
European Commission
FP7 - COOPERATION - THEME 2
Interim Catalogue of Marine related Projects
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Biotechnologies, Agriculture, Food
Research and Innovation

EUROPEAN COMMISSION

Directorate-General for Research and Innovation
Directorate E – Biotechnologies, Agriculture & Food
Unit E.1 - Horizontal aspects and coordination

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EUROPEAN COMMISSION

FP7 - COOPERATION - THEME 2

Interim Catalogue of Marine related Projects

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2012

Directorate-General for Research and Innovation
Biotechnologies, Agriculture, Food - Knowledge-based Bioeconomy

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Preface

In FP7, marine related projects are to be found across all themes of the Specific programme COOPERATION.

Theme 2: "Food, Agriculture and Fisheries, and Biotechnologies" plays a key role to support marine related research projects through 3 activities:

- Activity 2.1. Sustainable production and management of biological resources from land, forest and aquatic environments,
- Activity 2.2 Fork to farm: Food (including seafood), health and well-being,
- Activity 2.3 Life sciences, biotechnology and biochemistry for sustainable non-food products and processes.

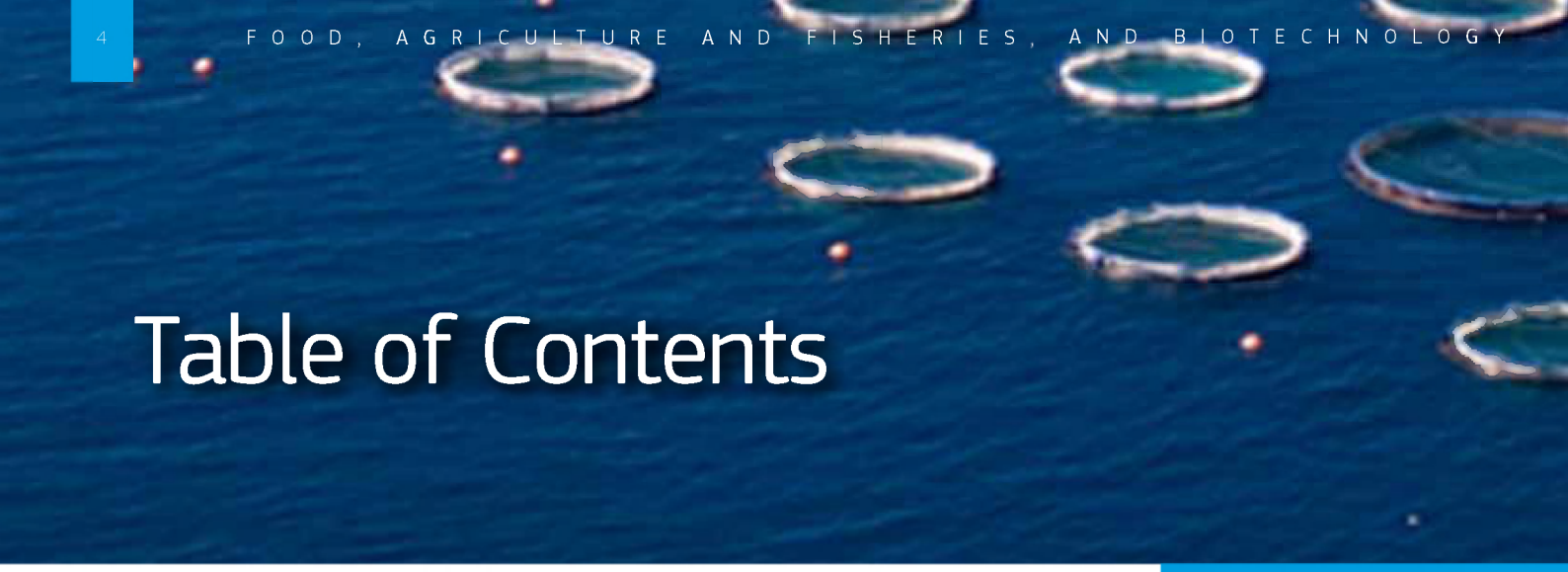
The EU will earmark more than € 1.9 billion for funding this theme and the knowledge bio-based economy over the duration of FP7 (2007-2013).

Each of the three activities comprises marine related areas such as sustainable production and management of fisheries and aquaculture, quality and safety in food products (including seafood) as well as marine biotechnologies.

This interim catalogue presents 88 marine related projects selected for funding under Theme 2. While most projects directly deal with fisheries, aquaculture, seafood safety and quality or marine biotechnologies, some of them are only partially relevant to the marine sector (specific work packages, tasks or experiments). Most of the projects are already running and some of them are about to start (Call KBBE 2012).

It also includes eight large integrating projects (for a total EU contribution of approx 60M€) partly funded by Theme 2 under the cross-thematic calls "The Ocean of Tomorrow". This initiative joins together resources from different Directorates and aims at a better integration between marine and maritime research in order to reinforce excellence in science and to reconcile the growth of sea-based activities with environmental sustainability. Directorate E follows directly three projects (VECTORS, COCONET, MICRO B3), while the others (ACCESS, PERSEUS, TROPOS, MERMAID and H2OCEAN) are managed by other contributing Directorates (Environment, Transport). In 2012 The Ocean of Tomorrow was launched by different Themes as coordinated topics in support to the implementation of the Marine Strategy Framework Directive (2008/56/C). The projects financed under Theme 2 are included in this catalogue and are AQUATRACE, BENTHIS, BIOCLEAN, ECsafeFOOD and KILL●SPILL.

Directorate-General for Research and Innovation
Directorate E: Food, Agriculture and Fisheries, and Biotechnology
Unit E4 "Agriculture, Forestry, Fisheries and Aquaculture"



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ACTIVITY 2.3 LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY FOR SUSTAINABLE NON-FOOD PRODUCTS AND PROCESSES

ACTIVITY 2.1 Sustainable production and management of biological resources from land, forest and aquatic environments

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

WILDTECH

Using new technologies to identify (re-)emerging pathogens from wildlife reservoirs

With the increasing impact of mankind's activities on the natural environment, disease naturally harboured by wild animals, both within the geographical limits of the EU and elsewhere, are becoming increasingly significant both for public health and health of livestock, in addition to having direct concerns for wild animal species. We are proposing a project which will combine (i) technological development to enable high throughput arraybased screening of samples from a wide variety of wild animals with (ii) surveillance of terrestrial, aerial and marine wild animal species within Europe and from countries which act as portals of disease entry into the EU, (iii) epidemiological analysis and risk assessment using data generated during the project and from other sources, and (iv) development and proposal of a model framework for disease surveillance within Europe developed in parallel with the burgeoning systems in North America. The proposal will place the EU at the centre of wildlife disease surveillance and also enable the translation of high throughput array-based technologies into human and veterinary medicine.

PROJECT COORDINATOR

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- THE UNIVERSITY OF NOTTINGHAM (UK)

FUNDING SCHEME

CP

EC CONTRIBUTION €

5,996,822

PROJECT N°

222633-2

DURATION

48 months

PROJECT START DATE

July 2009

LIST OF PARTNERS

1. THE UNIVERSITY OF NOTTINGHAM (UK)
2. THE INSTITUTE FOR ANIMAL HEALTH (UK)
3. FRIEDRICH LOEFFLER INSTITUT. BUNDESFORSCHUNGSINSTITUT FUER TIERGESUNDHEIT (DE)
4. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
5. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
6. ALERE TECHNOLOGIES GMBH (DE)
7. KENTRO EREVNAS TECHNOLOGIAS KAI ANAPTYXIS THESSALIAS (EL)
8. STATENS VETERINAERMEDICINSKA ANSTALT (SE)
9. HRVATSKI VETERINARSKI INSTITUT (HR)
10. THE SCOTTISH AGRICULTURAL COLLEGE (UK)
11. UNIVERSITY OF SASKATCHEWAN (CA)
12. TWYCROSS ZOO EAST MIDLAND ZOOLOGICAL SOCIETY LIMITED (UK)
13. INSTITUT D ENSEIGNEMENT SUPERIEUR ET DE RECHERCHE EN ALIMENTATION SANTE ANIMALE SCIENCES AGRONOMIQUES ETDE L ENVIRONNEMENT VETAGRO SUP (FR)

FP7-KBBE-2007-2A

Novel Technologies for Surveillance of Emerging and Re-emerging Infections of Wildlife

WILDTECH

www.wildtechproject.com

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

AQUATRACE

Providing molecular tools for assessing and monitoring the potential genetic impact of aquaculture on native populations (The Ocean of Tomorrow)

The genetic changes associated with domestication in aquaculture pose an increasing threat to the integrity of native fish gene pools. Consequently, there is a bourgeoning need for the development of molecular tools to assess and monitor the genetic impact of escaped or released farmed fish. In addition, exploration of basic links between genetic differences among farmed and wild fish and differences in important life-history traits with fitness consequences are crucial prerequisites for designing biologically informed management strategies.

The project "AquaTrace" will establish an overview of current knowledge on aquaculture breeding, genomic resources and previous research projects for the marine species seabass, seabream and turbot. The project will apply cutting-edge genomic methods for the development of high-powered, cost-efficient, forensically validated and transferable DNA based tools for identifying and tracing the impact of farmed fish in the wild. Controlled experiments with wild and farmed fish and their hybrids will be conducted with salmon and brown trout as model organisms using advanced "common garden" facilities. These experiments will elucidate the fundamental consequences of introgression by pinpointing and assessing the effects on fitness of specific genomic regions. Generated insights will form the basis of a risk assessment and management recommendations including suggestions for mitigation and associated costs. This information and the developed molecular tools will be available as open-access support to project participants and external stakeholders including the aquaculture industry. The project is expected to facilitate technology transfer to the aquaculture sector by promoting better tailored breeding practices and traceability throughout production chain. Overall this initiative will support the development of sustainable European aquaculture and provide "Good Environmental Status" in line with the Marine Strategy Framework Directive.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,185

PROJECT N°

311920

DURATION

36 months

PROJECT START DATE

under negotiation

LIST OF PARTNERS

1. DANMARKS TEKNISKE UNIVERSITET (DK)
2. HAVFORSKNINGSINSTITUTTET (NO)
3. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
4. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
5. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
6. TRACE WILDLIFE FORENSICS NETWORK LIMITED (UK)
7. JRCJOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
8. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
9. BANGOR UNIVERSITY (UK)
10. THE UNIVERSITY OF STIRLING (UK)
11. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
12. AARHUS UNIVERSITET (DK)
13. ISTITUTO SUPERIORE PER LA PROTEZIONE E LA RICERCA AMBIENTALE (IT)
14. MUSTAFA KEMAL UNIVERSITY (TR)
15. SCOTTISH GOVERNMENT (UK)
16. SYNDICAT DES SELECTIONNEURS AVICOLES ET AQUACOLES FRANCAIS (FR)
17. CLUSTER DE LA ACUICULTURA DE GALICIA (ES)
18. JEAN-SÉBASTIEN BRUANT (FR)
19. ARDAG LTD. (IL)
20. PLAGTON SA (EL)
21. LABOGENA (FR)
22. BMR GENOMICS SRL (IT)
23. FIOS GENOMICS LIMITED (UK)

FP7-KBBE-2012-6-singlestage

AQUATRACE

The development of tools for tracing and evaluating the genetic impact of fish from aquaculture: "AquaTrace"

n.a.

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

ARIMNET

Coordination of Agricultural Research in the Mediterranean

Agricultural research in the Mediterranean is characterised by three main features: it is scattered within the EU members and in Mediterranean Partner Countries as well as most of the problems and challenges that the Mediterranean agriculture is facing are shared by all the countries in the area and even further, its objectives are largely the same in the whole area, even if priorities can vary from one country to another; the conditions resulting from climate change as well as the objective of sustainable development and production need to rethink agricultural research in all the countries and to begin its alignment in the whole area to increase its impact. This situation allows and requires a coordination action at the level of the Mediterranean (among EU members and between them and the other Mediterranean countries) to fight again fragmentation in fostering the convergence of national programmes and in founding a new critical mass to address the key issues (such as the growing demand for safer, healthier and higher quality food; the sustainable production and use of renewable bio-resources; threats to the sustainability and security of agricultural and fisheries production resulting in particular from climate change), to increase excellence and relevance of research, to enhance and strengthen the cooperation within the region in sharing the objectives and the priorities. These are the aims of the proposal of an ERA-Net as a European Initiative for Coordination of Agricultural Research in the Mediterranean (ARIMNet) which bears clearly a double ambition: to enhance coordination of agricultural research programmes within the Mediterranean area and to improve the cooperation within the area. It is gathering twelve countries (6 EU members, 2 associated country and 4 other Mediterranean countries) and the programmes that could be under the coordination action are gathering more than 3000 researchers and 300 million euros per year.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

1,000,000

PROJECT N°

219262

DURATION

48 months

PROJECT START DATE

October 2008

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
3. MINISTERO DELLE POLITICHE AGRICOLE ALIMENTARI E FORESTALI (IT)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE D ALGERIE (DZ)
5. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
6. MINISTRY OF FOOD AGRICULTURE AND LIVESTOCK (TR)
7. THE AGRICULTURAL RESEARCH CENTER (EG)
8. FUNDACAO PARA A CIENCIA E A TECNOLOGIA (PT)
9. INSTITUT AGRONOMIQUE ET VETERINAIRE HASSAN II (MA)
10. HELLINIKOS GEORGIKOS ORGANISMOS. DIMITRA (HELLENIC AGRICULTURAL ORGANIZATION. DEMETER) (EL)
11. INSTITUTION DE LA RECHERCHE ET DE L'ENSEIGNEMENT SUPERIEUR AGRICOLES (TN)
12. MINISTRY OF AGRICULTURE, NATURAL RESOURCES AND ENVIRONMENT OF CYPRUS (CY)
13. MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT (IL)
14. NATIONAL AGRICULTURAL RESEARCH FOUNDATION. (EL)

FP7-ERANET-2007-RTD

ARIMNET

Coordination of Agricultural Research in the Mediterranean

www.arimnet.net

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

ARRAINA

Aquaculture feeds and fish nutrition: paving the way to the development of efficient and tailored sustainable feeds for European farmed fish

Sustainable development of European fish farming is dependent on the availability, environmental sustainability of feeds relying less and less on capture fisheries derived fishmeal and fish oil. The European aquaculture industry has made a determined shift towards the use of feeds based on alternative ingredients which continue to ensure the health and welfare of fish and the nutritional value of farmed seafood. However, the long term effects of such interventions and over the full life cycle of the major species farmed in Europe need to be determined. To answer this challenge, ARRAINA will define and provide complete data on the quantitative nutrient requirements of the five major fish species and develop sustainable alternative aquaculture feeds tailored to the requirements of these species with reduced levels of fish meal and fish oil.
By developing innovative vectors to deliver specific nutrients, ARRAINA will increase significantly the performance at all physiological stages thus improving overall efficiency of fish production. ARRAINA will apply targeted predictive tools to assess the long-term physiological and environmental consequences of these changes in the different species. This will provide flexibility in the use of various ingredients in the formulation of feeds which are cost-efficient, environmentally friendly and which ensure production of seafood of high nutritional value and quality. ARRAINA will design and deliver new pioneering training courses in fish nutrition to increase research capacities and expertise, particularly in countries of the enlarged EU. By developing applied tools and solutions of technological interest in collaborations with SMEs, ARRAINA will further strengthen the links between the scientific community and the EU feed industry and will contribute to increase the productivity and performance of the aquaculture sector leading to competitive advantage to the whole sector at a global level.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,803

PROJECT N°

288925

DURATION

60 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. NASJONALT INSTITUTT FOR ENAERINGS-OG SJOMATFORSKNING (NO)
3. THE UNIVERSITY OF STIRLING (UK)
4. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
5. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
6. UNIVERSIDAD DE LAS PALMAS DE GRAN CANARIA (ES)
7. RESEARCH INSTITUTE FOR FISHERIES, AQUACULTURE AND IRRIGATION (HU)
8. WAGENINGEN UNIVERSITEIT (NL)
9. UNIVERSITA DEGLI STUDI DELL'INSUBRIA (IT)
10. CENTRO DE CIENCIAS DO MAR DO ALGARVE (PT)
11. BIOMAR A/S (DK)
12. SPAROS LDA (PT)
13. VIVIERS DE SARRANCE SAS (FR)
14. GILDESKAL FORSKNINGSSTASJON AS (NO)
15. LANDCATCH NATURAL SELECTION LIMITED (UK)
16. BIODIVERSITY SPA (IT)
17. NOREL SA (ES)
18. ARANYKARASZ MEZOGAZDASAGI HALASZATIES SZAKTANACSADOI SZOLGALTATO BT (HU)
19. ALEVINES Y DORADAS SA (ES)
20. AQUATT UETP LTD (IE)
21. INRA TRANSFERT S.A. (FR)

FP7-KBBE-2011-5

ARRAINA

Advanced Research Initiatives for Nutrition & Aquaculture

www.arraina.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

BENTHIS

Integrating the role of marine benthic ecosystems in fisheries management (The Ocean of Tomorrow)

Benthic ecosystems provide important goods and services, such as fisheries products and supporting, regulation and cultural services. There is serious concern about the adverse impact of fisheries on benthic ecosystem which may negatively affect the fisheries yield and integrity of the sea bed. To develop an integrated approach to the management of human activities in the marine environment, in particular fishing, there is a need to develop quantitative tools to assess the impact of fisheries on the benthic ecosystem and at the same time collaborate with the fishing industry to develop innovative technologies and new management approaches to reduce the impact on benthic ecosystems. BENTHIS will provide the knowledge to further develop the ecosystem approach to fisheries management as required in the Common Fisheries Policy and the Marine Strategy Framework Directive. It will study the diversity of benthic ecosystem in European waters and the role of benthic species in the ecosystem functioning. Fisheries impacts will be studied on benthic organisms and on the geo-chemistry. The newly acquired knowledge will be synthesized in a number of generic tools that will be combined into a fishing/seabed habitat risk assessment method that will be applied to fisheries in the Baltic, North Sea, Western waters, Mediterranean and Black Sea. Fisheries will be selected with the fishing industry based on the impact on the benthic ecosystem. BENTHIS will integrate fishing industry partners to collaborate in testing the performance of innovative technologies to reduce fishing impact. Finally, in collaboration with the fishing industry and other stakeholders, new management approaches will be developed and tested on their effects on the ecosystem and the socio-economic consequences. As such BENTHIS will the urgently needed scientific basis to integrate the role of marine benthic ecosystems in fisheries management.

PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION €

5,994,250

PROJECT N° 312088

DURATION 60 months

PROJECT START DATE

under negotiation

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. VLAAMS GEWEST (BE)
3. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
4. BANGOR UNIVERSITY (UK)
5. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
6. THE SCOTTISH MINISTERS ACTING THROUGH MARINE SCOTLAND (UK)
7. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
8. MARINE INSTITUTE (IE)
9. DANMARKS TEKNISKE UNIVERSITET (DK)
10. AARHUS UNIVERSITET (DK)
11. KØBENHAVNS UNIVERSITET (DK)
12. SVERIGES LANTBRUKSUNIVERSITET (SE)
13. HAVFORSKNINGSINSTITUTTET (NO)
14. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
15. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
16. MINISTRY OF FOOD AGRICULTURE AND LIVESTOCK (TR)
17. SP/F SYNTESA (FO)
18. ATLAS VG86 (SE)
19. SUSANNE H PR (DK)
20. WITTRUP SEAFOOD A/S (DK)
21. FISKERISELSKABET GI. BRI AS (DK)
22. MARINE MONITORING VID KRISTINEBERG AB (SE)
23. ANTON DEKKER BEHEER BV (NL)
24. NAGEL CORNELIS WIJBE (NL)
25. TREGUIER LAURENT (FR)
26. YANN JEAN JOSEPH DIDELOT (FR)
27. RETIMAR DI PACI NAZZARENO & C S.N.C (IT)
28. OFFICINA MECCANICA GRILLI DI GRILLI ROBERTO & C. SAS (IT)
29. MORI CARLO SRL (IT)
30. MALKOCOGLU BALIKCILIK HAYVANCILIK SANAYI VE TICARET LIMITED SIRKETI (TR)
31. SADIKLAR SOGUK HAVA TESISLERI VE SU URUNLERI SANAYI TICARET LIMITED SIRKETI (TR)
32. VOF PESCE 43 (NL)
33. ONDOKUZ MAYIS UNIVERSITESI (TR)

FP7-KBBE-2012-6-singlestage

Benthic ecosystem fisheries Impact Study

BENTHIS

n.a.

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

BIVALIFE

Improving European mollusc aquaculture: disease detection and management

The two core objectives of BIVALIFE are (i) to provide innovative knowledge related to pathogens infecting oysters and mussels and (ii) to develop practical approaches for the control of infectious diseases and resulting mortality outbreaks these pathogens induce. The project will address the major issue identified by the European commission (i.e. detection and management of infectious diseases in oysters and mussels) at the EU level since the increase in international and intra EU trade and exchanges of animals increases the risk of pathogen transfer and infectious disease outbreak occurrence.
In this context, the specific objective of BIVALIFE are:(i) transfer and validate existing methods for detection and identification of oyster and mussel pathogens;(ii) improve the characterisation of oyster and mussel pathogens and develop innovative complementary diagnostic approaches;(iii) characterise culture sites in Europe regarding presence of oyster and mussel pathogens in relation to the presence or absence of mortality;(iv) investigate the life cycle, mechanisms allowing oyster and mussel pathogens to survive outside the host and their original source;(v) identify pathogen intrinsic virulence factors and effects on host defence mechanisms;(vi) assess the relationship between the presence of oyster and mussel pathogens and their role in observed mortality;(vii) develop methods and recommendations for pathogen control and eradication in Europe.
The project will focus on three mollusc species, namely the Pacific cupped oyster Crassostrea gigas and two mussel species Mytilus edulis and M. galloprovincialis, the most important species in terms of European production. Interestingly, Pacific oysters and mussels display different levels of susceptibility to diseases. The targeted pathogens will be the virus OsHV-1, Vibrio species including V. splendidus and V. aestuarianus, as well as the parasite Marteilia refringens and the bacterium Nocardia crassostreae.

PROJECT COORDINATOR

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- INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,995,636

PROJECT N°

266157

DURATION

36 months

PROJECT START DATE

February 2011

LIST OF PARTNERS

1. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
2. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
3. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
4. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
5. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. (ES)
6. MARINE INSTITUTE (IE)
7. UNIVERSITA DEGLI STUDI DI GENOVA (IT)
8. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
9. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
10. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
11. ATLANTIUM TECHNOLOGIES LTD (IL)

FP7-KBBE-2010-4

BIVALIFE

Controlling infectious diseases in oysters and mussels in Europe

www.bivalife.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

BRIGHTANIMAL

New and converging technologies for Precision Livestock Farming in European animal production systems

BrightAnimal will contribute to economically, socially and environmentally sustainable development by outlining a practical and acceptable methodology for precision livestock farming. To achieve this goal, BrightAnimal has the following mission: To produce a framework for European and non-European small and medium enterprises on effective and acceptable precision livestock farming and to create an international, interdisciplinary network for further development and dissemination. The main activity and achievement of BrightAnimal will be the elaboration of a book on effective Precision Livestock Farming in Europe and world-wide with special consideration of small and medium enterprises. The book aims at describing current and near-future techniques in PLF, especially taking into account both the practicality for SMEs as well as their acceptability (in the broader sense). The book will also try to set the scene for future developments. As the second component of the framework, BrightAnimal will produce best precision livestock farming practices (BPLFP) in a series of "problematic" areas such as aquaculture, beef, sheep and chicken. These best practice guides will be released to the public domain in the form of booklets. A third deliverable of the project will be a practical showcase activity showing the Good Practices in action in the European Centre of Excellence of Automatic Identification and Data Capture in the UK. BrightAnimal will organise interdisciplinary conferences for opinion exchange and cross-disciplinary discussions. It is of great importance to include opinions from outside Europe. We have been pleased to accept partners from the following ICPC countries: Thailand, Malaysia, South Africa, Brazil and China and from Australia as a third country. Other non-funded partners from third countries will also join the project.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

997,425

PROJECT N°

227138

DURATION

24 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. FOODREG TECHNOLOGY SL (ES)
2. AIM UK LTD (UK)
3. AIDC UK LTD (UK)
4. NOFIMA AS (NO)
5. BITLAND ENTERPRISE APS (DK)
6. DANMARKS TEKNISKE UNIVERSITET (DK)
7. EESTI MAAULIKOOLESTONIAN UNIVERSITY OF LIFE SCIENCES (EE)
8. INSTITUTE OF QUALITY STANDARDS & TESTING TECHNOLOGY FOR AGRO-PRODUCTS, CHINESE ACADEMY OF AGRICULTURAL SCIENCES (CN)
9. CONSUMER GOODS COUNCIL OF SOUTH AFRICA (ZA)
10. MINISTRY OF AGRICULTURE AND AGRO-BASED INDUSTRY (MY)
11. KASETSART UNIVERSITY (TH)
12. EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA (BR)
13. DEPARTMENT OF PRIMARY INDUSTRIES AND RESOURCES SOUTH AUSTRALIA (AU)
14. AALBORG UNIVERSITET (DK)

FP7-KBBE-2008-2B

BRIGHTANIMAL

Multidisciplinary Approach to Practical and Acceptable Precision Livestock Farming for SMEs in Europe and world-wide

www.brightanimal.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

COEXIST

Sustainable use of seas and oceans: integration of aquaculture and fisheries in the coastal zone

Coastal areas are subject to an increase in competing activities and protection (Natura 2000, Marine Strategy Directive) and are a source of potential conflict for space allocation. COEXIST is a broad, multidisciplinary approach to evaluate these interactions with the ultimate goal to provide a roadmap to better integration, sustainability and synergies among different activities in the coastal zone. 1. The project will study the interactions between capture fisheries and aquaculture and evaluate mutual benefits and possible bottlenecks for concomitant development of these activities in the coastal zone within the context of the ecosystem approach to management. 2. It will propose, develop and evaluate the efficiency of spatial management tools (zoning, closed areas, etc) to promote different forms of coastal aquaculture and fisheries at different scales (e.g. local, regional) and it will exploit mutual opportunities (e.g. artificial reefs, protected areas, wind farms, tourism etc) within a context of competition for space by multiple users. 3. The project will address differences in acceptance of activities (fisheries, aquaculture, and other use of the coastal zone) by the society. 4. A detailed strategy for communication and involvement of stakeholders and for dissemination of results to general and targeted audiences is integrated in the project. By these actions, the project will support the new European Maritime Policy and spatial planning of coastal areas. Case studies, supported by national projects will be used to provide data for further analysis through the integrated work packages This will include detailed comparative analyses and integrated models for the regional seas, as well as a synthesis on the European scale. COEXIST will address interactions on a biological and biogeochemical level, as well as a socio-economic level, and the governance and legal aspects.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,995,500

PROJECT N°

245178

DURATION

36 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. HAVFORSKNINGSINSTITUTTET (NO)
2. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)
3. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
4. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
5. INSTITUTO NACIONAL DE RECURSOS BIOLOGICOS I.P. INRB (PT)
6. IMAR- INSTITUTO DO MAR (PT)
7. RIISTA- JA KALATALOUDEN TUTKIMUSLAITOS (FI)
8. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
9. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
10. DANMARKS TEKNISKE UNIVERSITET (DK)
11. AQUATT UETP LTD (IE)
12. SUOMEN YMPARISTOKESKUS (FI)
13. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2009-3

COEXIST

Interaction in coastal waters: A roadmap to sustainable integration of aquaculture and fisheries

www.coexistproject.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

COPEWELL

Understanding of the basic mechanisms involved in coping strategies of fish towards improvement of welfare

COPEWELL aims to provide a better understanding of the underpinning mechanisms and basic knowledge about the physiology, biology, and behaviour of fishes and to give a deeper understanding of the basic mechanisms involved in coping styles. We will use an innovative hypothesis-driven multidisciplinary approach that aims to explore the links between brain function, behaviour and adaptive plasticity (WPs 1 and 2). Underlying mechanisms will be addressed by localising key elements of the stress-responsive serotonergic and learning and memory systems in the telencephalon, and for the first time also analyse rates of brain cell proliferation, neurogenesis, and expression of genes controlling other aspects of brain function, as learning and memory, in fish expressing different coping styles. The project will also focus on the understanding of how animals experience their world, based on appraisal theory and experimental studies of appraisal mechanisms in farmed fish, and not simply on the description of animal behaviour or stress responses (WP2 Appraisal). COPEWELL will further study the ontogeny of brain function and neuroendocrine stress responses in the call species Atlantic salmon (Salmo salar), European sea bass (Dicentrarchus labrax) and sea bream (Sparus aurata), and will provide new insights on the interrelations between different relevant husbandry practices, plasticity of brain function and stress response during early ontogeny. COPEWELL will explore potential consequences of early life stress experiences on the welfare and quality of juvenile fish, substantiate the concept of allostatic stress regulation in fish and determine thresholds between eustress that are considered positive for welfare and distress that can have severe negative consequences for fish welfare as: it will attempt to discriminate between normal adaptive stress responses and situations of potential consequence to animal welfare, in relation to different relevant husbandry practices and rearing methods (WP3Allostasis and WP4 Ontogeny). The expected impact the COPEWELL project is to deepen our knowledge on the development of the brain function, behaviour and stress response in relation to the different husbandry practises and rearing methods. It will also serve to define how short or long episodes of stress during the early life affect the welfare and quality of juveniles and adult fish (WPs 3 & 4). It will significantly contribute in providing and extending the knowledge basis for the development of tools such as new individual-based indicators for a better assessment of fish welfare, e.g. by identifying and verifying non-invasive indicators of coping styles. Perhaps most important, COPEWELL will provide a new framework, based on evolutionary principles and an understanding of subjective experience of welfare as an evolved survival mechanism, making welfare available for scientific inquiry.

FP7-KBBE-2010-4

A new integrative framework for the study of fish welfare based on the concepts of allostasis, appraisal and coping styles

COPEWELL

www.imr.no/copewell

European Commission

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

4,498,718

PROJECT N°

265957

DURATION

54 months

PROJECT START DATE

July 2011

LIST OF PARTNERS

1. HAVFORSKNINGSINSTITUTTET (NO)
2. CENTRO DE CIENCIAS DO MAR DO ALGARVE (PT)
3. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
4. ISPA. INSTITUTO SUPERIOR DE PSICOLOGIA APLICADA, CRL (PT)
5. NOFIMA MARIN AS (NO)
6. TCN PARTNERSHIP TRANSNATIONAL CONSULTING PARTNERSHIP (DE)
7. STICHTING KATHOLIEKE UNIVERSITEIT (NL)
8. UNIVERSITETET I OSLO (NO)
9. UNI RESEARCH AS (NO)
10. UNIVERSITAT AUTONOMA DE BARCELONA (ES)
11. PANEPISTIMIO KRITIS (UNIVERSITY OF CRETE) (EL)
12. THE UNIVERSITY OF STIRLING (UK)
13. UPPSALA UNIVERSITET (SE)
14. DANMARKS TEKNISKE UNIVERSITET (DK)
15. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
16. UNIVERSITY OF PATRAS (EL)
17. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

ECOKNOWS

Improving fisheries assessment methods by integrating new sources of biological knowledge

The general aim of the ECOKNOWS project is to improve the use of biological knowledge in fisheries science and management. The lack of appropriate calculus methods and fear of statistical overparameterisation has limited biological reality in fisheries models. This reduces biological credibility perceived by many stakeholders. We solve this technical estimation problem by using up-to date methodology supporting more effective use of data. The models suggested will include important knowledge about biological processes and the applied statistical inference methods allow to integrate and update this knowledge in stock assessment. We will use the basic biological data (such as growth, maturity, fecundity, maximum age and recruitment data sets) to estimate general probabilistic dependencies in fish stock assessments. In particular, we will seek to improve the use of large existing biological and environmental databases, published papers and survey data sets provided by EU data collection regulations and stored by ICES and EU member countries. Bayesian inference will form the methodological backbone of the project and will enable realistic estimations of uncertainty. We develop a computational learning approach that builds on the extensive information present in FishBase (www.fishbase. org).The developed methodology will be of fundamental importance, especially for the implementation of the Ecosystem Approach to Fisheries Management. It has been a difficult challenge even for target species with long data series, and now the same challenge is given for new and poorly studied species. We will improve ways to find generic and understandable biological reference points, such as the required number of spawning times per fish, which also supports the management needs in the developing countries. ECOKNOWS applies decision analysis and bioeconomic methods to evaluate the validity and utility of improved information, helping to plan efficient EU data collection.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,993,607

PROJECT N°

244706

DURATION

48 months

PROJECT START DATE

September 2010

LIST OF PARTNERS

1. HELSINGIN YLIOPISTO (FI)
2. RIISTA- JA KALATALOUDEN TUTKIMUSLAITOS (FI)
3. INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA (DK)
4. FISHBASE INFORMATION & RESEARCH GROUP INC (PH)
5. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
6. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
7. MARINE INSTITUTE (IE)
8. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
9. FISHERIES AND OCEANS CANADA (CA)
10. FISKERIVERKET (SE)
11. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
12. INSTITUT SUPERIEUR DES SCIENCES AGRONOMIQUES, AGROALIMENTAIRES, HORTICOLES ET DU PAYSAGE (FR)
13. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)

FP7-KBBE-2009-3

Effective use of ecosystem and biological knowledge in fisheries

ECOKNOWS

www.ecoknows.eu/

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

EUROSHELL

Bridging the gap between science and producers to support the European marine mollusc production sector

Under the acronym EUROSHELL, this proposal will provide solutions to identified challenges that may constrain the transfer of knowledge to the shellfish sector and thus affect its sustainable development. It will focus on identification of the underlying factors that inhibit effective knowledge management in the sector and provide regional forums to facilitate dialogue between shellfish companies (especially through their regional or national producers' organisations) and researchers, with a strong focus on developing efficient methodology for knowledge transfer. This will result in the production of visions for the future of the sector and the identification of key research objectives that could be integrated in the European Aquaculture Technology and Innovation Platform (EATIP) and also provide clear cooperation opportunities with the Fisheries Local Action Groups (FLAGS) of the European Fisheries Areas Network (FARNET) through enhanced methodology for an extension network. The core objectives of EUROSHELL are to:

- Enhance integration of knowledge into the production cycle of the main farmed species, by assessing current critical problems experienced by the sector that have a direct link to research and reviewing current knowledge and especially the extent of its uptake.
- Assess the current structural organisation that links knowledge to practice in key European production countries and identify solutions that will address structural difficulties (where these exist) for shellfish SME's to participate in RTDI initiatives.
- Identify future visions for the European shellfish sector by industry, including the identification of gaps and research needs, so as to lay the basis for more effective methodology for future dialogue and possible integration of the sector into the EATIP.

