, whichever number</b></p>	<p>62) The exchange rates used to convert other currencies into Euros were in accordance with the rules established of the Grant Agreement and there was no difference in the final</p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<p><i>is highest):</i></p> <p><i>COSTS INCURRED IN ANOTHER CURRENCY SHALL BE CONVERTED INTO EURO AT THE AVERAGE OF THE DAILY EXCHANGE RATES PUBLISHED IN THE C SERIES OF OFFICIAL JOURNAL OF THE EUROPEAN UNION (<a href="https://www.ecb.int/stats/exchange/eurofxref/html/index.en.html">https://www.ecb.int/stats/exchange/eurofxref/html/index.en.html</a> ), DETERMINED OVER THE CORRESPONDING REPORTING PERIOD.</i></p> <p><i>IF NO DAILY EURO EXCHANGE RATE IS PUBLISHED IN THE OFFICIAL JOURNAL OF THE EUROPEAN UNION FOR THE CURRENCY IN QUESTION, CONVERSION SHALL BE MADE AT THE AVERAGE OF THE MONTHLY ACCOUNTING RATES ESTABLISHED BY THE COMMISSION AND PUBLISHED ON ITS WEBSITE (<a href="http://ec.europa.eu/budget/contracts_grants/info_contracts/inforeuro/inforeuro_en.cfm">http://ec.europa.eu/budget/contracts_grants/info_contracts/inforeuro/inforeuro_en.cfm</a> ), DETERMINED OVER THE CORRESPONDING REPORTING PERIOD.</i></p>	<p>figures.</p>	
	<p><b>b) For Beneficiaries with accounts established in euros</b></p> <p><b>The Auditor sampled [redacted] cost items selected randomly and verified that the exchange rates used for converting other currencies into euros were in accordance with the following rules established in the Agreement ( full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 item, or 10% of the total, whichever number is highest):</b></p> <p><i>COSTS INCURRED IN ANOTHER CURRENCY SHALL BE CONVERTED INTO EURO BY APPLYING THE BENEFICIARY'S USUAL ACCOUNTING PRACTICES.</i></p>	<p>63) The Beneficiary applied its usual accounting practices.</p>	

*[legal name of the audit firm]*

*[name and function of an authorised representative]*

*[dd Month yyyy]*

*<Signature of the Auditor>*

**ANNEX 6**

**MODEL FOR THE CERTIFICATE ON THE METHODOLOGY**

- For options [*in italics in square brackets*]: choose the applicable option. Options not chosen should be deleted.
- For fields in [grey in square brackets]: enter the appropriate data.

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**Terms of reference for an audit engagement for a methodology certificate in connection with one or more grant agreements financed under the Horizon 2020 Research and Innovation Framework Programme**

This document sets out the ‘**Terms of Reference (ToR)**’ under which

[OPTION 1: [insert name of the beneficiary] (*‘the Beneficiary’*)] [OPTION 2: [insert name of the linked third party] (*‘the Linked Third Party’*), third party linked to the Beneficiary [insert name of the beneficiary] (*‘the Beneficiary’*)]

agrees to engage

[insert legal name of the auditor] (*‘the Auditor’*)

to produce an independent report of factual findings (*‘the Report’*) concerning the [Beneficiary’s] [Linked Third Party’s] usual accounting practices for calculating and claiming direct personnel costs declared as unit costs (*‘the Methodology’*) in connection with grant agreements financed under the Horizon 2020 Research and Innovation Framework Programme.

The procedures to be carried out for the assessment of the methodology will be based on the grant agreement(s) detailed below:

[title and number of the grant agreement(s)] (*‘the Agreement(s)’*)

The Agreement(s) has(have) been concluded between the Beneficiary and [OPTION 1: *the European Union, represented by the European Commission (‘the Commission’)*][ OPTION 2: *the European Atomic Energy Community (Euratom,) represented by the European Commission (‘the Commission’)*][OPTION 3: *the [Research Executive Agency (REA)] [European Research Council Executive Agency (ERCEA)] [Innovation and Networks Executive Agency (INEA)] [Executive Agency for Small and Medium-sized Enterprises (EASME)] (‘the Agency’), under the powers delegated by the European Commission (‘the Commission’).*].

The [Commission] [Agency] is mentioned as a signatory of the Agreement with the Beneficiary only. The [European Union] [Euratom] [Agency] is not a party to this engagement.

### **1.1 Subject of the engagement**

According to Article 18.1.2 of the Agreement, beneficiaries [*and linked third parties*] that declare direct personnel costs as unit costs calculated in accordance with their usual cost accounting practices may submit to the [Commission] [Agency], for approval, a certificate on the methodology (*‘CoMUC’*) stating that there are adequate records and documentation to prove that their cost accounting practices used comply with the conditions set out in Point A of Article 6.2.

The subject of this engagement is the CoMUC which is composed of two separate documents:

- the Terms of Reference (*‘the ToR’*) to be signed by the [Beneficiary] [Linked Third Party] and the Auditor;
- the Auditor’s Independent Report of Factual Findings (*‘the Report’*) issued on the Auditor’s letterhead, dated, stamped and signed by the Auditor which includes; the standard statements (*‘the Statements’*) evaluated and signed by the [Beneficiary] [Linked Third Party], the agreed-upon procedures (*‘the Procedures’*) performed by the Auditor and the standard factual findings



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(‘the Findings’) assessed by the Auditor. The Statements, Procedures and Findings are summarised in the table that forms part of the Report.

The information provided through the Statements, the Procedures and the Findings will enable the Commission to draw conclusions regarding the existence of the [Beneficiary’s] [Linked Third Party’s] usual cost accounting practice and its suitability to ensure that direct personnel costs claimed on that basis comply with the provisions of the Agreement. The Commission draws its own conclusions from the Report and any additional information it may require.

### 1.2 Responsibilities

The parties to this agreement are the [Beneficiary] [Linked Third Party] and the Auditor.

The [Beneficiary] [Linked Third Party]:

- is responsible for preparing financial statements for the Agreement(s) (‘the Financial Statements’) in compliance with those Agreements;
- is responsible for providing the Financial Statement(s) to the Auditor and enabling the Auditor to reconcile them with the [Beneficiary’s] [Linked Third Party’s] accounting and bookkeeping system and the underlying accounts and records. The Financial Statement(s) will be used as a basis for the procedures which the Auditor will carry out under this ToR;
- is responsible for its Methodology and liable for the accuracy of the Financial Statement(s);
- is responsible for endorsing or refuting the Statements indicated under the heading ‘Statements to be made by the Beneficiary/ Linked Third Party’ in the first column of the table that forms part of the Report;
- must provide the Auditor with a signed and dated representation letter;
- accepts that the ability of the Auditor to carry out the Procedures effectively depends upon the [Beneficiary] [Linked Third Party] providing full and free access to the [Beneficiary’s] [Linked Third Party’s] staff and to its accounting and other relevant records.

The Auditor:

- *[Option 1 by default: is qualified to carry out statutory audits of accounting documents in accordance with Directive 2006/43/EC of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts, amending Council Directives 78/660/EEC and 83/349/EEC and repealing Council Directive 84/253/EEC or similar national regulations].*
- *[Option 2 if the Beneficiary or Linked Third Party has an independent Public Officer: is a competent and independent Public Officer for which the relevant national authorities have established the legal capacity to audit the Beneficiary].*
- *[Option 3 if the Beneficiary or Linked Third Party is an international organisation: is an [internal] [external] auditor in accordance with the internal financial regulations and procedures of the international organisation].*

The Auditor:

- must be independent from the Beneficiary [and the Linked Third Party], in particular, it must not have been involved in preparing the Beneficiary’s [and Linked Third Party’s] Financial Statement(s);
- must plan work so that the Procedures may be carried out and the Findings may be assessed;
- must adhere to the Procedures laid down and the compulsory report format;
- must carry out the engagement in accordance with these ToR;
- must document matters which are important to support the Report;
- must base its Report on the evidence gathered;
- must submit the Report to the [Beneficiary] [Linked Third Party].

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The Commission sets out the Procedures to be carried out and the Findings to be endorsed by the Auditor. The Auditor is not responsible for their suitability or pertinence. As this engagement is not an assurance engagement the Auditor does not provide an audit opinion or a statement of assurance.

1.3 Applicable Standards

The Auditor must comply with these Terms of Reference and with<sup>52</sup>:

- the International Standard on Related Services ('ISRS') 4400 *Engagements to perform Agreed-upon Procedures regarding Financial Information* as issued by the International Federation of Accountants (IFAC);
- the *Code of Ethics for Professional Accountants* issued by the IFAC. Although ISRS 4400 states that independence is not a requirement for engagements to carry out agreed-upon procedures, the Commission requires that the Auditor also complies with the Code's independence requirements.

The Auditor's Report must state that there was no conflict of interests in establishing this Report between the Auditor and the Beneficiary [and the Linked Third Party] that could have a bearing on the Report, and must specify – if the service is invoiced - the total fee paid to the Auditor for providing the Report.

1.4 Reporting

The Report must be written in the language of the Agreement (see Article 20.7 of the Agreement).

Under Article 22 of the Agreement, the Commission, [the Agency], the European Anti-Fraud Office and the Court of Auditors have the right to audit any work that is carried out under the action and for which costs are claimed from [the European Union] [Euratom]. This includes work related to this engagement. The Auditor must provide access to all working papers related to this assignment if the Commission, [the Agency], the European Anti-Fraud Office or the European Court of Auditors requests them.

1.5 Timing

The Report must be provided by [dd Month yyyy].