EUROSHELL does not seek to create new STRUCTURES for knowledge management in the sector, but looks to strengthen the existing relationships between the existing one.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

649,983

PROJECT N°

312025

DURATION

18 months

PROJECT START DATE

under negotiation

LIST OF PARTNERS

1. COMITE NATIONAL DE LA CONCHYLICULTURE (FR)
2. EUROPEAN AQUACULTURE SOCIETY (BE)
3. ASSOCIATION EUROPEENNE DES PRODUCTEURS DE MOLLUSQUES (FR)
4. CONSELLO REGULADOR D.O. MEXILLON DE GALICIA (ES)
5. ASSOCIAZIONE MEDITERRANEA ACQUACOLTORI (IT)
6. IRISH SALMON GROWERS ASSOCIATION LIMITED (IE)
7. PRODUCENTENORGANISATIE VAN DE NEDERLANDSE MOSSELCULTUUR (NL)
8. SAGB COMMERCIAL SERVICES LTD (UK)
9. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
10. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
11. UNIVERSITA CA' FOSCARI VENEZIA (IT)
12. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
13. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
14. VIKING FISH FARMS LIMITED (UK)
15. AC2G SARL (FR)
16. COMITE REGIONAL DE LA CONCHYLICULTURE BRETAGNE NORD (FR)
17. COMITE REGIONAL DE LA CONCHYLICULTURE DE POITOU CHARENTES ORGANISME PROFESSIONNEL (FR)
18. COMITE REGIONAL DE LA CONCHYLICULTURE DE LA MEDITERRANEE (FR)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

FACTS

Sustainable use of seas and oceans: importance of foraging fish in the ecosystem

Removal of a forage fish has consequences for both predators and prey of forage fish. As everything is connected, every management action has a price which goes beyond the apparent, direct effect on the target species. The fishery on forage fish can therefore not be seen in isolation, as the immediate gain in profit from the fishery has to be discounted by the lowered potential for production of large piscivorous fish. Management actions on other species also influences forage fish, i.e. conservation efforts on marine mammals or sea birds have direct consequences for the predation pressure on forage fish. The objective of the project is to provide insight and quantitative advice on the ecosystem wide consequences of management actions directly or indirectly related to forage fish. The two overarching questions are: 1. What are the consequences of forage fish fisheries on (a) predator growth and abundance, (b) economic output of fisheries on piscivorous species, and (c) ecosystem stability and the risk for regime shifts 2. What are the consequences of changes in predator populations on forage fish populations and fisheries. The methods is a combination of ecosystem models, of process studies aimed at feeding into the models, of economical models, and of data-analysis of existing data sources. The project covers four ecosystems in detail; Norwegian-Barents Sea, Baltic Sea, North Sea and Bay of Biscay. FACTS bring together leading European fisheries and university institutes working on creating the tools for ecosystem based management. The active involvement of the institutes in the current management provides a means for the results of the project to feed into management. The project furthermore includes a network component which ensures a wider dissemination of methods and results within the marine scientific community.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,938,375

PROJECT N°

244966

DURATION

36 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. DANMARKS TEKNISKE UNIVERSITET (DK)
2. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
3. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
4. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
5. UNIVERSITAET HAMBURG (DE)
6. HAVFORSKNINGSINSTITUTTET (NO)
7. SYDDANSK UNIVERSITET (DK)
8. CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL (DE)
9. RIISTA- JA KALATALOUDEN TUTKIMUSLAITOS (FI)
10. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
11. KØBENHAVNS UNIVERSITET (DK)
12. INSTITUT FUER OSTSEEFORSCHUNG WARNEMUENDE AN DER UNIVERSITAET ROSTOCK (DE)
13. THE UNIVERSITY COURT OF THE UNIVERSITY OF ST ANDREWS (UK)
14. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
15. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2009-3

Forage Fish Interactions

FACTS

www.facts-project.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

FISHPOPTRACE

The structure of fish populations and traceability of fish and fish products

Although exploited fishes have traditionally been managed on a geographic basis, for conservation purposes they should be managed at the population level: the extent and dynamics of population structuring underlies resilience and sustainability. More effective enforcement and conservation demands a focus on identification and monitoring of wild fish populations and traceability of products. FishPopTrace brings together expertise in fish traceability projects (Fish and Chips, FishTrace, FISH-BOL) to: 1.Integrate data from European fish species traceability projects, and to generate a single compatible database and tissue archive managed by the Joint Research Centre of the European Commission. 2. Examine single nucleotide polymorphisms (SNPs) and otolith microchemistry and morphometrics in widely distributed populations of cod, hake, herring and sole. Outputs will comprise population-level signatures associated with fish origins in early life and representative spawning groups. 3. Undertake validation of traceability tools in relation to end-user technology. 4. Develop a population monitoring system based on genetic and otolith data that will assess population stability in a temporal and spatial framework. 5. Test the utility of additional novel traceability systems (fatty acid profiles, proteomics, gene expression, microarray platform for SNP genotyping). 6. Facilitate technology transfer in relation to enforcement and conservation policies of the EU Common Fisheries Policy (CFP) and associated socio-economic consequences. Outputs from FishPopTrace will improve the traceability of fish and fish products and protection of consumer interests through enhanced understanding of the dynamics, temporal stability and distribution of major populations of four key exploited fish species. Central elements of the output will be the development and evaluation of end-user tools, a Cost Benefit Analysis and a final report setting FishPopTrace in the context of the CFP.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,949,984

PROJECT N°

212399

DURATION

39 months

PROJECT START DATE

March 2008

LIST OF PARTNERS

1. BANGOR UNIVERSITY (UK)
2. DANMARKS TEKNISKE UNIVERSITET (DK)
3. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
4. UNIVERSIDAD COMPLUTENSE DE MADRID (ES)
5. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
6. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
7. UNIVERSITETET I BERGEN (NO)
8. JRCJOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
9. UNIVERSITAET BREMEN (DE)
10. WILDLIFE DNA SERVICES LIMITED*WDNAS (UK)
11. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
12. NATIONAL AGRICULTURAL RESEARCH FOUNDATION. (EL)
13. ASOCIACION NACIONAL DE FABRICANTES DE CONSERVAS DE PESCADOS Y MARISCOS-CENTRO TECNICO NACIONAL DE CONSERVACION DE PRODUCTOS DE LA PESCA (ES)
14. AARHUS UNIVERSITET (DK)
15. RUSSIAN FEDERAL RESEARCH INSTITUTE OF FISHERIES AND OCEANOGRAPHY (RU)
16. TRACE WILDLIFE FORENSICS NETWORK LIMITED (UK)

FP7-KBBE-2007-1

Fish Population Structure and Traceability

FISHPOPTRACE

http://fishpoptrace.jrc.ec.europa.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

LIFECYCLE

Essential biological functions related to the most relevant stages of aquaculture fish life-history

LIFECYCLE will deliver a knowledge-base to improve competitiveness and sustainability of European aquaculture, through a combination of question-problem driven approaches. The focus will be on early developmental events, growth and environmental adaptation throughout the lifecyle, and on the physiology and immunology of key life-stage transitions, such as metamorphosis, smoltification and puberty. To advance current knowledge on mechanisms governing essential biological functions in fish, state-of-theart physiological research will be combined with functional genomics by leading European research groups. LIFECYCLE will focus on all major life stages of sea bass, sea bream, Atlantic salmon and rainbow trout. For these important aquaculture species, substantial resources and biological information exists which will be exploited and integrated to potentiate the overall impact. Two key conceptual approaches will be taken: 1. Changes in physiological systems at different points during the lifecycle will be studied to establish how early factors impact on later stages. 2. Cross-cutting experiments will address integration and crosstalk between physiological systems. LIFECYCLE is planned to direct research at current production bottlenecks. The knowledge generated about development and growth, adaptation and homeostasis, the immune system, sex differentiation and puberty will have a major impact on alleviating problems linked to abnormal larval development, skeletal deformities, poor growth and energy utilization, mortalities related to life stage transitions, poor environmental performance, and unwanted sexual maturation. The focused dissemination of such knowledge will make the EU aquaculture industry more efficient and stimulate its sustainable expansion. The knowledge-base established will pave way for future advances within fields of stress and disease control, breeding selection, environmental performance and species diversification.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,995,801

PROJECT N°

222719-2

DURATION

48 months

PROJECT START DATE

February 2009

LIST OF PARTNERS

1. GOETEBORGS UNIVERSITET (SE)
2. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
3. HAVFORSKNINGSINSTITUTTET (NO)
4. THE UNIVERSITY COURT OF THE UNIVERSITY OF ST ANDREWS (UK)
5. UNIVERSITEIT UTRECHT (NL)
6. CENTRO DE CIENCIAS DO MAR DO ALGARVE (PT)
7. UNIVERSITETET I BERGEN (NO)
8. UNIVERSITE DE RENNES I (FR)
9. UNIVERSITAT DE BARCELONA (ES)
10. CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
11. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
12. MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. (DE)
13. FISKEY HF (IS)
14. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. (ES)

FP7-KBBE-2007-2A

LIFECYCLE

Building a biological knowledge-base on fish lifecycles for competitive, sustainable European aquaculture

www.lifecycle-fp7.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

MADE

Mitigating adverse impacts of fisheries

A particular attention has been paid worldwide on longline fisheries as they catch considerable amount of by-catch (seabirds, turtles, sharks, etc.). Seabird and turtles by-catch mitigation methods have now been established in many fisheries worldwide, but similar efforts must be put to reduce by-catch of sharks. In the same ecosystems, another issue attracts the attention of international tuna commissions: the use of drifting fish aggregating devices (FADs). These FADs are responsible for major catches of juvenile tuna and non target pelagic species (sharks). Finally, the effects of thousands of FADs released regularly in the tropical oceans are unknown, and must be studied to estimate if they impact the biology of pelagic species. The European open ocean tropical and Mediterranean pelagic fishery (Spain, France, Portugal, Italy, Greece) is one of the main sources of catch, income and employment for the European fishery, with interactions with many developing countries. The main objective of the project is to develop measures to mitigate adverse impacts of fisheries targeting large pelagic fish in the open ocean: purse seiners using FADs and longliners. Two main categories of mitigation measures will be studied: spatial management issues (e.g. closure areas) and technical solutions to reduce by-catch in these fisheries. The main concept of MADE is to follow a multi-disciplinary and comparative approach, combining biological and technological studies with economical analyses in different sites (Indian and Atlantic oceans, Mediterranean Sea), with a particular effort to closely associate fishers from the beginning of this research. Hightech technology and novel approaches will be employed (electronic tagging, in situ and in vitro experiments, etc.), and a particular effort will be devoted to disseminate results to fishers, tuna commissions, EU DG Fisheries, and scientists.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,978,200

PROJECT N°

210496

DURATION

48 months

PROJECT START DATE

May 2008

LIST OF PARTNERS

1. INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT (FR)
2. SEYCHELLES FISHING AUTHORITY (SC)
3. UNIVERSITE LIBRE DE BRUXELLES (BE)
4. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
5. AQUASTUDIO (IT)
6. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
7. UNIVERSIDADE FEDERAL RURAL DE PERNAMBUCO (BR)
8. UNIVERSITE DE LA REUNION (FR)
9. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
10. UNIVERSITE MONTPELLIER II (FR)
11. FONDAZIONE ACQUARIO DI GENOVA ONLUS (IT)
12. IMAR- INSTITUTO DO MAR (PT)
13. UNIVERSITY OF PATRAS (EL)

FP7-KBBE-2007-1

Mitigating ADverse Ecological impacts of open ocean fisheries

MADE

www.made-project.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

MYFISH

Beyond Maximum Sustainable Yield (MSY): defining management targets and their consequences

The MSY concept was included as a principle in the 2009 Green Paper on the reform of the Common Fisheries Policy (CFP) in accordance with the global imperative to manage fish stocks according to the maximum sustainable yield (MSY). This implies a commitment to direct management of fish stocks towards achieving MSY by 2015. Attaining this goal is complicated by the lack of common agreement on the interpretation of "sustainability" and "yield" and by the effects that achieving MSY for one stock may have on other stocks and broader ecosystem, economic, or social aspects. MYFISH will provide definitions of MSY variants which maximize other measures of “yield” than biomass and which account for the fact that single species rarely exist in isolation. Further, MYFISH will redefine the term “sustainable” to signify that Good Environmental Status (MSFD) is achieved and economically and socially unacceptable situations are avoided, all with acceptable levels of risk. In short, MYFISH aims at integrating the MSY concept with the overarching principals of the CFP: the precautionary and the ecosystem approach. MYFISH will achieve this objective through addressing fisheries in all RAC areas and integrating stakeholders (the fishing industry, NGOs and managers) throughout the project. Existing ecosystem and fisheries models will be modified to perform maximization of stakeholder approved yield measures while ensuring acceptable impact levels on ecosystem, economic and social aspects. Implementation plans are proposed and social aspects addressed through active involvement of stakeholders. Finally, effects of changes in environment, economy and society on MSY variants are considered, aiming at procedures rendering the MSY approach robust to such changes. The expertise of 26 partners from relevant disciplines including fisheries, ecosystem, economic and social science are involved in all aspects of the project. Global experience is engaged from North America and the South Pacific.

FP7-KBBE-2011-5

MYFISH

Maximising yield of fisheries while balancing ecosystem, economic and social concerns

www.myfishproject.eu

European Commission

PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION €

4,999,999

PROJECT N° 289257

DURATION

48 months

PROJECT START DATE

March 2012

LIST OF PARTNERS

1. DANMARKS TEKNISKE UNIVERSITET (DK)
2. MARINE INSTITUTE (IE)
3. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
4. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
5. CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL (DE)
6. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)
7. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
8. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
9. PLYMOUTH MARINE LABORATORY (UK)
10. KØBENHAVNS UNIVERSITET (DK)
11. HAVFORSKNINGSINSTITUTTET (NO)
12. MORSKI INSTYTUT RYBACKI. PANSTWOWY INSTYTUT BADAWCZY (PL)
13. AALBORG UNIVERSITET (DK)
14. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
15. UNIVERSITAET HAMBURG (DE)
16. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
17. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
18. JRC.JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
19. AQUAMARINE ADVISERS (SE)
20. THE UNIVERSITY COURT OF THE UNIVERSITY OF ST ANDREWS (UK)
21. NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU (NO)
22. AQUATT UETP LTD (IE)
23. UNIVERSIDAD DE VIGO (ES)
24. THE QUEEN'S UNIVERSITY OF BELFAST (UK)
25. CODE LUTIN SARL (FR)
26. KILLYBEGS FISHERMEN'S ORGANISATION LIMITED COOPERATIVE SOCIETY (IE)
27. KUTTERFISCH-ZENTRALE GMBH (DE)
28. VOF DE DRIE GEBROEDERS (NL)
29. WILMA BV (NL)
30. VOF VISSERIJBEDRIJF J 'T MANNETJE SL-3 (NL)
31. KARBAK APS (DK)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

PREVENT ESCAPE

Assessment and mitigation of the impact of aquaculture on wild populations

The escape of fish from sea-cage aquaculture is perceived as a serious threat to natural biodiversity in Europe's marine waters. Escaped fish may cause undesirable genetic effects in native populations through interbreeding, and ecological effects through predation, competition and the transfer of diseases to wild fish. Technical and operational failures of fish farming technology cause escapes. Cages break down in storms, wear and tear of the netting causes holes, and operational accidents lead to spills of fish. Sea-cage equipment is marketed and used across Europe, thus knowledge relevant to the culture of numerous species in diverse environments is required to produce robust equipment and implement risk adverse operations. The Prevent Escape project will conduct and integrate biological and technological research on a pan-European scale to improve recommendations and guidelines for aquaculture technologies and operational strategies that reduce escape events. Through research focused on sea-cages and their immediate surrounds, we will assess technical and operational causes of escape incidents, assess the extent of escapes of reproductive gametes and fish, determine the inherent behaviours that pre-dispose certain species of fish towards a higher probability of escaping, and document the dispersal of escapees to develop and test recapture strategies. Information from these components of the project will feed into research specifically aimed at benchmarking the performance of equipment under farming conditions and thereby improving operations and equipment production, and advancing national and international standards for the design, construction and use of aquaculture equipment. These key pieces of information, when added to existing knowledge, will allow determination of practical, implementable measures to prevent escapes and mitigate the effects of escapees. If prevention and mitigation are more successful, genetic and ecological impacts should diminish.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,970,646

PROJECT N°

226885

DURATION

36 months

PROJECT START DATE

April 2009

LIST OF PARTNERS

1. SINTEF FISKERI OG HAVBRUK AS (NO)
2. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
3. UNIVERSIDAD DE ALICANTE (ES)
4. THE SCOTTISH ASSOCIATION FOR MARINE SCIENCE (UK)
5. STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING (NO)
6. NOFIMA MARIN AS (NO)
7. UNIVERSITY OF CRETE-SPECIAL ACCOUNT FOR RESEARCH (EL)
8. MARINE INSTITUTE (IE)
9. UNIVERSITA TA MALTA (MT)
10. TECNALIA CORPORACION TECNOLOGICA AIE (ES)
11. UNIVERSIDAD DE LAS PALMAS DE GRAN CANARIA (ES)

FP7-KBBE-2008-2B

PREVENT ESCAPE

Assessing the causes and developing measures to prevent the escape of fish from sea-cage aquaculture

www.preventescape.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

PRO-EEL

From capture based to self-sustained aquaculture

The recent decline of European eel (Anguilla anguilla) and no signs of recovery has brought attention to the biologically unsustainable exploitation of the stock. In September 2007, the EU has adopted the Council Regulation 1100/2007 establishing measures for the recovery of the European eel stock. However, eel are still fished intensively for human consumption while aquaculture and restocking rely exclusively on the supply of glass eels caught each year. A controlled production of eel larvae is ever more urgent. The objective of PRO-EEL is to develop standardised protocols for production of high quality gametes, viable eggs and feeding larvae. The approach is to expand knowledge about the intricate hormonal control and physiology of eels which complicates artificial reproduction. This knowledge will be applied in the development of suitable methods to induce maturation considering different rearing conditions. Knowledge about the gametogenesis and maturation pattern will be developed in small scale tests and applied to establish standardised fertilisation procedures. New knowledge about functional anatomy of embryos and yolksac larvae will be applied to develop suitable feed. Protocols for larval production will be tested in full scale experimental facilities managed in collaboration with a qualified SME. The integrated protocols and technology development will be evaluated relative to the output of healthy embryos and yolksac larvae. Larval feeds will be developed towards pioneering first-feeding in European eel larvae, which will be a major breakthrough and promising step towards a self-sustained aquaculture. The strength of the project is its interdisciplinary approach and the unique expertise of the consortium. PRO-EEL brings together leading institutes in eel reproduction complemented by excellence in disciplines filling gaps in knowledge and technology. A tight collaboration with the aquaculture industry promotes the applicability of developed technology.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,307

PROJECT N°

245257

DURATION

48 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. DANMARKS TEKNISKE UNIVERSITET (DK)
2. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
3. UNIVERSITEIT LEIDEN (NL)
4. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
5. UNIVERSIDAD POLITECNICA DE VALENCIA (ES)
6. NOFIMA AS (NO)
7. UNIVERSITEIT GENT (BE)
8. KØBENHAVNS UNIVERSITET (DK)
9. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
10. BILLUND AQUAKULTURSERVICE APS (DK)
11. WAGENINGEN UNIVERSITEIT (NL)
12. INSTITUT NATIONAL DES SCIENCES ET TECHNOLOGIES DE LA MER (TN)
13. HAVFORSKNINGSINSTITUTTET (NO)
14. NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU (NO)
15. BIOMAR AS (DK)

FP7-KBBE-2009-3

PRO-EEL

Reproduction of European Eel: Towards a Self-sustained Aquaculture

www.pro-eel.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

PROMICROBE

Microbial control for more sustainable aquaculture

Aquaculture is still facing a number of bottlenecks. To further develop aquaculture, the major bottlenecks need to be systematically removed. At the production level, unpredictable larval survival and larval/juvenile quality and robustness are major bottlenecks which have strong microbial components. With respect to microbial interference, we need to make use of the natural mutualistic symbiotic relationships that have evolved over million of years between the host and the microbial community. Hence, we need to understand the mutual and reciprocal interactions between them and use these interactions to the benefit of the viability and robustness of the fish under aquaculture conditions. This "join them" approach is contradictory to the traditional "beat them" strategy generally applied in microbial management used in human medicine, agriculture and aquaculture. This project suggests bringing together various European research groups that have contributed to some important methodological break-throughs that can be used in the study of host/microbe interactions and can help to disentangle the complex interplay between the different components of the aquaculture ecosystem. The work packages are directed towards the systematic gathering of novel information in relation to the axis host-host microbial community-system microbial community. It is anticipated that this novel information will allow developing new concepts that will be translated into new or adapted protocols to rear aquaculture organisms in a biological stable and economical efficient way.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,996,531

PROJECT N°

227197

DURATION

48 months

PROJECT START DATE

February 2009

LIST OF PARTNERS

1. UNIVERSITEIT GENT (BE)
2. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
3. WAGENINGEN UNIVERSITEIT (NL)
4. NORGES TEKNISK. NATURVITENSKAPELIGE UNIVERSITET (NO)
5. STIFTELSEN SINTEF (NO)
6. SINTEF FISKERI OG HAVBRUK AS (NO)
7. VIB (BE)

FP7-KBBE-2008-2B

PROMICROBE

Microbes as positive actors for more sustainable aquaculture

www.promicrobe.ugent.be

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

REPROSEED

Improving mollusc spat production in hatcheries

Secure and stabilised hatchery production of bivalve seed is the unifying objective of the REPROSEED project. Development of innovative new methods will lead to high quality seed of guaranteed physiological health, sanitary status and genetic diversity. By considering the biology of bivalve life stages and the trophic and microbial environment of rearing conditions REPROSEED researches ways of controlling key processes, like reproduction, larval rearing and metamorphosis. New technological advances, like recirculation systems and outdoor algal culture, will provide ways to reduce costs. The need for hatcheries is growing in Europe due to demands from the shellfish industry for quality juveniles and concerns about wild seed due to inconsistent spatfall or environmental harm caused by seed collection of some species. Four economically important molluscs were selected to represent these needs: two species already reared in hatcheries, Crassostrea gigas and Pecten maximus, and two emerging hatchery species, Mytilus edulis and Ruditapes decussatus. Scientific research is most advanced for C. gigas, so its further development will enable us to attain a level of excellence. Knowledge on this species and on P. maximus, an excellent model for solving particular bivalve rearing problems, can also help improve hatchery culture of the other species. Inter-specific differences enable comparative study of important traits. REPROSEED investigates the physiological basis of early sexual maturation, gamete competency, immunity and metamorphosis, at cellular and molecular levels, including genomics and proteomics. Application of these results and dedicated studies will be made on practical aspects of controlled bivalve reproduction, nutritional needs for broodstock conditioning and larval growth (including testing of mutant yeasts and lipid microcapsules) and the benefits of probiotics. Advances will be shared with end-users throughout the project.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,994,853

PROJECT N°

245119

DURATION

48 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
2. UNIVERSITE DE CAEN BASSE NORMANDIE (FR)
3. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
4. BANGOR UNIVERSITY (UK)
5. UNIVERSITETET I BERGEN (NO)
6. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
7. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
8. INSTITUTO NACIONAL DE RECURSOS BIOLOGICOS I.P. INRB (PT)
9. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
10. SYNDICAT DES SELECTIONNEURS AVICOLES ET AQUACOLES FRANCAIS (FR)
11. SOCIETE ATLANTIQUE DE MARICULTURE (FR)
12. SCALPRO AS (NO)

FP7-KBBE-2009-3

REPROSEED

REsearch to improve PROduction of SEED of established and emerging bivalve species in European hatcheries

www.reproseed.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

SARNISSA

Consolidate alliances with third countries in the field of aquaculture

The project concept is to build a sustainable aquaculture research network based on academics and other professionals between Europe and Africa, with a focus on Sub-Saharan Africa. The three-year work plan will strengthen alliances among experienced and emergent players in the African and wider aquaculture scene that will build on an existing framework knowledge resource base and exchange platform - the `Aquaculture Compendium'. Project partners: Institute of Aquaculture, University of Stirling (coordinator; UK); CIRAD (France); WorldFish Center (Egypt), CABI (UK HQ); Asian Institute of Technology (Thailand), Bunda College of Agriculture (Malawi); IRAD (Cameroon); and ETC (Netherlands). This consortium has a balance of expertise in aquaculture research, development and policy information technology; ability to work in different linguistic areas; and a track record in the implementation of activities at local to international levels. The project will work across a wide range of stakeholders (researchers, SMEs, government agencies, NGOs, producers and others) throughout Sub- Saharan Africa; between anglophone and francophone regions in Africa; between Africa and Asia; and between Europe and Africa. In 6 Work Packages, the project will deliver (1) the comprehensive interdisciplinary knowledge base required for Sub-Saharan African aquaculture to develop in a sustainable way; (2) a sustainable process to identify and nurture new initiatives for Sub-Saharan African aquaculture research, with key involvement of European stakeholders; (3) learning and adaptation for Sub-Saharan Africa of the processes of aquaculture research-into-practice through multi-stakeholder collaboration of research-to-practice networks developed in Southeast Asia; (4) maximal dissemination of project outputs; and (5) tools to aid policy-making for aquaculture in Africa. Mechanisms will be in place by the project end to enable sustainability of the networks established during the project.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

996,036

PROJECT N°

213143

DURATION

36 months

PROJECT START DATE

February 2008

LIST OF PARTNERS

1. THE UNIVERSITY OF STIRLING (UK)
2. CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
3. INTERNATIONAL CENTER FOR LIVING AQUATIC RESOURCES (MY)
4. CAB INTERNATIONAL (UK)
5. ASIAN INSTITUTE OF TECHNOLOGY* (TH)
6. UNIVERSITY OF MALAWI (MW)
7. INSTITUT DE RECHERCHE AGRICOLE POUR LE DEVELOPPEMENT (CM)
8. STICHTING ETC (NL)

FP7-KBBE-2007-1

Sustainable Aquaculture Research Networks in Sub Saharan Africa

SARNISSA

www.sarnissa.org

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

SELFDOTT

From capture based to self-sustained aquaculture

SELFDOTT proposes to implement knowledge already obtained on the artificial control of reproduction of the Atlantic bluefin tuna (BFT), Thunnus thynnus, to obtain viable eggs, and study embryonic and larval development for the production of fry (juveniles). At the same time, suitable and environmentally performing feeds for the growout of BFT will be developed, thus reducing or eliminating the practice of raw fish importation and feeding by the fattening industry. Wild juvenile and mature BFT will be reared in captivity at two sites in the Mediterranean, and will be used to study puberty, gametogenesis, and the influence of diet on reproductive maturation and gamete quality. Mature fish will be induced to spawn using hormone implants and the eggs will be collected using devices designed specifically for cages. To establish the knowledge-base for controlled development of BFT larvae, the mesocosm and artificial larval rearing methods will be employed. The ontogenesis of essential biological functions will be studied, including environmental perception, digestion, immunity and behaviour. A protocol for the commercial-scale larval rearing of BFT will be recommended at the end of the project. Whole body and stomach composition of wild fish will be analyzed and serve as a guide to formulate nutritionally complete artificial feeds for BFT. Juveniles will be captured from the wild, adapted to captive conditions and used to carry out weaning and feeding experiments, using moist and dry pelleted diets. The environmental impact of the formulated feeds will be examined and compared to existing raw-fish practises. SELFDOTT will produce the basic knowledge necessary for the development of a self-sustained aquaculture industry for the BFT in the Mediterranean, thus enhancing the competitiveness of the EU aquaculture industry, while at the same time reducing the pressure on the wild BFT stocks and ensuring the conservation and recovery of this magnificent fish.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,979,966

PROJECT N°

212797

DURATION

47 months

PROJECT START DATE

January 2008

LIST OF PARTNERS

1. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
2. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
3. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
4. HEINRICH-HEINE-UNIVERSITAET DUESSELDORF (DE)
5. TUNA GRASO SA (ES)
6. MINISTRY FOR RESOURCES AND RURAL AFFAIRS (MT)
7. ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH LIMITED (IL)
8. UNIVERSIDAD DE CADIZ (ES)
9. UNIVERSITA DEGLI STUDI DI BARI "ALDO MORO" (IT)
10. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
11. SKRETTING AQUACULTURE RESEARCH CENTRE AS (NO)
12. UNIVERSITE MONTPELLIER 2 SCIENCES ET TECHNIQUES (FR)
13. MFF LTD (MT)
14. CALADEROS DEL MEDITERRANEO S.L. (ES)

FP7-KBBE-2007-1

SELFDOTT

From capture based to SELF-sustained aquaculture and Domestication Of bluefin tuna, Thunnus thynnus

www.sites.google.com/site/selfdottpublic

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

SOCIOEC

Socio-economic effects of the main management principles of the future Common Fishery Policy (CFP): impact of new policy framework and opportunities for the fishing sector to develop self- and co-management

SOCIOEC is an interdisciplinary, European wide project bringing together scientists from several fisheries sciences with industry partners and other key stakeholders to work in an integrated manner on solutions for future fisheries management, that can be implemented at a regional level. The central concept is to provide a mechanism for developing measures that are consistent with the overarching sustainability objectives of the EU, and that can provide consensus across all stakeholders. The first step will be to develop a coherent and consistent set of management objectives, which will address ecological; economic and social sustainability targets. The objectives should be consistent with the aims of the CFP, MSFD and other EU directives, but they should also be understandable by the wider stakeholder community and engage their support. This will then lead to the proposal of a number of potential management measures, based on existing or new approaches. The second step will be to analyze the incentives for compliance provided by these measures. In particular, we will examine fisher's responses and perceptions of these measures, based on historical analysis as well as direct consultation and interviews. This project part will also examine how the governance can be changed to facilitate self- and co-management to ensure fisher buy-in to promising management measures. In particular, the project will focus on the interpretation of overarching (i.e. EU) objectives in local and regional contexts. Finally, the project will examine the impacts of the management measures that emerge from this process, particularly in terms of their economic and social impacts. The IA analysis will be integrated by evaluating the proposed measures against the criteria of effectiveness, efficiency and coherence. Special attention will be paid in evaluating the proposed management measures' performance in terms of their ability to achieve the general and specific ecological objectives.

FP7-KBBE-2011-5

SOCIOEC

Socio economic effects of management measures of the future CFP

n.a.

European Commission

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,939

PROJECT N° 289192

DURATION

36 months

PROJECT START DATE

March 2012

LIST OF PARTNERS

1. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)
2. AALBORG UNIVERSITET (DK)
3. KØBENHAVNS UNIVERSITET (DK)
4. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
5. DANMARKS TEKNISKE UNIVERSITET (DK)
6. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
7. AQUATT UETP LTD (IE)
8. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
9. ISTITUTO DI RICERCHE ECONOMICHE PERLA PESCA E L'AQUACOLTURA IREPA ONLUS ASSOCIAZIONE (IT)
10. HASKOLI ISLANDS (IS)
11. KARADENIZ TEKNIK UNIVERSITESI (TR)
12. UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION CORPORATION (UK)
13. NATIONAL UNIVERSITY OF IRELAND, GALWAY (IE)
14. UNIVERSITE DE BRETAGNE OCCIDENTALE (FR)
15. CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL (DE)
16. MARINE INSTITUTE (IE)
17. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
18. JRCJOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
19. PECHEURS DE MANCHE ET D'ATLANTIQUESA (FR)
20. KUTTERFISCH-ZENTRALE GMBH (DE)
21. A/S LAESO FISKEINDUSTRI (DK)
22. MARINE LAW AND OCEAN POLICY RESEARCH SERVICES LTD (IE)
23. DENNIS NISSEN (DE)
24. CLODIAMARE1 SC (IT)
25. MEDITERRANEAN AQUAFARM SERVICES SL (ES)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

TARGETFISH

Prevention of important diseases of farmed fish species

European aquaculture production provides direct employment to 65.000 people with a turnover of 3 billion €. However, the lack of authorised veterinary medicinal products and the consequent disease outbreaks in farmed fish species costs the sector 20% of the production value. The most appropriate method for disease control, both on economical and ethical grounds, is disease prevention by vaccination. TargetFish will advance the development of existing (but not sufficient) and new prototype vaccines against socio-economically important viral or bacterial pathogens of Atlantic salmon, rainbow trout, common carp, sea bass, sea bream and turbot. The project will develop targeted vaccination strategies for currently sub-optimal and for novel vaccines. Improved vaccines will be brought closer to industrial application by addressing practical issues such as efficacy, safety and delivery route. TargetFish will also establish a knowledge- and technology-base for rational development of next generation fish vaccines. To achieve these challenging tasks, we brought together 29 partners from 11 EU member states, 2 associated countries and 1 International Cooperation Partner Country (ICPC). In this large multidisciplinary consortium an approximate equal number of RTD and SME partners will cooperate closely while keeping an intensive communication with the large vaccine and nutrition industries via an Industry Forum. Specifically, TargetFish will 1) generate knowledge by studying antigens and adjuvants for mucosal routes of administration while analyzing the underpinning protective immune mechanisms; 2) validate this knowledge with response assays for monitoring vaccine efficacy and study safety aspects, including those associated with DNA vaccines; 3) approach implementation of prototype vaccines by optimizing vaccination strategies thus 4) shortening the route to exploitation. Thereby, this project will greatly enhance targeted disease prophylaxis in European fish farming.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,979

PROJECT N° 311993

DURATION

60 months

PROJECT START DATE

under negotiation

LIST OF PARTNERS

1. WAGENINGEN UNIVERSITEIT (NL)
2. DANMARKS TEKNISKE UNIVERSITET (DK)
3. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
4. THE SCOTTISH MINISTERS ACTING THROUGH MARINE SCOTLAND (UK)
5. FRIEDRICH LOEFFLER INSTITUT. BUNDESFORSCHUNGSINSTITUT FUER TIERGESUNDHEIT (DE)
6. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
7. UNIVERSITAT AUTONOMA DE BARCELONA (ES)
8. UNIVERSITA DEGLI STUDI DELLA TUSCIA (IT)
9. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
10. NORGES VETERINAERHOGSKOLE (NO)
11. THE UNIVERSITY OF STIRLING (UK)
12. ISTITUTO ZOOPROFILATTICO SPERIMENTALE DELLE VENEZIE (IT)
13. KØBENHAVNS UNIVERSITET (DK)
14. VYZKUMNY USTAV VETERINARNIHO LEKARSTVI (CZ)
15. THE HEBREW UNIVERSITY OF JERUSALEM. (IL)
16. UNIVERSIDAD DE MURCIA (ES)
17. TETHYS AQUACULTURE LIMITED (UK)
18. PATOGEN ANALYSE AS (NO)
19. FISHLAB HESTELABORATORIET (DK)
20. OSAUHING NAXO (EE)
21. RIDGEWAY BIOLOGICALS LIMITED (UK)
22. ROSSI INTERNATIONAL AS (DK)
23. INGENIATRICS TECNOLOGIAS S.L. INGEN (ES)
24. BIGDNA LTD (UK)
25. W 42 INDUSTRIAL BIOTECHNOLOGY GMBH (DE)
26. PANAGIOTIS CHRISTOFILOGIANNIS. IOANA TAVLA (EL)
27. CENTRO VETERINARIO Y AGRICOLA LIMITADA (CL)
28. DANSK AKVAKULTUR FORENING (DK)
29. BIOMAR A/S (DK)
30. BIOORGANIC RESEARCH AND SERVICES SA (ES)

FP7-KBBE-2012-6-singlestage

Targeted disease prophylaxis in European fish farming

TARGETFISH

n.a.