1.6 Other Terms

[The [Beneficiary] [Linked Third Party] and the Auditor can use this section to agree other specific terms, such as the Auditor's fees, liability, applicable law, etc. Those specific terms must not contradict the terms specified above.]

[legal name of the Auditor]  
 [name & title of authorised representative]  
 [dd Month yyyy]  
 Signature of the Auditor Signature

[legal name of the [Beneficiary] [Linked Third Party]]  
 [name & title of authorised representative]  
 [dd Month yyyy]  
 Signature of the [Beneficiary] [Linked Third Party]

<sup>52</sup> Supreme Audit Institutions applying INTOSAI-standards may carry out the Procedures according to the corresponding International Standards of Supreme Audit Institutions and code of ethics issued by INTOSAI instead of the International Standard on Related Services ('ISRS') 4400 and the Code of Ethics for Professional Accountants issued by the IFAC.

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**Independent report of factual findings on the methodology concerning grant agreements financed under the Horizon 2020 Research and Innovation Framework Programme**

*(To be printed on letterhead paper of the auditor)*

To  
[ name of contact person(s)], [Position]  
[[Beneficiary's] [Linked Third Party's] name]  
[ Address]  
[ dd Month yyyy]

Dear [Name of contact person(s)],

As agreed under the terms of reference dated [dd Month yyyy]

with [OPTION 1: [insert name of the beneficiary] ('the Beneficiary')] [OPTION 2: [insert name of the linked third party] ('the Linked Third Party'), third party linked to the Beneficiary [insert name of the beneficiary] ('the Beneficiary')],

we

[ name of the auditor] ('the Auditor'),  
established at  
[full address/city/state/province/country],  
represented by  
[name and function of an authorised representative],

have carried out the agreed-upon procedures ('the Procedures') and provide hereby our Independent Report of Factual Findings ('the Report'), concerning the [Beneficiary's] [Linked Third Party's] usual accounting practices for calculating and declaring direct personnel costs declared as unit costs ('the Methodology').

You requested certain procedures to be carried out in connection with the grant(s)

[title and number of the grant agreement(s)] ('the Agreement(s)').

### **The Report**

Our engagement was carried out in accordance with the terms of reference ('the ToR') appended to this Report. The Report includes: the standard statements ('the Statements') made by the [Beneficiary] [Linked Third Party], the agreed-upon procedures ('the Procedures') carried out and the standard factual findings ('the Findings') confirmed by us.

The engagement involved carrying out the Procedures and assessing the Findings and the documentation requested appended to this Report, the results of which the Commission uses to draw conclusions regarding the acceptability of the Methodology applied by the [Beneficiary] [Linked Third Party].

The Report covers the methodology used from [dd Month yyyy]. In the event that the [Beneficiary] [Linked Third Party] changes this methodology, the Report will not be applicable to any Financial Statement<sup>53</sup> submitted thereafter.

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<sup>53</sup> Financial Statement in this context refers solely to Annex 4 of the Agreement by which the Beneficiary declares costs under the Agreement.

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The scope of the Procedures and the definition of the standard statements and findings were determined solely by the Commission. Therefore, the Auditor is not responsible for their suitability or pertinence.

Since the Procedures carried out constitute neither an audit nor a review made in accordance with International Standards on Auditing or International Standards on Review Engagements, we do not give a statement of assurance on the costs declared on the basis of the [Beneficiary's] [Linked Third Party's] Methodology. Had we carried out additional procedures or had we performed an audit or review in accordance with these standards, other matters might have come to its attention and would have been included in the Report.

**Exceptions**

Apart from the exceptions listed below, the [Beneficiary] [Linked Third Party] agreed with the standard Statements and provided the Auditor all the documentation and accounting information needed by the Auditor to carry out the requested Procedures and corroborate the standard Findings.

**List here any exception and add any information on the cause and possible consequences of each exception, if known. If the exception is quantifiable, also indicate the corresponding amount.**  
.....

*Explanation of possible exceptions in the form of examples (to be removed from the Report):*  
i. the [Beneficiary] [Linked Third Party] did not agree with the standard Statement number ... because...;  
ii. the Auditor could not carry out the procedure ... established because .... (e.g. due to the inability to reconcile key information or the unavailability or inconsistency of data);  
iii. the Auditor could not confirm or corroborate the standard Finding number ... because ....

**Remarks**

We would like to add the following remarks relevant for the proper understanding of the Methodology applied by the [Beneficiary] [Linked Third Party] or the results reported:

*Example (to be removed from the Report):*  
Regarding the methodology applied to calculate hourly rates ...  
Regarding standard Finding 15 it has to be noted that ...  
The [Beneficiary] [Linked Third Party] explained the deviation from the benchmark statement XXIV concerning time recording for personnel with no exclusive dedication to the action in the following manner:

**Annexes**

Please provide the following documents to the auditor and annex them to the report when submitting this CoMUC to the Commission:

1. Brief description of the methodology for calculating personnel costs, productive hours and hourly rates;
2. Brief description of the time recording system in place;
3. An example of the time records used by the [Beneficiary] [Linked Third Party];
4. Description of any budgeted or estimated elements applied together with an explanation as to why they are relevant for calculating the personnel costs, why they are reasonable and how they are based on objective and verifiable information;

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5. A summary sheet with the hourly rate for direct personnel declared by the [Beneficiary] [Linked Third Party] and recalculated by the Auditor for each staff member included in the sample (the names do not need to be reported);
6. A comparative table summarising for each person selected in the sample a) the time claimed by the [Beneficiary] [Linked Third Party] in the Financial Statement(s) and b) the time according to the time record verified by the Auditor;
7. A copy of the letter of representation provided to the Auditor.

**Use of this Report**

This Report has been drawn up solely for the purpose given under Point 1.1 Reasons for the engagement.

The Report:

- is confidential and is intended to be submitted to the Commission by the [Beneficiary] [Linked Third Party] in connection with Article 18.1.2 of the Agreement;
- may not be used by the [Beneficiary] [Linked Third Party] or by the Commission for any other purpose, nor distributed to any other parties;
- may be disclosed by the Commission only to authorised parties, in particular the European Anti-Fraud Office (OLAF) and the European Court of Auditors.
- relates only to the usual cost accounting practices specified above and does not constitute a report on the Financial Statements of the [Beneficiary] [Linked Third Party].

No conflict of interest<sup>54</sup> exists between the Auditor and the Beneficiary [and the Linked Third Party] that could have a bearing on the Report. The total fee paid to the Auditor for producing the Report was EUR [ ] (including EUR [ ] of deductible VAT).

We look forward to discussing our Report with you and would be pleased to provide any further information or assistance which may be required.

Yours sincerely

[legal name of the Auditor]  
[name and title of the authorised representative]  
[dd Month yyyy]  
Signature of the Auditor

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<sup>54</sup> A conflict of interest arises when the Auditor's objectivity to establish the certificate is compromised in fact or in appearance when the Auditor for instance:

- was involved in the preparation of the Financial Statements;
- stands to benefit directly should the certificate be accepted;
- has a close relationship with any person representing the beneficiary;
- is a director, trustee or partner of the beneficiary; or
- is in any other situation that compromises his or her independence or ability to establish the certificate impartially.

**Statements to be made by the Beneficiary/Linked Third Party (‘the Statements’) and Procedures to be carried out by the Auditor (‘the Procedures’) and standard factual findings (‘the Findings’) to be confirmed by the Auditor**

The Commission reserves the right to provide the auditor with guidance regarding the Statements to be made, the Procedures to be carried out or the Findings to be ascertained and the way in which to present them. The Commission reserves the right to vary the Statements, Procedures or Findings by written notification to the Beneficiary/Linked Third Party to adapt the procedures to changes in the grant agreement(s) or to any other circumstances.

If this methodology certificate relates to the Linked Third Party’s usual accounting practices for calculating and claiming direct personnel costs declared as unit costs any reference here below to ‘the Beneficiary’ is to be considered as a reference to ‘the Linked Third Party’.

<i>Please explain any discrepancies in the body of the Report.</i>	
<b>Statements to be made by Beneficiary</b>	<b>Procedures to be carried out and Findings to be confirmed by the Auditor</b>
<p><b>A. Use of the Methodology</b></p> <p>I. The cost accounting practice described below has been in use since [dd Month yyyy].</p> <p>II. The next planned alteration to the methodology used by the Beneficiary will be from [dd Month yyyy].</p>	<p><b>Procedure:</b></p> <p>✓ The Auditor checked these dates against the documentation the Beneficiary has provided.</p> <p><b>Factual finding:</b></p> <p>1. The dates provided by the Beneficiary were consistent with the documentation.</p>
<p><b>B. Description of the Methodology</b></p> <p>III. The methodology to calculate unit costs is being used in a consistent manner and is reflected in the relevant procedures.</p> <p><i>[Please describe the methodology your entity uses to calculate <u>personnel costs</u>, productive hours and hourly rates, present your description to the Auditor and annex it to this certificate]</i></p> <p><i>[If the statement of section “B. Description of the methodology” cannot be endorsed by the Beneficiary or there is no written methodology to calculate unit costs it should be listed here below and reported as exception by the Auditor in the main Report of Factual Findings:</i></p> <p>- ...]</p>	<p><b>Procedure:</b></p> <p>✓ The Auditor reviewed the description, the relevant manuals and/or internal guidance documents describing the methodology.</p> <p><b>Factual finding:</b></p> <p>2. The brief description was consistent with the relevant manuals, internal guidance and/or other documentary evidence the Auditor has reviewed.</p> <p>3. The methodology was generally applied by the Beneficiary as part of its usual costs accounting practices.</p>