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

TXOTX

Improving research in support to scientific advice to fisheries management outside EU waters

It is widely recognised that scientific efforts need to be coordinated to strengthen the knowledge base in support of policy-making in a global context. This is a complicated task that requires effective coordination and cooperation among States, RFOs and other agencies. States with an obligation to ensure sustainability of the resources they exploit should seek (i) to promote responsible fisheries and (ii) to promote good, coordinated scientific research. In the case of the EU, actions should be consistent with major international agreements (UNCLOS, CCRF, UNIA, WSSD) and contribute to improving coherence between different EU Policies. The purpose of this Coordination Action is to facilitate a coherent approach towards research directed at the assessment and management of fish resources. The targets are particularly those areas where the European fleet is fishing in international or third country waters, or where the EU has important development goals. Thus, the principal objectives of TXOTX are: To collate information from all RFMO/RFOs and Fisheries Partnership Agreements as well as selected additional regions of special interest (with emphasis on CPA areas) on the extent of scientific research programmes being undertaken by the various actors. To analyse the data available and methodologies applied in assessment and management procedures regionally, in order to identify data and research gaps and opportunities for greater research coordination that may be promoted by the EU in support to scientific advice to fisheries management. To develop recommendations on how to improve cooperation with third parties in order to enhance research and resource status The TXOTX consortium proposes to build a network of scientists in countries with a strategic geographical distribution to produce a synthesis of data collection standards, assessment methods, management procedures that will be disseminated among participants, stakeholders and public in general

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,854

PROJECT N°

212188

DURATION

36 months

PROJECT START DATE

April 2008

LIST OF PARTNERS

1. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
2. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
3. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
4. INSTITUTO DE FOMENTO PESQUERO (CL)
5. STOCKHOLMS UNIVERSITET (SE)
6. UNIVERSITY OF CAPE TOWN (ZA)
7. COLDSTREAM HOLDINGS LTD TRADING AS NFDS AFRICA (BW)
8. SEYCHELLES FISHING AUTHORITY (SC)
9. INSTITUT NATIONAL DE RECHERCHE HALIEUTIQUE (MA)
10. UNIVERSITY OF DAR ES SALAAM (TZ)
11. TANZANIA FISHERIES RESEARCH INSTITUTE (TZ)

FP7-KBBE-2007-1

Technical eXperts Overseeing Third country eXpertise

TXOTX

www.txotx.net

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

EMIDA

Coordination of European research in the area of animal health, including emerging threats, infectious diseases and surveillance

The disease threats to the livestock industry have increased steadily over the past decades as a result of globalisation, evolving pathogens and climate change. Responding to animal disease threats relies heavily on science; research makes a significant contribution to the development of disease control policy and the translation of policy, and other drivers for improving animal health, into practical effect. Although the legislation that underpins policy for the control of statutory diseases is determined at the EU level, the research that supports policy development and implementation is primarily carried out at the national level and is largely uncoordinated as is the research on other major infectious diseases currently affecting livestock production. The aim of the Animal Health ERA-NET is to build on and accelerate the work of the SCAR CWG in developing a durable focused network of national research funders in Member and Associated States of the EU for the purpose of sharing information, coordinating activities and working towards a common research agenda and mutual research funding activities in the field of animal health. The scope of the project will include emerging and major infectious diseases of production animals, including fish and bees and including those conditions which pose a threat to human health but excluding food safety issues relating to livestock products and diseases of wildlife except where they act as reservoirs of infection for humans or production animals. The objectives of the ERA-NET will be delivered through the following four workpackages: WP1. Project coordination, management, communication and dissemination; WP2. Mapping and analysis of existing research and current needs and information on the commissioning and management of joint programmes; WP3. Develop, test, evaluate and refine instruments (Pilots) and WP4. Developing a strategic trans-national animal health research agenda.

PROJECT COORDINATOR

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- THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)

FUNDING SCHEME CSA

EC CONTRIBUTION € 997,218

PROJECT N° 219235

DURATION 39 months

PROJECT START DATE April 2008

LIST OF PARTNERS

1. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
2. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
3. BUNDESMINISTERIUM FUER BILDUNG UND FORSCHUNG (DE)
4. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
5. MINISTERIE VAN ECONOMISCHE ZAKEN, LANDBOUW EN INNOVATIE (NL)
6. VOEDSEL EN WAREN AUTORITEIT (NL)
7. MINISTERO DELLA SALUTE (IT)
8. MINISTERO DELLE POLITICHE AGRICOLE ALIMENTARI E FORESTALI (IT)
9. MINISTERIET FOR FODEVARER, LANDBRUG OG FISKERI (DK)
10. MINISTRY OF AGRICULTURE OF THE CZECH REPUBLIC (CZ)
11. BUNDESMINISTERIUM FUER GESUNDHEIT (AT)
12. FEDERALE OVERHEIDSDIENST VOLKSGEZONDHEID, VEILIGHEID VAN DE VOEDSELKETEN EN LEEFMILIEU (BE)
13. AGENCE FEDERALE POUR LA SECURITE DE LA CHAINE ALIMENTAIRE (BE)
14. CENTRUM VOOR ONDERZOEK IN DIERGENEESKUNDE EN AGROCHEMIE. CODA (BE)
15. MINISTRY OF AGRICULTURE AND FORESTRY (FI)
16. AN ROINN TALMHAÍOCHTA, IASCACH AGUS BIA (IE)
17. NORGES FORSKNINGSRAD (NO)
18. FORSKNINGSRÅDET FÖR MILJÖ, AREELLA NÄRINGAR OCH SAMHÄLLSBYGGANDE (SE)
19. BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL (UK)
20. EIDGENOESSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
21. SCOTTISH GOVERNMENT (UK)
22. MINISTRY OF AGRICULTURE, NATURAL RESOURCES AND ENVIRONMENT OF CYPRUS (CY)
23. LIETUVOS RESPUBLIKOS ZEMES UKIO MINISTERIJA (LT)
24. MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT (IL)
25. MINISTRY OF AGRICULTURE AND RURAL AFFAIRS (TR)
26. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
27. AGENCE NATIONALE DE LA RECHERCHE (FR)
28. BUNDESMINISTERIUM FÜR ERNÄHRUNG, LANDWIRTSCHAFT UND VERBRAUCHERSCHUTZ (DE)
29. BUNDESANSTALT FÜR LANDWIRTSCHAFT UND ERNÄHRUNG (DE)

FP7-ERANET-2007-RTD

Coordination of European Research on Emerging and Major Infectious Diseases of Livestock

EMIDA

www.emida-era.net

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

STAR-IDAZ

Promoting coordination and cooperation at international level of research programmes in the area of animal health, in particular infectious diseases including zoonoses - Mandatory ICPC (Latin America and Asia)

Animal diseases can cause serious social, economic and environmental damage and in some cases also threaten human health. An increasing number of the major disease problems or threats faced by the livestock industry and zoonoses are of a global nature. The overall aim of the global strategic alliances for the coordination of research on the major infectious diseases of animals is to improve coordination of research activities on the major infectious diseases of livestock and zoonoses so as to hasten the delivery of improved control methods. This will be achieved through the establishment of an international forum of R&D programme owners/managers and international organisations for the purpose of sharing information, improving collaboration on research activities and working towards common research agendas and coordinated research funding on the major animal diseases affecting livestock production and/or human health. It will build on the groundwork established by the SCAR collaborative working group on animal health and welfare research, the EMIDA ERA-NET project and specific INCO-NETs involving partner countries. The scope of the project will include co-ordination of research relevant to emerging and major infectious diseases of livestock, including fish and managed bees, and those infections of livestock that may carry the risk of disease threat to human health. Diseases of wildlife will also be considered where they are identified as reservoirs of infection with emerging and major infectious diseases of humans or production animals. These objectives will be delivered through the following five workpackages: WP1. Project coordination, management, communication and dissemination; WP2. Sharing information on existing research programmes; WP3. Analysis of and responding to global, regional and industry sector priorities; WP4. Networking of ongoing research activities on major issues and WP5. Developing a strategic trans-national animal health research agendas.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,130

PROJECT N° 265919

DURATION

48 months

PROJECT START DATE

February 2011

LIST OF PARTNERS

1. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
2. CHINESE ACADEMY OF AGRICULTURAL SCIENCES (CN)
3. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
4. EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA (BR)
5. FOUNDATION FOR RESEARCH SCIENCE AND TECHNOLOGY (NZ)
6. MINISTERIO DE CIENCIA, TECNOLOGÍA E INNOVACIÓN PRODUCTIVA (AR)
7. UNITED STATES DEPARTMENT OF AGRICULTURE (US)
8. CONSEJO TECNICO CONSULTIVO NACIONAL DE SANIDAD ANIMAL (MX)
9. MINISTRY OF FOOD, AGRICULTURE AND FISHERIES, DANISH FOOD INDUSTRY AGENCY (DK)
10. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
11. CANADIAN FOOD INSPECTION AGENCY (CA)
12. FEDERAL STATE EDUCATIONAL INSTITUTION OF HIGHER PROFESSIONAL EDUCATION MOSCOW STATE ACADEMY OF VETERINARY MEDICINE AND BIOTECHNOLOGIES NAMED AFTER K.I. SKRYABIN (RU)
13. INTERNATIONAL CENTRE FOR INNOVATIONS IN SCIENCE, TECHNOLOGY AND EDUCATION (RU)
14. MINISTERIE VAN ECONOMISCHE ZAKEN, LANDBOUW EN INNOVATIE (NL)
15. MINISTERO DELLA SALUTE (IT)
16. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
17. PFIZER INTERNATIONAL OPERATIONS (FR)
18. DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY (AU)
19. MINISTRY OF SCIENCE AND TECHNOLOGY (IN)
20. MERIAL SAS (FR)
21. BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL (UK)
22. INTERNATIONAL FEDERATION FOR ANIMAL HEALTH (BE)

FP7-KBBE-2010-4

STAR-IDAZ

Global Strategic Alliances for the Coordination of Research on the Major Infectious Diseases of Animals and Zoonoses

www.star-idaz.net

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

AFSPAN

Role of aquaculture in improving food security and eradicating poverty worldwide

Aquaculture is widely considered as important for enhancing food security, alleviating poverty and improving nutrition. However, little information is available concerning the direct and indirect impacts of aquaculture on food security and poverty alleviation in most developing countries and LIFDCs. Strengthening the knowledge base surrounding aquaculture and food and nutrition security through this project will provide the evidence upon which sound resource allocation and strategies can be based, and subsequently plan, implement and coordinate efficiently development and research programmes supporting the sustainable expansion of aquaculture and increasing its impact to food security and poverty alleviation. The project is to be implemented by 18 partners in 11 selected LIFDCs, 3 EU partners, and 3 international organizations. The project will strengthen the knowledge base on food security and poverty and develop new methodologies or more rigorous methodologies to quantify the contribution of aquaculture in combating hunger and poverty in developing countries and LIFDCs. This will endeavour to better understand aquaculture's contribution to human development. Project partner countries were selected based on varied human development conditions and national level efforts in including aquaculture for improving national food security and alleviating poverty. They represent all major aquaculture regions and ICPCs where aquaculture has major contributions to national economy involve high numbers of small-scale aquaculture farms, and with high international trade of fish and fishery products. The results of the project will be brought to the attention of countries and development partners, particularly the EU, and outputs will help LIFDCs and various development partners to improve efficiency and coordination in development initiatives focused on aquaculture as a means of promoting food security and poverty alleviation.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,380

PROJECT N°

289760

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO (IT)
2. INTERNATIONAL CENTER FOR LIVING AQUATIC RESOURCES (MY)
3. INSTITUTE OF DEVELOPMENT STUDIES (UK)
4. UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION CORPORATION (UK)
5. KØBENHAVNS UNIVERSITET (DK)
6. UNIVERSITETET I STAVANGER (NO)
7. NETWORK OF AQUACULTURE CENTRES IN ASIA-PACIFIC (TH)
8. BANGLADESH FISHERIES RESEARCH FORUM (BD)
9. FRESHWATER FISHERIES RESEARCH CENTER OF CHINESE ACADEMY OF FISHERY SCIENCES (CN)
10. MINISTRY OF AGRICULTURE (IN)
11. SOUTHEAST ASIAN FISHERIES DEVELOPMENT CENTER (TH)
12. VIEN NGHIEN CUU NUOI TRONG THUY SAN1 (VN)
13. MINISTRY OF FISHERIES DEVELOPMENT (KE)
14. MAKERERE UNIVERSITY (UG)
15. UNIVERSITY OF ZAMBIA (ZM)
16. UNIVERSIDADE FEDERAL DO CEARA (BR)
17. PONTIFICIA UNIVERSIDAD CATOLICA DE VALPARAISO (CL)
18. UNIVERSIDAD CENTROAMERICANA ASOCIACION (NI)

FP7-KBBE-2011-5

Aquaculture for Food Security, Poverty Alleviation and Nutrition

AFSPAN

http://www.afspan.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

AQUAINNOVA

Supporting governance in aquaculture research and innovation

Aquainnova establishes an operational framework for dialogue based on best governance practises - between the aquaculture industry, the research community and policy makers, focusing on exploiting the potential for innovation and technological development in the European aquaculture value chain. It will actively promote the exploitation, dissemination and communication of Community aquaculture RTD research actions and results, looking to improve the manner in which the knowledge generated is efficiently and effectively managed, disseminated and transferred. This will be achieved by using expert groups working on different thematic areas of aquaculture and developing innovative methodologies for gap analysis and problem solving. These will be supported by sectoral benchmarking documents. Draft Vision Documents and Strategic Research Agendas will be the subject of multi-stakeholder consultation in regional workshops. Dissemination materials will include new technical summaries on Community RTD and interactive assessment of the benefits of RTD Projects. Active dissemination actions will include consumer organisations, CSOs and the professional and research communities. Improving knowledge transfer and uptake is a core component, applying effective communication channels, tools and resources for maximum impact. AquaInnova will develop and provide a structured and operational platform that will facilitate networking and consultation, while providing consensus on the associated Vision Documents, Strategic Research Agendas and Action Plans for implementation.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

988,954

PROJECT N°

245238

DURATION

30 months

PROJECT START DATE

February 2010

LIST OF PARTNERS

1. EUROPEAN AQUACULTURE TECHNOLOGY AND INNOVATION PLATFORM (BE))

FP7-KBBE-2009-3

AQUAINNOVA

Supporting governance and multi-stakeholder participation in aquaculture research and innovation

www.eatip.eu/default.asp?SHORTCUT=100

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

AQUAMED

Consolidate alliances with the Mediterranean in the field of aquaculture - Mandatory ICPC (Mediterranean Partner Countries)

The fast development of the Mediterranean aquaculture (freshwater, marine) is confronted to a set of difficulties e.g. inadequate production systems and competitiveness, interaction and space competition with other users and the need for a proper integration in the coastal zones, possible negative impact on the environment and negative image of the product quality. Aquaculture development in the Mediterranean countries is contrasted in terms of importance of the sector, domestic market demand, typology of the industry, and research and development structures and capacities. Consequently, a strategy for a knowledge-based development of the activity has to be implemented using a flexible and concerted approach. To deliver practical results, the AQUAMED project will be based on a four step process consisting in (1) mapping and setting a database of all relevant information (about policies, research and socio-economy) in each partner country, (2) identifying common situations and constraints between countries, (3) grouping countries confronted to similar driving forces in order to foster information exchanges and formulate more focussed science based recommendations and (4) setting up of a multi-stakeholder platform to promote a research organisation and an revolving implementation plan aiming at the sustainable development of aquaculture. The platform will be organised to be self-sustainable after the end of the project. It will be instrumental to rationalising research programming in order to avoid duplication, fragmentation and dispersion of research efforts, and to stimulate a long-term cooperation and coordination among policy makers, aquaculture industry and RTD performers in the Region. The Project consortium, covering most of the situations of the aquaculture sector met in Mediterranean, will put the emphasis on the participatory approach, the dissemination of the outcomes of the AQUAMED activities and the sustainability the multi-stakeholder platform.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