<i>Please explain any discrepancies in the body of the Report.</i>	
<b>Statements to be made by Beneficiary</b>	<b>Procedures to be carried out and Findings to be confirmed by the Auditor</b>
<p><b>C. Personnel costs</b></p> <p><u>General</u></p> <p>IV. The unit costs (hourly rates) are limited to salaries including during parental leave, social security contributions, taxes and other costs included in the remuneration required under national law and the employment contract or equivalent appointing act;</p> <p>V. Employees are hired directly by the Beneficiary in accordance with national law, and work under its sole supervision and responsibility;</p> <p>VI. The Beneficiary remunerates its employees in accordance with its usual practices. This means that personnel costs are charged in line with the Beneficiary's usual payroll policy (e.g. salary policy, overtime policy, variable pay) and no special conditions exist for employees assigned to tasks relating to the European Union or Euratom, unless explicitly provided for in the grant agreement(s);</p> <p>VII. The Beneficiary allocates its employees to the relevant group/category/cost centre for the purpose of the unit cost calculation in line with the usual cost accounting practice;</p> <p>VIII. Personnel costs are based on the payroll system and accounting system.</p> <p>IX. Any exceptional adjustments of actual personnel costs resulted from relevant budgeted or estimated elements, were reasonable and were based on objective and verifiable information. <i>[Please describe the 'budgeted or estimated elements' and their relevance to personnel costs, and explain how they were reasonable and based on objective and verifiable information, present your explanation to the Auditor and annex it to this certificate].</i></p> <p>X. Personnel costs claimed do not contain any of the following ineligible costs: costs related to return on capital; debt and debt service charges; provisions for future losses or debts; interest owed; doubtful debts; currency exchange losses; bank costs charged by the Beneficiary's bank for transfers from the Commission/Agency; excessive or reckless expenditure; deductible VAT or costs incurred during suspension of the implementation of the action.</p> <p>XI. Personnel costs were not declared under another EU or Euratom grant (including grants awarded by a Member State and financed by the EU budget and grants awarded by bodies other than the Commission/Agency for the</p>	<p><b>Procedure:</b></p> <p><i>The Auditor draws a sample of employees to carry out the procedures indicated in this section C and the following sections D to F.</i>  <i>[The Auditor has drawn a random sample of 10 full-time equivalents made up of employees assigned to the action(s). If fewer than 10 full-time equivalents are assigned to the action(s), the Auditor has selected a sample of 10 full-time equivalents consisting of all employees assigned to the action(s), complemented by other employees irrespective of their assignments.]. For this sample:</i></p> <ul style="list-style-type: none"> <li>✓ the Auditor reviewed all documents relating to personnel costs such as employment contracts, payslips, payroll policy (e.g. salary policy, overtime policy, variable pay policy), accounting and payroll records, applicable national tax, labour and social security law and any other documents corroborating the personnel costs claimed;</li> <li>✓ in particular, the Auditor reviewed the employment contracts of the employees in the sample to verify that: <ul style="list-style-type: none"> <li>i. they were employed directly by the Beneficiary in accordance with applicable national legislation;</li> <li>ii. they were working under the sole technical supervision and responsibility of the latter;</li> <li>iii. they were remunerated in accordance with the Beneficiary's usual practices;</li> <li>iv. they were allocated to the correct group/category/cost centre for the purposes of calculating the unit cost in line with the Beneficiary's usual cost accounting practices;</li> </ul> </li> <li>✓ the Auditor verified that any ineligible items or any costs claimed under other costs categories or costs covered by other types of grant or by other grants financed from the European Union budget have not been taken into account when calculating the personnel costs;</li> <li>✓ the Auditor numerically reconciled the total amount of personnel costs used to calculate the unit cost with the total amount of personnel costs recorded in the statutory accounts and the payroll system.</li> <li>✓ to the extent that actual personnel costs were adjusted on the basis of</li> </ul>