996,852

PROJECT N°

244999

DURATION

36 months

PROJECT START DATE

June 2010

LIST OF PARTNERS

1. EUROPEAN FISHERIES AND AQUACULTURE ORGANISATION (FR)
2. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
3. INSTITUTE OF OCEANOGRAPHY AND FISHERIES (HR)
4. INSTITUT NATIONAL DE RECHERCHE HALIEUTIQUE (MA)
5. THE AGRICULTURAL RESEARCH ORGANISATION OF ISRAEL. THE VOLCANI CENTRE (IL)
6. MINISTRY OF AGRICULTURE (LB)
7. INSTITUT NATIONAL DES SCIENCES ET TECHNOLOGIES DE LA MER (TN)
8. MINISTIRY OF AGRICULTURE AND RURAL AFFAIRS, GENERAL DIRECTORATE OF AGRICULTURAL RESEARCHES, PISTACHIO RESARCH INSTITUTE (TR)
9. NATIONAL INSTITUTE OF OCEANOGRAPHY AND FISHERIES (EG)
10. UNIVERSITE D'ANNABA. LABORATOIRE BIORESSOURCES MARINES (DZ)
11. AQUATT UETP LTD (IE)

FP7-KBBE-2009-3

AQUAMED

The future of research on aquaculture in the Mediteranean Region

www.aquamedproject.net

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

ASEM-AQUACULTURE09

Consolidate alliances with Asia in the field of aquaculture - Mandatory ICPC (China and other ICPC from Asia)

This proposal builds on the outputs of the ASEM Aquaculture Platform, established in 2003 as an EU-Asia framework for dialogue, networking and continuing coordination for sustainable aquaculture development. From 2003-2006, 6 expert workshops targeted key topics (Disease; Health management, Biodiversity ; Ecological impacts, Breeding ; Domestication, Education, Food safety; Legislation, Food security) and yielded valuable recommendations on future directions in research, production and trade. With increasingly critical demands on aquaculture for food supply and food security, income and employment, the vulnerability of the natural resource issues involved, and the important gains to be realised through developing stronger scientific and economic partnerships between the two regions, the aim is to move more pro-actively into effective policy, into formulation of joint research goals, and into outcomes which contribute to Millennium Development and related goals. The project's major aim is to reconcile ecosystem and economic system demands to consolidate concepts of sustainability in aquaculture development in both regions. Specific actions include: 1) validation of earlier recommendations; 2) translating priority recommendations into concrete actions; 3) facilitate industry interaction between the two regions; 4) build and exchange knowledge and its application. The common denominator of the actions is the concerted effort to initiate joint EU-Asia processes which have impact on research excellence, contributing realistically and effectively to good production practice, improved governance, fair trade, social equity and sustainability. In developing these, the ASEM Aquaculture Platform will strengthen opportunities for the EU aquaculture sector to derive value from its technological and structural assets, and develop valuable trade partnerships, using the driver of import product quality to improve product quality and value in both markets.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

997,502

PROJECT N°

245020

DURATION

48 months

PROJECT START DATE

December 2009

LIST OF PARTNERS

1. UNIVERSITEIT GENT (BE)
2. THE UNIVERSITY OF STIRLING (UK)
3. WAGENINGEN UNIVERSITEIT (NL)
4. RESEARCH INSTITUTE FOR FISHERIES, AQUACULTURE AND IRRIGATION (HU)
5. NETWORK OF AQUACULTURE CENTRES IN ASIA-PACIFIC (TH)
6. SHANGHAI OCEAN UNIVERSITY (CN)
7. UNIVERSITI PUTRA MALAYSIA (MY)
8. CAN THO UNIVERSITY (VN)
9. EUROPEAN AQUACULTURE TECHNOLOGY AND INNOVATION PLATFORM (BE)

ASEM Aquaculture Platform

FP7-KBBE-2009-3

www.asemaquaculture.org

ASEM-AQUACULTURE09

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

BECOTEPS

Coordinating the activities of KBBE relevant European Technology Platforms

The nine European Technology Platforms (ETPs) that focus on the Knowledge-Based Bio-Economy (KBBE) join forces in this support action 'BECOTEPS'. The main objectives and the respective activities will be:1) Achieve closer and more coordinated collaboration between the KBBE ETPs. 2) Develop recommendations for better interaction between KBBE ETP stakeholders along the product chains and the sustainability issue regarding multidisciplinary research, application and policy issues. BECOTEPS will help to link science and application by addressing synergies and gaps i) between the SRAs of the ETPs and ii) with respect to the research preparedness of the scientific community by topical workshops on cross-cutting KBBE issues.The first workshop will address trust and collaboration in the food and feed chain, the second the integration of the non-food chains, and the third cross-cutting sustainability issues. The workshop recommendations on research and policy will be summarised in a White Paper.3) Encourage discussions among public research initiatives - European and national and between the public and the private research initiatives to foster implementation of the Strategic Research Agendas based on the recommendations developed between the ETPs. In addition, BECOTEPS will promote the KBBE concept with the European Commission, European Parliament and national ministries in the member states including the relevant ERA-NETs. A small number of dissemination events will be held to discuss the KBBE, recommendations from the workshops on implementing cross-cutting issues from the ETPs' Strategic Research Agendas (including Lead Markets, SMEs, education and training), and future collaboration.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

699,989

PROJECT N°

226526

DURATION

25 months

PROJECT START DATE

March 2009

LIST OF PARTNERS

1. EUROPESE ORGANISATIE VOOR WETENSCHAPPELIJK PLANTENONDERZOEK E.P.S.O. IVZW (BE)
2. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
3. EUROPABIO. THE EUROPEAN ASSOCIATION OF BIOINDUSTRIES (BE)
4. EUROPEAN FORUM OF FARM ANIMAL BREEDERS (NL)
5. EUROPEAN FOREST INSTITUTE (FI)
6. FACHAGENTUR NACHWACHSENDE ROHSTOFFE E.V. (DE)
7. TECHNISCHE UNIVERSITAET DRESDEN (DE)
8. FÉDÉRATION EUROPÉENNE DES PRODUCTEURS AQUACOLES (FR)
9. EUROPEAN CONFEDERATION OF WOODWORKING INDUSTRIES AISBL (BE)
10. PAPIERTECHNISCHE STIFTUNG (DE)
11. FOREST-BASED SECTOR TECHNOLOGY PLATFORM (BE)

FP7-KBBE-2008-2B

BECOTEPS

The Bio-Economy Technology Platforms join forces to address synergies and gaps between their Strategic Research Agendas

www.becoteps.org

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

COMFISH

Strengthening the impact of fisheries related research through dissemination, communication and technology transfer

ComFish takes the view that it is not sufficient to focus on pressing issues in fisheries or on communication impasses between stakeholders in isolation (scientists industry policy makers). A broader view is necessary, and this is very much in line with the ecosystem approach of the revision of the Common Fisheries Policy to be implemented in 2012.

In this frame of mind, ComFish aims to identify important fisheries topics with long term impacts and ascertain whether scientific results have been properly communicated to fisheries stakeholders. If yes, why and how was this done? If not, then the question must be answered which communication needs must be addressed. What are the related challenges, needed actions and possible solutions?

ComFish will identify these topics and through five regional participatory stakeholder events address these communication impasses. Next, ComFish will use the outcome of the events to prepare Information Packages, that include audio-visual materials, and communicate the identified priority issues to a wider circle of stakeholders as well as to EU citizens. Finally, ComFish will organise a Partnering Event to facilitate network building amongst stakeholders, to jointly address and overcome communication impasses and to stimulate collaborations. All activities are supported by a robust science based impact analysis.

ComFish has nine partners in eight EU countries: four are communication specialists and five are institutions engaged in marine research and policy advice. The project benefits from an extensive Advisory Board with representation from all major fisheries stakeholders in Europe as well as over 40 Project Associated Members, mostly FP6/FP7 research project co-ordinators.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,565

PROJECT N°

289610

DURATION

36 months

PROJECT START DATE

February 2012

LIST OF PARTNERS

1. LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN (DE)
2. PROBIO PARTNERS VOF (NL)
3. VISIONS UNLIMITED MEDIEN (DE)
4. INTERNATIONAL ORGANISATION FOR THE DEVELOPMENT OF FISHERIES IN EASTERN AND CENTRAL EUROPE*EUROFISH (DK)
5. MORSKI INSTYTUT RYBACKI. PANSTWOWY INSTYTUT BADAWCZY (PL)
6. HAVFORSKNINGSINSTITUTTET (NO)
7. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
8. ISTITUTO DI RICERCHE ECONOMICHE PERLA PESCA E L'AQUACOLTURA IREPA ONLUS ASSOCIAZIONE (IT)
9. INSTITUTE OF FISHING RESOURCES (BG)

FP7-KBBE-2011-5

COMFISH

Strengthening the impact of fisheries related research through dissemination, communication and technology transfer

www.eusem.com/main/ComFish/comfish

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

CREAM

Improving research in support to scientific advice to fisheries management in the Mediterranean and Black Seas – Mandatory ICPC (Mediterranean Partner Countries and Black Sea region)

The Coordinating Action (hereafter "the project") will establish an effective collaboration network among key role players in Mediterranean and Black Sea fisheries research and management. The participants in the project include national research institutes from Mediterranean and Black Sea countries with a long history and active participation in fisheries research and assessment, who provide advice to national, regional and international fisheries management organisms. The project will seek the active collaboration of regional and international fisheries management organisms as external participants in the project, in order to identify the gaps (in terms of data, knowledge, training, coordination) which hamper at present the full application of the Ecosystem Approach in the management of Mediterranean and Black Sea fisheries. The project will have a strong training and capacity building component in order to help harmonize data collection and methodologies used in fisheries assessment and management in the Mediterranean and Black Sea. The project will serve to establish the guidelines for the application of the Ecosystem Approach to Fisheries in the Mediterranean and Black Sea, both in EU member states and third countries. The project is organized in 6 workpackages: i) Project Coordination ii) Review of current knowledge in data collection and methodological practices in assessment and management iii) Identification of data needs, quality, harmonization, methodologies and models for EAF iv) Establishing coordination with the assessment and management international/regional bodies v) Training and capacity building. Symposium. Dissemination component vi) Strengthening the scientific basis of EAF application in Mediterranean and Black Sea fisheries.

PROJECT COORDINATOR

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- MEDITERRANEAN AGRONOMIC INSTITUTE OF ZARAGOZA / INTERNATIONAL CENTRE FOR ADVANCED MEDITERRANEAN AGRONOMIC STUDIES (ES)

FUNDING SCHEME CSA

EC CONTRIBUTION € 999,137.00

PROJECT N° 265648

DURATION 36 months

PROJECT START DATE May 2011

LIST OF PARTNERS

1. MEDITERRANEAN AGRONOMIC INSTITUTE OF ZARAGOZA / INTERNATIONAL CENTRE FOR ADVANCED MEDITERRANEAN AGRONOMIC STUDIES (ES)
2. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
3. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
4. CONSORZIO PER IL CENTRO INTERUNIVERSITARIO DI BIOLOGIA MARINA ED ECOLOGIA APPLICATA G. BACCI (IT)
5. UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA (IT)
6. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
7. INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT (FR)
8. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
9. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
10. INSTITUT NATIONAL DE RECHERCHE HALIEUTIQUE (MA)
11. INSTITUT NATIONAL DES SCIENCES ET TECHNOLOGIES DE LA MER (TN)
12. EGE UNIVERSITESI (TR)
13. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE MARINA GRIGORE ANTIPA (RO)
14. INSTITUTE OF OCEANOLOGY. BULGARIAN ACADEMY OF SCIENCES (BG)
15. RUSSIAN FEDERAL RESEARCH INSTITUTE OF FISHERIES AND OCEANOGRAPHY (RU)
16. SOUTHERN SCIENTIFIC RESEARCH INSTITUTE OF MARINE FISHERIES AND OCEANOGRAPHY (UA)
17. ALEXANDRIA UNIVERSITY (EG)
18. INSTITUTE OF OCEANOGRAPHY AND FISHERIES (HR)
19. AMERICAN UNIVERSITY OF BEIRUT (LB)
20. MINISTRY FOR RESOURCES AND RURAL AFFAIRS (MT)
21. MINISTRY OF AGRICULTURE, NATURAL RESOURCES AND ENVIRONMENT OF CYPRUS (CY)
22. WATER ECOLOGY AND FISHERIES RESEARCH INSTITUTE UNION (GE)

FP7-KBBE-2010-4

CREAM

Coordinating research in support to application of EAF (Ecosystem Approach to Fisheries) and management advice in the Mediterranean and Black Seas

www.cream-fp7.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

DEEPFISHMAN

Deep sea fisheries management

Deepwater fisheries pose particular difficulties for management. Target species are difficult to assess with high levels of uncertainty, they are generally vulnerable to overfishing and sustainable levels of exploitation are low. Ecosystems are impacted by fishing due to the removal of target species, bycatch of numerous fish and other organisms and the crushing of benthos such as e.g. cold water coral and large sponges. However, the impact of fishing on the deepwater ecosystem in general is poorly quantified. DEEPFISHMAN will develop a range of strategy options for the management of deepwater fisheries in the NE Atlantic that will take account of these factors. Firstly, the aim will be to identify new and more effective assessment methods, reference points, control rules and management strategies to be used in the short term, making better use of available data. Secondly, a reliable long-term framework will be developed for which additional data needs will be specified in order to fill current information gaps to achieve reliable long-term management requirements. This work will be developed by examining a range of case studies selected to reflect the different types of deepwater fishery found in the NE Atlantic. In addition two case studies outside the NE Atlantic are selected to give a wider perception of the management and monitoring of deepwater fisheries elsewhere in the world. For each case study current problems with assessment or management will be identified and new methods will be developed and tested. Recommendations for future methods and approaches will be made. The socio-economic profile and projected impact of the management strategy options as applied both through a short- and long-term framework will be examined for selected fisheries. In this way the project outputs will aim to provide robust guidelines for deepwater fisheries management suitable for adoption within the Common Fishery policy. The work will involve an ICPC country.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,924,156

PROJECT N°

227390

DURATION

36 months

PROJECT START DATE

April 2009

LIST OF PARTNERS

1. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
2. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
3. HASKOLI ISLANDS (IS)
4. HAVFORSKNINGSINSTITUTTET (NO)
5. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
6. MINISTRY OF FISHERIES AND MARINE RESOURCES (NA)
7. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
8. INSTITUTO NACIONAL DE RECURSOS BIOLOGICOS I.P. INRB (PT)
9. MARINE INSTITUTE (IE)
10. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
11. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
12. HAFRANNSOKNASTOFNUNIN (IS)
13. UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION CORPORATION (UK)

FP7-KBBE-2008-2B

Management and monitoring of deep-sea fisheries and stocks

DEEPFISHMAN

www.ifremer.fr/deepfishman

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

ECOFISHMAN

Using results-based management to achieve CFP objectives

EcoFishMan seeks to develop a responsive fisheries management system (RFMS) based on results-based management (RBM) principles. The intended context of application of the RFMS is complex, mixed-fisheries and multi-stakeholder fishery sectors like those found in the EU/Common Fisheries Policy (CFP) area. It will be an ecosystem-based sustainable management system under a precautionary framework that will define maximum acceptable negative impact, target elimination of discards and maintain economic and social viability. EcoFishMan is a multidisciplinary project, involving scientists and stakeholders in activities relating to biology, stock assessment, technology, economy, sociology and legal aspects of fisheries management. The work starts with a review on existing results-based management systems (RBMS), the CFP and tools that aid fisheries management. The next step is identification of outcome targets and development of relevant indicators, which are then visualised through development of a GIS based decision support tool. The RFMS will be designed, developed and evaluated in collaboration between scientists and stakeholders and tested through simulated case studies. This will take place in an iterative process (spiral model) to ensure that the RFMS is adaptive to different types of fisheries and changes in the environment. A roadmap will be produced for the implementation and maintenance of recommendations in the system. In the RFMS, stakeholder involvement is essential and through their active involvement in the development of the system, EcoFishMan aims at improving cooperation and mutual understanding between scientists, policy makers and other stakeholders. Top-down management strategies will be combined with a co-management and bottom-up approach that aims to shift the burden of proof and to involve and benefit stakeholders, offering a fundamentally new approach to fisheries management in Europe.