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<b>Statements to be made by Beneficiary</b>	<b>Procedures to be carried out and Findings to be confirmed by the Auditor</b>
<p>purpose of implementing the EU budget).</p> <p><u>If additional remuneration as referred to in the grant agreement(s) is paid</u></p> <p>XII. The Beneficiary is a non-profit legal entity;</p> <p>XIII. The additional remuneration is part of the beneficiary’s usual remuneration practices and paid consistently whenever the relevant work or expertise is required;</p> <p>XIV. The criteria used to calculate the additional remuneration are objective and generally applied regardless of the source of funding;</p> <p>XV. The additional remuneration included in the personnel costs used to calculate the hourly rates for the grant agreement(s) is capped at EUR 8 000 per full-time equivalent (reduced proportionately if the employee is not assigned exclusively to the action).</p> <p><i>[If certain statement(s) of section “C. Personnel costs” cannot be endorsed by the Beneficiary they should be listed here below and reported as exception by the Auditor in the main Report of Factual Findings: - ...]</i></p>	<p>budgeted or estimated elements, the Auditor carefully examined those elements and checked the information source to confirm that they correspond to objective and verifiable information;</p> <ul style="list-style-type: none"> <li>✓ if additional remuneration has been claimed, the Auditor verified that the Beneficiary was a non-profit legal entity, that the amount was capped at EUR 8 000 per full-time equivalent and that it was reduced proportionately for employees not assigned exclusively to the action(s).</li> <li>✓ the Auditor recalculated the personnel costs for the employees in the sample.</li> </ul> <p><b>Factual finding:</b></p> <ol style="list-style-type: none"> <li>4. All the components of the remuneration that have been claimed as personnel costs are supported by underlying documentation.</li> <li>5. The employees in the sample were employed directly by the Beneficiary in accordance with applicable national law and were working under its sole supervision and responsibility.</li> <li>6. Their employment contracts were in line with the Beneficiary’s usual policy;</li> <li>7. Personnel costs were duly documented and consisted solely of salaries, social security contributions (pension contributions, health insurance, unemployment fund contributions, etc.), taxes and other statutory costs included in the remuneration (holiday pay, thirteenth month’s pay, etc.);</li> <li>8. The totals used to calculate the personnel unit costs are consistent with those registered in the payroll and accounting records;</li> <li>9. To the extent that actual personnel costs were adjusted on the basis of budgeted or estimated elements, those elements were relevant for calculating the personnel costs, reasonable and correspond to objective and verifiable information. The budgeted or estimated elements used are: — (indicate the elements and their values).</li> <li>10. Personnel costs contained no ineligible elements;</li> <li>11. Specific conditions for eligibility were fulfilled when additional remuneration was paid: a) the Beneficiary is registered in the grant agreements as a non-profit legal entity; b) it was paid according to</li> </ol>



<i>Please explain any discrepancies in the body of the Report.</i>	
<b>Statements to be made by Beneficiary</b>	<b>Procedures to be carried out and Findings to be confirmed by the Auditor</b>
	<p>objective criteria generally applied regardless of the source of funding used and c) remuneration was capped at EUR 8000 per full-time equivalent (or up to up to the equivalent pro-rata amount if the person did not work on the action full-time during the year or did not work exclusively on the action).</p>
<p><b>D. Productive hours</b></p> <p>XVI. The number of productive hours per full-time employee applied is <i>[delete as appropriate]</i>:</p> <p>A. 1720 productive hours per year for a person working full-time (corresponding pro-rata for persons not working full time).</p> <p>B. the total number of hours worked in the year by a person for the Beneficiary</p> <p>C. the standard number of annual hours generally applied by the beneficiary for its personnel in accordance with its usual cost accounting practices. This number must be at least 90% of the standard annual workable hours.</p> <p><u>If method B is applied</u></p> <p>XVII. The calculation of the total number of hours worked was done as follows: annual workable hours of the person according to the employment contract, applicable labour agreement or national law plus overtime worked minus absences (such as sick leave and special leave).</p> <p>XVIII. ‘Annual workable hours’ are hours during which the personnel must be working, at the employer’s disposal and carrying out his/her activity or duties under the employment contract, applicable collective labour agreement or national working time legislation.</p> <p>XIX. The contract (applicable collective labour agreement or national working time legislation) do specify the working time enabling to calculate the annual workable hours.</p> <p><u>If method C is applied</u></p> <p>XX. The standard number of productive hours per year is that of a full-time equivalent; for employees not assigned exclusively to the action(s) this</p>	<p><b>Procedure (same sample basis as for Section C: Personnel costs):</b></p> <ul style="list-style-type: none"> <li>✓ The Auditor verified that the number of productive hours applied is in accordance with method A, B or C.</li> <li>✓ The Auditor checked that the number of productive hours per full-time employee is correct and that it is reduced proportionately for employees not exclusively assigned to the action(s).</li> <li>✓ If method B is applied the Auditor verified i) the manner in which the total number of hours worked was done and ii) that the contract specified the annual workable hours by inspecting all the relevant documents, national legislation, labour agreements and contracts.</li> <li>✓ If method C is applied the Auditor reviewed the manner in which the standard number of working hours per year has been calculated by inspecting all the relevant documents, national legislation, labour agreements and contracts and verified that the number of productive hours per year used for these calculations was at least 90% of the standard number of working hours per year.</li> </ul> <p><b>Factual finding:</b></p> <p><u>General</u></p> <p>12. The Beneficiary applied a number of productive hours consistent with method A or B detailed in the left-hand column.</p> <p>13. The number of productive hours per year per full-time employee was accurate and was proportionately reduced for employees not working full-time or exclusively for the action.</p> <p><u>If method B is applied</u></p> <p>14. The number of ‘annual workable hours’, overtime and absences was verifiable based on the documents provided by the Beneficiary and the</p>

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<b>Statements to be made by Beneficiary</b>	<b>Procedures to be carried out and Findings to be confirmed by the Auditor</b>
<p>number is reduced proportionately.</p> <p>XXI. The number of productive hours per year on which the hourly rate is based i) corresponds to the Beneficiary’s usual accounting practices; ii) is at least 90% of the standard number of workable (working) hours per year.</p> <p>XXII. Standard workable (working) hours are hours during which personnel are at the Beneficiary’s disposal performing the duties described in the relevant employment contract, collective labour agreement or national labour legislation. The number of standard annual workable (working) hours that the Beneficiary claims is supported by labour contracts, national legislation and other documentary evidence.</p> <p><i>[If certain statement(s) of section “D. Productive hours” cannot be endorsed by the Beneficiary they should be listed here below and reported as exception by the Auditor: - ...]</i></p>	<p>calculation of the total number of hours worked was accurate.</p> <p>15. The contract specified the working time enabling to calculate the annual workable hours.</p> <p><u>If method C is applied</u></p> <p>16. The calculation of the number of productive hours per year corresponded to the usual costs accounting practice of the Beneficiary.</p> <p>17. The calculation of the standard number of workable (working) hours per year was corroborated by the documents presented by the Beneficiary.</p> <p>18. The number of productive hours per year used for the calculation of the hourly rate was at least 90% of the number of workable (working) hours per year.</p>
<p><b>E. Hourly rates</b></p> <p>The hourly rates are correct because:</p> <p>XXIII. Hourly rates are correctly calculated since they result from dividing annual personnel costs by the productive hours of a given year and group (e.g. staff category or department or cost centre depending on the methodology applied) and they are in line with the statements made in section C. and D. above.</p> <p><i>[If the statement of section ‘E. Hourly rates’ cannot be endorsed by the Beneficiary they should be listed here below and reported as exception by the Auditor: - ...]</i></p>	<p><b>Procedure</b></p> <ul style="list-style-type: none"> <li>✓ The Auditor has obtained a list of all personnel rates calculated by the Beneficiary in accordance with the methodology used.</li> <li>✓ The Auditor has obtained a list of all the relevant employees, based on which the personnel rate(s) are calculated.</li> </ul> <p>For 10 full-time equivalent employees selected at random (same sample basis as Section C: Personnel costs):</p> <ul style="list-style-type: none"> <li>✓ The Auditor recalculated the hourly rates.</li> <li>✓ The Auditor verified that the methodology applied corresponds to the usual accounting practices of the organisation and is applied consistently for all activities of the organisation on the basis of objective criteria irrespective of the source of funding.</li> </ul> <p><b>Factual finding:</b></p> <p>19. No differences arose from the recalculation of the hourly rate for the employees included in the sample.</p>

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<b>Statements to be made by Beneficiary</b>	<b>Procedures to be carried out and Findings to be confirmed by the Auditor</b>
<p><b>F. Time recording</b></p> <p>XXIV. Time recording is in place for all persons with no exclusive dedication to one Horizon 2020 action. At least all hours worked in connection with the grant agreement(s) are registered on a <b>daily/weekly/monthly</b> basis <i>[delete as appropriate]</i> using a <b>paper/computer-based system</b> <i>[delete as appropriate]</i>;</p> <p>XXV. For persons exclusively assigned to one Horizon 2020 activity the Beneficiary has either signed a declaration to that effect or has put arrangements in place to record their working time;</p> <p>XXVI. Records of time worked have been signed by the person concerned (on paper or electronically) and approved by the action manager or line manager at least monthly;</p> <p>XXVII. Measures are in place to prevent staff from:</p> <ol style="list-style-type: none"> <li>i. recording the same hours twice,</li> <li>ii. recording working hours during absence periods (e.g. holidays, sick leave),</li> <li>iii. recording more than the number of productive hours per year used to calculate the hourly rates, and</li> <li>iv. recording hours worked outside the action period.</li> </ol> <p>XXVIII. No working time was recorded outside the action period;</p> <p>XXIX. No more hours were claimed than the productive hours used to calculate the hourly personnel rates.</p> <p><i>[Please provide a brief description of the <u>time recording system</u> in place together with the measures applied to ensure its reliability to the Auditor and annex it to the present certificate<sup>55</sup>].</i></p>	<p><b>Procedure</b></p> <ul style="list-style-type: none"> <li>✓ The Auditor reviewed the brief description, all relevant manuals and/or internal guidance describing the methodology used to record time.</li> </ul> <p>The Auditor reviewed the time records of the random sample of 10 full-time equivalents referred to under Section C: Personnel costs, and verified in particular:</p> <ul style="list-style-type: none"> <li>✓ that time records were available for all persons with not exclusive assignment to the action;</li> <li>✓ that time records were available for persons working exclusively for a Horizon 2020 action, or, alternatively, that a declaration signed by the Beneficiary was available for them certifying that they were working exclusively for a Horizon 2020 action;</li> <li>✓ that time records were signed and approved in due time and that all minimum requirements were fulfilled;</li> <li>✓ that the persons worked for the action in the periods claimed;</li> <li>✓ that no more hours were claimed than the productive hours used to calculate the hourly personnel rates;</li> <li>✓ that internal controls were in place to prevent that time is recorded twice, during absences for holidays or sick leave; that more hours are claimed per person per year for Horizon 2020 actions than the number of productive hours per year used to calculate the hourly rates; that working time is recorded outside the action period;</li> <li>✓ the Auditor cross-checked the information with human-resources records to verify consistency and to ensure that the internal controls have been effective. In addition, the Auditor has verified that no more hours were charged to Horizon 2020 actions per person per year than the number of</li> </ul>