PROJECT COORDINATOR

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- MATIS OHF (IS)

FUNDING SCHEME

CP

EC CONTRIBUTION €

3,000,000

PROJECT N°

265401

DURATION

36 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. MATIS OHF (IS)
2. INTERNATIONAL ORGANISATION FOR THE DEVELOPMENT OF FISHERIES IN EASTERN AND CENTRAL EUROPE*EUROFISH (DK)
3. CENTRO TECNOLOGICO DEL MAR. FUNDACION CETMAR (ES)
4. BITLAND ENTERPRISE APS (DK)
5. HASKOLI ISLANDS (IS)
6. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
7. NOFIMA AS (NO)
8. UNIVERSITETET I TROMSOE (NO)
9. CENTRO DE CIENCIAS DO MAR DO ALGARVE (PT)
10. INSTITUTO NACIONAL DE RECURSOS BIOLOGICOS I.P. INRB (PT)
11. MAPIX TECHNOLOGIES LTD (UK)
12. THE SCOTTISH MINISTERS ACTING THROUGH MARINE SCOTLAND (UK)
13. SEA FISH INDUSTRY AUTHORITY (UK)
14. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
15. SP/F SYNTESA (FO)

FP7-KBBE-2010-4

Ecosystem-based Responsive Fisheries Management in Europe

ECOFISHMAN

www.ecofishman.com/

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

JAKFISH

Addressing uncertainty and complexity – governance for fisheries management

The project will investigate how different actors in the marine sector, including fisheries, make use of scientific knowledge, how the roles that scientists play help formulate policies and how governance approaches can be developed which enable policy decisions to address uncertainty and complexity based on research and with the participation of stakeholders. The project will collect and build on experiences from a diverse range of EU policy areas which address interactions between human activities and nature. The main objectives of the proposal are to examine and develop the institutions, practices and tools that allow complexity and uncertainty to be dealt with effectively within participatory decision making processes. The proposal will develop these institutions, practices and tools in respect to European marine management with a particular focus on fish harvesting and marine spatial plannin via two linked strategies. Where Strategy One is to develop tools to facilitate participatory decision making processes based on recently developed bio-economic modeling techniques. While Strategy Two carries out a sociological analysis of the practices and institutional forms that can most effectively involve the wider community in debates over developing science-based policies.

PROJECT COORDINATOR

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- STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,775,876

PROJECT N°

212969

DURATION

36 months

PROJECT START DATE

May 2008

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. TARTU ULIKOOL (EE)
3. DANMARKS TEKNISKE UNIVERSITET (DK)
4. HELSINGIN YLIOPISTO (FI)
5. HAVFORSKNINGSINSTITUTTET (NO)
6. UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION CORPORATION (UK)
7. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
8. AALBORG UNIVERSITET (DK)
9. DIALOGIK GEMEINNUETZIGE GESELLSCHAFT FUER KOMMUNIKATIONS- UND KOOPERATIONSFORSCHUNG MBH (DE)
10. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)

FP7-KBBE-2007-1

JAKFISH

Judgement and Knowledge in Fisheries including Stakeholders

www.surfgroepen.nl/sites/jakfish/default.aspx

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

MEFEPO

Governance for an operational regional ecosystem approach to fisheries management

Since the reform of the EU Common Fisheries Policy in 2002, effort has been devoted to addressing the governance, scientific, social and economic issues required to introduce an ecosystem approach to European marine fisheries. Fisheries management needs to support the `three pillars of sustainability" (ecological, social and economic. Fisheries Ecosystem Plans (FEPs) were developed to further the ecosystem approach in fisheries management and as a tool to assist managers consider the ecological, social and economic implications of their decisions. The FP5-funded European Fisheries Ecosystem Plan (EFEP) project developed a FEP for European waters, using the North Sea as a case study. The core concept of the Making the European Fisheries Ecosystem Plan Operational (MEFEPO) project is the delivery of an operational framework for three regional seas. This is the necessary next step in the process. Furthermore, MEFEPO will, based on the lessons learned consider how FEPs can be made operational and developed for other regional areas. MEFEPO will focus on how best to make current institutional frameworks responsive to an ecosystem approach to fisheries management at regional and pan-European levels in accordance with the principles of good governance. This will involve developing new linkages and means of allowing dialogue between the disparate groups of stakeholders, the integration of the considerable body of ecological, fisheries, social and economic research which has been developed in recent years and investigate how existing institutional frameworks need to evolve to incorporate this information and develop both dialogue between the disparate groups of marine stakeholders and develop a decision-making process which integrates a wide breadth of interests. The three areas used by MEFEPO will be the North Sea RAC, North-western Waters RAC and South-western Waters RAC areas.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,909

PROJECT N°

212881

DURATION

36 months

PROJECT START DATE

September 2008

LIST OF PARTNERS

1. THE UNIVERSITY OF LIVERPOOL (UK)
2. INSTITUTO NACIONAL DE RECURSOS BIOLOGICOS I.P. INRB (PT)
3. UNIVERSITE DE BRETAGNE OCCIDENTALE (FR)
4. MARINE INSTITUTE (IE)
5. UNIVERSITETET I TROMSOE (NO)
6. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
7. AALBORG UNIVERSITET (DK)
8. IMAR- INSTITUTO DO MAR (PT)
9. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
10. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2007-1

MEFEPO

Making the European Fisheries Ecosystem Operational

www.liv.ac.uk/mefepo

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

PEGASUS

Exploring the pros & cons and the public perception of GM animals

PEGASUS aims to provide policy support regarding the development, implementation and commercialisation of GM animals, and derivative foods. The results will contribute to the FP7 KBBE by integrating existing social, (including existing public perception) environmental and economic knowledge regarding GM animals. The use of GM in farmed animals (aquatic and terrestrial) will be reviewed. A foresight exercise will be conducted to predict future developments. Two case studies (1 aquatic, 1 terrestrial) will be applied to identify the pro's and con's of GM animals from the perspectives of the production chain (economics, agri-food sector) and the life sciences (human and animal health, environmental impact, animal welfare, sustainable production). Ethical and policy concerns will be refined through application of combined ethical matrix and policy workshops involving EU and non-EU stakeholders. The case studies will be used to demonstrate best practice in public engagement in the policy process. The activities will provide European policy support regarding GM animals and the foods derived from them, taking into account public perceptions, the competitiveness of EU animal production, and riskbenefit assessments linked with human and animal health, environmental impact, and sustainable production. A final stakeholder dissemination workshop will disseminate the results to the EU policy community.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

978,088

PROJECT N°

226465

DURATION

36 months

PROJECT START DATE

August 2009

LIST OF PARTNERS

1. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
2. UNIVERSITA DEGLI STUDI DI PARMA (IT)
3. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. KING'S COLLEGE LONDON (UK)
6. THE UNIVERSITY OF NOTTINGHAM (UK)
7. AGROBIOINSTITUTE (BG)
8. AGRIBIOTECH FOUNDATION (IN)
9. PERSEUS BVBA (BE)
10. INSTITUTE OF FOOD RESEARCH (UK)
11. UNIVERSITETET I BERGEN (NO)
12. WAGENINGEN UNIVERSITEIT (NL)

FP7-KBBE-2008-2B

PEGASUS

Public Perception of Genetically modified Animals - Science, Utility and Society

www.pegasus.wur.nl/UK

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

TAPSIM

Trade and agricultural policies - India

The project offers a qualitative and quantitative analysis of future developments in Indian supply, demand and trade for the main agricultural commodities as well as developments in the food value chain. Working tools are improved and used to evaluate the impact of trade and agricultural policies, structural changes on the Indian agrifood system as well as on world markets. More specifically, the project will include the following actions: Design of an analytical framework for the analysis of future trade and agricultural policy developments (including trade agreements) on supply, demand and trade for the main agricultural commodities in India. Initial suggestions for analysis are cereals, pulses, vegetable oils, cotton, sugar, dairy, meat and fish, fruits and vegetables. Identify the key processes of change in the Indian and global economy and their impacts on the agrifood sector of India. This serves as a basis for understanding future trends. Update, test and improve modelling tools and value chain analysis that will be used as building blocks in this project. Define indicators and develop databases for understanding and forecasting the impacts of policies on future developments of agriculture in India up to 2020. This will be done at regional and national levels, taking into account international trade. Implementation of tools to simulate the impacts of domestic and international trade policy changes and structural changes in the agrifood sector on the Indian agricultural sectors as well as on world markets, with a specific focus on the EU. Dissemination of our findings and interaction with the research and policy community, as well as the key stakeholders in the agrifood sector, both in India and the EU.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,349,500

PROJECT N°

212617

DURATION

36 months

PROJECT START DATE

September 2008

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
3. INTERNATIONAL FOOD POLICY RESEARCH ORGANISATION (IN)
4. CENTRO RICERCHE PRODUZIONI ANIMALI. C.R.P.A. S.P.A. (IT)
5. INDIRA GANDHI INSTITUTE OF DEVELOPMENT RESEARCH (IN)
6. LEIBNIZ INSTITUT FUER AGRARENTWICKUNG IN MITTEL- UND OSTEUROPA (DE)

FP7-KBBE-2007-1

TAPSIM

Trade, Agricultural Policies and Structural Changes in India's Agrifood System; Implications for National and Global Markets

www3.lei.wur.nl/tapsim/index.aspx

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

TRANSDOTT

Boosting the translation of FP projects' results into innovative applications in the field of agriculture, forestry, fisheries and aquaculture

Due to declining stocks and increased fishing pressure there are serious concerns that the present fisheries and fattening industry for Bluefin Tuna (Thunnus thynnus) is not sustainable and that every effort should be made to develop BFT aquaculture. TRANSDOTT represents a “top-down” approach from five SMEs and three non SMEs to build on the scientific results obtained from two previous projects REPRODOTT in (FP5) and SELFDOTT (FP7) and to translate them into a commercially viable innovative marketable application for tuna aquaculture. Starting in April 2012, based on an already established broodstock in a central Mediterranean major SME in Malta, fertilized tuna eggs will be provided in June 2012 and 2013 for larval rearing in three industrial scale hatchery SME´s for rearing scenarios in Spain, Israel and Italy together with two experimental hatcheries in Malta and Israel. RTD will involve the validation of existing protocols with the generation of fingerlings in late summer to be transferred from the industrial hatcheries to grow- out sea cages. Previously tried and tested, successful weaning and grow-out diets from SELFDOTT will be supplied by a subcontractor. The economic viability of these methodologies will be studied and used for the development of commercialization and capitalization of this process to provide sustainable Tuna Aquaculture.

PROJECT COORDINATOR

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- HEINRICH-HEINE-UNIVERSITAET DUESSELDORF (DE)

FUNDING SCHEME

CP

EC CONTRIBUTION €

892,196

PROJECT N°

311904

DURATION

24 months

PROJECT START DATE

April 2012

LIST OF PARTNERS

1. HEINRICH-HEINE-UNIVERSITAET DUESSELDORF (DE)
2. MINISTRY FOR RESOURCES AND RURAL AFFAIRS (MT)
3. ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH LIMITED (IL)
4. MFF LTD (MT)
5. FUTUNA BLUE ESPAÑA SL (ES)
6. ARDAG COOPERATIVE AGRICULTURAL SOCIETY LTD (IL)
7. PANITTICA PUGLIESE. SOCIETA' AGRICOLA SPA (IT)
8. SKRETTING AQUACULTURE RESEARCH CENTRE AS (NO)

FP7-KBBE-2012-6-singlestage

Translation of domestication of thunnus thynnus into an innovative commercial application

TRANSDOTT

n.a.

European Commission

The ocean of tomorrow: joining research forces to meet challenges in ocean management

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

ACCESS

Quantification of climate change impacts on economic sectors in the Arctic

The Arctic is engaged in a deep climatic evolution. This evolution is quite predictable at short (year) and longer scales (several decades), but it is the decadal intermediate scale that is the most difficult to predict. This is because the natural variability of the system is large and dominant at this scale, and the system is highly non linear due to positive and negative feedback between sea ice, the ocean and atmosphere. Already today, due to the increase of the GHG concentration in the atmosphere and the amplification of global warming in the Arctic, the impacts of climate change in the region are apparent, e.g. in the reduction in sea ice, in changes in weather patterns and cyclones or in the melting of glaciers and permafrost. It is therefore not surprising that models clearly predict that Artic sea ice will disappear in summer within 20 or 30 years, yielding new opportunities and risks for human activities in the Arctic. This climatic evolution is going to have strong impacts on both marine ecosystems and human activities in the Arctic. This in turn has large socioeconomic implications for Europe. ACCESS will evaluate climatic impacts in the Arctic on marine transportation (including tourism), fisheries, marine mammals and the extraction of hydrocarbons for the next 20 years; with particular attention to environmental sensitivities and sustainability. These meso-economic issues will be extended to the macro-economic scale in order to highlight trans-sectoral implications and provide an integrated assessment of the socio-economic impact of climate change. An important aspect of ACCESS, given the geostrategic implication of Arctic state changes, will be the consideration of Arctic governance issues, including the framework UNCLOS (United Nations Convention for the Law of the Sea). ACCESS dedicates a full work package to integrate Arctic climate changes, socioeconomic impacts and Arctic governance issues.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

10,978,468

PROJECT N° 265863

DURATION

48 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. UNIVERSITE PIERRE ET MARIE CURIE. PARIS 6 (FR)
2. O.A. SYS. OCEAN ATMOSPHERE SYSTEMS GMBH (DE)
3. NATURAL ENVIRONMENT RESEARCH COUNCIL (UK)
4. INSTITUT FUR WELTWIRTSCHAFT (DE)
5. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UK)
6. ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG (DE)
7. SCHWARZ JOACHIM REINHOLD FRANZ (DE)
8. NOFIMA MARIN AS (NO)
9. HAMBURGISCHE SCHIFFBAU-VERSUCHSANSTALT GMBH (DE)
10. NORSK POLARINSTITUTT (NO)
11. METEOROLOGISK INSTITUTT (NO)
12. FASTOPT GMBH (DE)
13. THE SCOTTISH ASSOCIATION FOR MARINE SCIENCE (UK)
14. KUNGLIGA VETENSKAPSAKADEMIEN (SE)
15. P.P. SHIRSHOV INSTITUTE OF OCEANOLOGY OF RUSSIAN ACADEMY OF SCIENCES (RU)
16. IMPAC OFFSHORE ENGINEERING GMBH (DE)
17. UNIVERSITAT POLITECNICA DE CATALUNYA (ES)
18. DEUTSCHES ZENTRUM FUER LUFT. UND RAUMFAHRT EV (DE)
19. ARCTIC AND ANTARCTIC RESEARCH INSTITUTE (RU)
20. ECONOMIC AND SOCIAL RESEARCH INSTITUTE (IE)
21. LAPIN YLIOPISTO (FI)
22. SINTEF FISKERI OG HAVBRUK AS (NO)
23. CICERO SENTER KLIMAFORSKNING STIFTELSE (NO)
24. STIFTELSEN SINTEF (NO)
25. GESELLSCHAFT ZUR FORDERUNG DES ENERGIEWIRTSCHAFTLICHEN INSTITUTS AN DER UNIVERSITAT ZU KOLN GGMBH. EWI (DE)
26. LE CERCLE POLAIRE ASSOCIATION (FR)
27. BELUGA SHIPPING GMBH (DE)
28. NORDIC BULK CARRIERS AS (DK)

FP7-OCEAN-2010

Arctic Climate Change, Economy and Society

ACCESS

www.access-eu.org

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

COCONET

Knowledge-base and tools for regional networks of MPAs, integrated management of activities together with assessment of wind energy potential in the Mediterranean and the Black Sea

The project will identify groups of putatively interconnected MPAs in the Mediterranean and the Black Seas, shifting from local (single MPA) to regional (network of MPAs) and basin (network of networks) scales. The identification of physical and biological connections will clear the processes that govern patterns of biodiversity distribution. This will enhance policies of effective environmental management, also to ascertain if the existing MPAs are sufficient for ecological networking and to suggest how to design further protection schemes, based on effective exchanges between protected areas. The coastal focus will be widened to off shore and deep sea habitats, comprising them in MPAs networks. These activities will also individuate areas where Offshore Wind Farms might become established, avoiding too sensitive habitats but acting as stepping stones through MPAs. Socioeconomic studies will integrate to knowledge-based environmental management aiming at both environmental protection (MPAs) and clean energy production (OWF). Current legislations are crucial to provide guidelines to find legal solutions to problems on the use of maritime space. Two pilot projects (one in the Mediterranean Sea and one in the Black Sea) will test in the field the assumptions of theoretical approaches. The project covers a high number of Countries and involves researchers covering a vast array of subjects, developing a timely holistic approach and integrating the Mediterranean and Black Seas scientific communities through intense collective activities and a strong communication line with stakeholders and the public at large. The project will produce the guidelines to design, manage and monitor networks of MPAs, and an enriched wind atlas for both the Mediterranean and the Black Seas, creating a permanent network of excellent researchers (e.g. with summer schools) that will work together also in the future, making their expertise available to their Countries and to the European Union.