<sup>55</sup> The description of the time recording system must state among others information on the content of the time records, its coverage (full or action time-recording, for all personnel or only for personnel involved in H2020 actions), its degree of detail (whether there is a reference to the particular tasks accomplished), its form, periodicity of the time registration and authorisation (paper

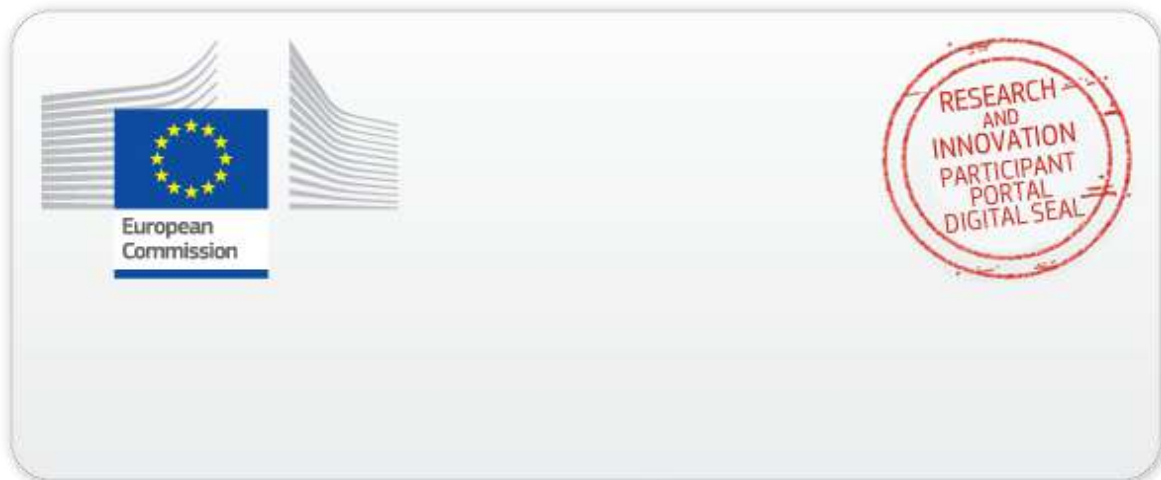
Grant Agreement number(s): [insert numbers and acronyms]

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<p>[If certain statement(s) of section “F. Time recording” cannot be endorsed by the Beneficiary they should be listed here below and reported as exception by the Auditor: - ...]</p>	<p>productive hours per year used to calculate the hourly rates, and verified that no time worked outside the action period was charged to the action.</p> <p><b>Factual finding:</b></p> <ol style="list-style-type: none"><li>20. The brief description, manuals and/or internal guidance on time recording provided by the Beneficiary were consistent with management reports/records and other documents reviewed and were generally applied by the Beneficiary to produce the financial statements.</li><li>21. For the random sample time was recorded or, in the case of employees working exclusively for the action, either a signed declaration or time records were available;</li><li>22. For the random sample the time records were signed by the employee and the action manager/line manager in reasonable time.</li><li>23. Working time claimed for the action occurred in the periods claimed;</li><li>24. No more hours were claimed than the number productive hours used to calculate the hourly personnel rates;</li><li>25. There is proof that the Beneficiary has checked that working time has not been claimed twice, that it is consistent with absence records and the number of productive hours per year, and that no working time has been claimed outside the action period.</li><li>26. Working time claimed is consistent with that on record at the human-resources department.</li></ol>

[official name of the [Beneficiary] [Linked Third Party]]  
[name and title of authorised representative]  
[dd Month yyyy]  
<Signature of the [Beneficiary] [Linked Third Party]>

[official name of the Auditor]  
[name and title of authorised representative]  
[dd Month yyyy]  
<Signature of the Auditor>

or a computer-based system; on a daily, weekly or monthly basis; signed and countersigned by whom), controls applied to prevent double-charging of time or ensure consistency with HR-records such as absences and travels as well as it information flow up to its use for the preparation of the Financial Statements.



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