PROJECT COORDINATOR
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FUNDING SCHEME CP

EC CONTRIBUTION €
9,000,000

PROJECT N° 287844

DURATION 48 months

PROJECT START DATE
February 2012

LIST OF PARTNERS
1. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
2. CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE SCIENZE DEL MARE (IT)
3. 3E N.V. (BE)
4. UNIVERSITY OF THE AEGEAN-RESEARCH UNIT (EL)
5. CLU SRL (IT)
6. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
7. COISPA TECNOLOGIA & RICERCA SCARL (IT)
8. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
9. DANMARKS TEKNISKE UNIVERSITET (DK)
10. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU GEOLOGIE SI GEOECOLOGIE MARINA-GEOECOMAR (RO)
11. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
12. INSTITUT PO BIORAZNOOBRAZIE I EKOSISTEMNI IZSLEDVANIYA BALGARSKA AKADEMIYA NA NAUKITE (BG)
13. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
14. UNIVERSIDAD DE CANTABRIA (ES)
15. INSTITUT NATIONAL AGRONOMIQUE DE TUNISIE (TN)
16. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE MARINA GRIGORE ANTIPA (RO)
17. ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH LIMITED (IL)
18. ISTANBUL UNIVERSITY (TR)
19. MIDDLE EAST TECHNICAL UNIVERSITY (TR)
20. MARINE HYDROPHYSICAL INSTITUTE, UKRAINIAN NATIONAL ACADEMY OF SCIENCES (UA)
21. NATUREBUREAU LIMITED (UK)
22. THE NATIONAL ENVIRONMENTAL AGENCY (GE)
23. NENUPHAR SARL (FR)
24. STIFTELSEN NANSEN SENTER FOR FJERNMAALING (NO)
25. NATIONAL INSTITUTE OF OCEANOGRAPHY AND FISHERIES (EG)
26. ODESSA BRANCH INSTITUTE OF BIOLOGY OF SOUTHERNS SEAS NATIONAL ACADEMY OF SCIENCE OF UKRAINE (UA)
27. P.P. SHIRSHOV INSTITUTE OF OCEANOLOGY OF RUSSIAN ACADEMY OF SCIENCES (RU)
28. UNIVERSITY OF ZADAR (HR)
29. FONDACIONI ZOJA E KESHILLIT TE MIRE (AL)
30. UNIVERSITA TA MALTA (MT)
31. JAVNA USTANOVA UNIVERZITET CRNE GORE PODGORICA (ME)
32. UNIVERSITAET ROSTOCK (DE)
33. SOFIISKI UNIVERSITET SVETI KLIMENT OHRIDSKI (BG)
34. UNIVERSITE DU SUD TOULON VAR (FR)
35. INSTITUTE OF OCEANOLOGY, BULGARIAN ACADEMY OF SCIENCES (BG)
36. UKRAINIAN SCIENTIFIC CENTRE OF ECOLOGY OF THE SEA (UA)
37. A.O. KOVALEVSKIY INSTITUTE OF BIOLOGY OF SOUTHERN SEAS (UA)
38. RUSSIAN STATE HYDROMETEOROLOGICAL UNIVERSITY (RU)
39. SINOP UNIVERSITY*SINOP FISHERIES FACULTY SNU FF (TR)

FP7-OCEAN-2011

COCONET

Towards COast to COast NETworks of marine protected areas (from the shore to the high and deep sea), coupled with sea-based wind energy potential.

www.coconet-fp7.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

MICRO B3

Marine microbial diversity – new insights into marine ecosystems functioning and its biotechnological potential

Micro B3 will develop innovative bioinformatic approaches and a legal framework to make large-scale data on marine viral, bacteria; archaeal and protists genomes and metagenomes accessible for marine ecosystems biology and to define new targets for biotechnological applications. Micro B3 will build upon a highly interdisciplinary consortium of 32 academic and industrial partners comprising world-leading experts in bioinformatics, computer science, biology, ecology, oceanography, bioprospecting and biotechnology, as well as legal aspects.

Micro B3 is based on a strong user- and data basis from ongoing European sampling campaigns to long-term ecological research sites. For the first time a strong link between oceanographic and molecular microbial research will be established to integrate global marine data with research on microbial biodiversity and functions. The Micro B3 Information System will provide innovative open source software for data-processing, -integration, -visualisation, and -accessibility. Interoperability will be the key for seamless data transfer of sequence and contextual data to public repositories. Micro B3 will allow taking full advantage of current sequencing technologies to efficiently exploit large-scale sequence data in an environmental context. Micro B3 will create integrated knowledge to inform marine ecosystems biology and modelling. Moreover, it will facilitate detecting candidate genes to be explored by targeted laboratory experiments for biotechnology and for assigning potential functions to unknown genes. Micro B3 will develop clear IP agreements for the protection and sustainable use of pre-competitive microbial genetic resources and their exploitation in high potential commercial applications.

To underline the translational character of Micro B3, outreach and training activities for diverse stakeholders are planned as well as an Ocean Sampling Day to transparently make project results accessible and gain valuable user feedback.

PROJECT COORDINATOR
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FUNDING SCHEME CP

EC CONTRIBUTION € 8,987,491

PROJECT N° 287589

DURATION 48 months

PROJECT START DATE January 2012

LIST OF PARTNERS
1. JACOBS UNIVERSITY BREMEN GGMBH (DE)
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5. ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG (DE)
6. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
7. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
8. STAZIONE ZOOLOGICA ANTON DOHRN (IT)
9. MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM (UK)
10. VIB (BE)
11. TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU (TR)
12. MARIENE INFORMATIE SERVICE MARIS BV (NL)
13. INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA (DK)
14. VLAAMS INSTITUUT VOOR DE ZEE VZW (BE)
15. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
16. EUROPEAN MOLECULAR BIOLOGY LABORATORY (DE)
17. COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (FR)
18. UNIVERSITAET BREMEN (DE)
19. RIJKSUNIVERSITEIT GRONINGEN (NL)
20. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
21. BANGOR UNIVERSITY (UK)
22. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
23. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
24. COMMISSION INTERNATIONALE POUR L'EXPLORATION SCIENTIFIQUE DE LA MER MEDITERRANEE (CIESM) (MC)
25. UNION INTERNATIONALE POUR LA CONSERVATION DE LA NATURE ET DE SES RESSOURCES (CH)
26. WESNIGK JOHANNA B (DE)
27. MATIS OHF (IS)
28. BIO-ILIBERIS RESEARCH AND DEVELOPMENT (ES)
29. DRUSTVO ZA USLUGI I TRGOVIJA INTERWORKS UVOZ-IZVOZ DOOEL BITOLA (MK)
30. RIBOCON GMBH (DE)
31. BIO-PRODICT BV (NL)
32. PHARMAMAR, S.A.U. (ES)

FP7-OCEAN-2011

MICRO B3

Marine Microbial Biodiversity, Bioinformatics and Biotechnology

www.microb3.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

VECTORS

Vectors of changes in marine life, impact on economic sectors

Marine life makes a substantial contribution to the economy and society of Europe. VECTORS will elucidate the drivers, pressures and vectors that cause change in marine life, the mechanisms by which they do so, the impacts that they have on ecosystem structures and functioning, and on the economics of associated marine sectors and society. VECTORS will particularly focus on causes and consequences of invasive alien species, outbreak forming species, and changes in fish distribution and productivity. New and existing knowledge and insight will be synthesised and integrated to project changes in marine life, ecosystems and economies under future scenarios for adaptation and mitigation in the light of new technologies, fishing strategies and policy needs. VECTORS will evaluate current forms and mechanisms of marine governance in relation to the vectors of change. Based on its findings, VECTORS will provide solutions and tools for relevant stakeholders and policymakers, to be available for use during the lifetime of the project.The project will address a complex array of interests comprising areas of concern for marine life, biodiversity, sectoral interests, regional seas, and academic disciplines as well as the interests of stakeholders. VECTORS will ensure that the links and interactions between all these areas of interest are explored, explained, modelled and communicated effectively to the relevant stakeholders. The VECTORS consortium is extremely experienced and genuinely multidisciplinary. It includes a mixture of natural scientists with knowledge of socio-economic aspects, and social scientists (environmental economists, policy and governance analysts and environmental law specialists) with interests in natural system functioning. VECTORS is therefore fully equipped to deliver the integrated interdisciplinary research required to achieve its objectives with maximal impact in the arenas of science, policy, management and society.

PROJECT COORDINATOR
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FUNDING SCHEME CP

EC CONTRIBUTION €
12,484,835

PROJECT N° 266445

DURATION 48 months

PROJECT START DATE
February 2011

LIST OF PARTNERS
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2. THE UNIVERSITY COURT OF THE UNIVERSITY OF ST ANDREWS (UK)
3. ACONDICIONAMIENTO TARRASENSE ASSOCIACION (ES)
4. CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE SCIENZE DEL MARE (IT)
5. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)
6. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
7. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
8. TARTU ULIKOOL (EE)
9. WAGENINGEN UNIVERSITEIT (NL)
10. STICHTING DELTARES (NL)
11. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
12. UNIVERSITY OF HULL (UK)
13. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
14. ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH LIMITED (IL)
15. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
16. AALBORG UNIVERSITET (DK)
17. UNIVERSITÀ DI PISA (IT)
18. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
19. FONDAZIONE ENI ENRICO MATTEI (IT)
20. UNIVERSITAET HAMBURG (DE)
21. DANMARKS TEKNISKE UNIVERSITET (DK)
22. GOLLASCH STEPHAN. GOLLASCH CONSULT (DE)
23. UNIVERSITE DE BRETAGNE OCCIDENTALE (FR)
24. BANGOR UNIVERSITY (UK)
25. KLAIPEDOS UNIVERSITETAS (LT)
26. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
27. INSTYTUT OCEANOLOGII. POLSKIEJ AKADEMII NAUK (PL)
28. KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN. KNAW (NL)
29. SIR ALISTER HARDY FOUNDATION FOR OCEAN SCIENCE (UK)
30. UNIVERSITA DEGLI STUDI DI PAVIA (IT)
31. INSTITUT SUPERIEUR DES SCIENCES AGRONOMIQUES, AGROALIMENTAIRES, HORTICOLES ET DU PAYSAGE (FR)
32. UNIVERSITE DE ROUEN (FR)
33. COMMUNITY OF EUROPEAN SHIPYARDS ASSOCIATIONS ASBL (BE)
34. UNIVERZA V LJUBLJANI (SI)
35. ISTITUTO NAZIONALE DI OCEANOGRAFIA E DI GEOFISICA SPERIMENTALE OGS (IT)
36. INSTITUT FUER OSTSEEFORSCHUNG WARNEMUENDE AN DER UNIVERSITAET ROSTOCK (DE)
37. AARHUS UNIVERSITET (DK)
38. COMMISSION INTERNATIONALE POUR L'EXPLORATION SCIENTIFIQUE DE LA MER MEDITERRANEE (CIESM) (MC)

FP7-OCEAN-2010

VECTORS

Vectors of Change in Oceans and Seas Marine Life, Impact on Economic Sectors

www.marine-vectors.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

PERSEUS

Policy-oriented marine Environmental Research in the Southern EUropean Seas

The overall scientific objectives of PERSEUS are to identify the interacting patterns of natural and human-derived pressures on the Mediterranean and Black Seas, assess their impact on marine ecosystems and, using the objectives and principles of the Marine Strategy Framework Directive as a vehicle, to design an effective and innovative research governance framework based on sound scientific knowledge. Well-coordinated scientific research and socio-economic analysis will be applied at a wide-ranging scale, from basin to coastal. The new knowledge will advance our understanding on the selection and application of the appropriate descriptors and indicators of the MSFD. New tools will be developed in order to evaluate the current environmental status, by way of combining monitoring and modelling capabilities and existing observational systems will be upgraded and extended. Moreover, PERSEUS will develop a concept of an innovative, small research vessel, aiming to serve as a scientific survey tool, in very shallow areas, where the currently available research vessels are inadequate.

In view of reaching Good Environmental Status (GES), a scenario-based framework of adaptive policies and management schemes will be developed. Scenarios of a suitable time frame and spatial scope will be used to explore interactions between projected anthropogenic and natural pressures. A feasible and realistic adaptation policy framework will be defined and ranked in relation to vulnerable marine sectors/groups/regions in order to design management schemes for marine governance. Finally, the project will promote the principles and objectives outlined in the MSFD across the SES.

Leading research Institutes and SMEs from EU Member States, Associated States, Associated Candidate countries, non-EU Mediterranean and Black Sea countries, will join forces in a coordinated manner, in order to address common environmental pressures, and ultimately, take action in the challenge of achieving GES.

PROJECT COORDINATOR
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FUNDING SCHEME CP

EC CONTRIBUTION € 12,973,123.40

PROJECT N° 287600

DURATION 48 months

PROJECT START DATE January 2012

LIST OF PARTNERS
1. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
2. MIDDLE EAST TECHNICAL UNIVERSITY (TR)
3. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
4. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
5. CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE SCIENZE DEL MARE (IT)
6. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU GEOLOGIE SI GEOECOLOGIE MARINA-GEOECOMAR (RO)
7. PLAN BLEU POUR L'ENVIRONNEMENT ET LE DEVELOPPEMENT EN MEDITERRANNEE (FR)
8. COSNAV ENGINEERING SRL (IT)
9. UNIVERSITA TA MALTA (MT)
10. EIR SYMVOULOI ANAPTYXIS ETAIREIA PERIORISMENIS EFTHYNIS (EL)
11. BC3 BASQUE CENTRE FOR CLIMATE CHANGE. KLIMA ALDAKETA IKERGAI (ES)
12. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
13. UNIVERSITAT DE BARCELONA (ES)
14. UNIVERSITAT POLITECNICA DE CATALUNYA (ES)
15. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
16. UNIVERSITE D'AIX MARSEILLE (FR)
17. UNIVERSITE PIERRE ET MARIE CURIE. PARIS 6 (FR)
18. UNIVERSITE PAUL SABATIER TOULOUSE III (FR)
19. CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL (IT)
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21. AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE,L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE (IT)
22. JRC-JOINT RESEARCH CENTRE - EUROPEAN COMMISSION (BE)
23. ISTITUTO NAZIONALE DI OCEANOGRAFIA E DI GEOFISICA SPERIMENTALE. OGS (IT)
24. STAZIONE ZOOLOGICA ANTON DOHRN (IT)
25. PLYMOUTH MARINE LABORATORY (UK)
26. UNIVERSITY OF PLYMOUTH (UK)
27. STICHTING DELTARES (NL)
28. UNIVERSITEIT UTRECHT (NL)
29. UNIVERSITE DE LIEGE (BE)
30. UNIVERSITY OF THE AEGEAN-RESEARCH UNIT (EL)
31. NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS (EL)
32. PANEPISTIMIO KRITIS (UNIVERSITY OF CRETE) (EL)
33. THE CYPRUS RESEARCH AND EDUCATIONAL FOUNDATION (CY)
34. UNIVERSITY OF CYPRUS (CY)
35. NACIONALNI INSTITUT ZA BIOLOGIJO (SI)
36. INSTITUTE OF OCEANOGRAPHY AND FISHERIES (HR)
37. ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH LIMITED (IL)
38. UNIVERSITY OF HAIFA (IL)
39. BLACK SEA NGO NETWORK (BG)
40. SOFIISKI UNIVERSITET SVETI KLIMENT OHRIDSKI (BG)
41. INSTITUT PO BIORAZNOOBRAZIE I EKOSISTEMNI IZSLEDVANIYA BALGARSKA AKADEMIYA NA NAUKITE (BG)
42. INSTITUTE OF OCEANOLOGY, BULGARIAN ACADEMY OF SCIENCES (BG)
43. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE MARINA GRIGORE ANTIPA (RO)
44. ISTANBUL UNIVERSITY (TR)
45. A.O. KOVALEVSKIY INSTITUTE OF BIOLOGY OF SOUTHERN SEAS (UA)
46. MARINE HYDROPHYSICAL INSTITUTE, UKRAINIAN NATIONAL ACADEMY OF SCIENCES (UA)
47. ODESSA NATIONAL I.I. MECHNIKOV UNIVERSITY (UA)
48. P.P. SHIRSHOV INSTITUTE OF OCEANOLOGY OF RUSSIAN ACADEMY OF SCIENCES (RU)
49. IVANE JAVAKHISHVILI TBILISI STATE UNIVERSITY (GE)
50. NATIONAL INSTITUTE OF OCEANOGRAPHY AND FISHERIES (EG)
51. INSTITUT NATIONAL DE RECHERCHE HALIEUTIQUE (MA)
52. CLU SRL (IT)
53. ECOLOGIC INSTITUT GEMEINNÜTZIGE GMBH (DE)
54. SAROST SA (TN)

FP7-OCEAN-2011

The Ocean of Tomorrow

PERSEUS

www.perseus-net.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

TROPOS

Modular Multi-use Deep Water Offshore Platform Harnessing and Servicing Mediterranean, Subtropical and Tropical Marine and Maritime Resources

The key objective of the TROPOS project is the development of a floating modular multi-use platform system for use in deep waters, with an initial geographic focus on the Mediterranean, Tropical and Sub-Tropical regions but designed to be flexible enough not to be limited in geographic scope.

The TROPOS approach is centered on the modular development where different types of modules can be combined as appropriate in each area. In this way, the TROPOS multi-use platform system is able to integrate a range of functions from the transport, energy, aquaculture and leisure sectors, in a greater number of geographical areas than if it was a set platform design. This subsequently provides greater opportunities for profitability.

The TROPOS design will focus on a floating multi-purpose structure able to operate in, and exploit, deep waters, where fixed structures such as those piled in the seabed are not feasible. The multi-use platforms developed from the concept designs will have the potential to provide European coastal regions with appropriate aquaculture systems, innovative transport services as well as leisure and offshore energy solutions.

The main S/T objectives of the project are:

- To determine, based on both numerical and physical modeling, the optimal locations for multi-use offshore platforms in Mediterranean, sub-tropical and tropical latitudes
- To research the relations between oceanic activities, including wind energy, aquaculture, transport solutions for shipping, and other additional services
- To develop novel, cost-efficient and modular multi-use platform designs, that enable optimal coupling of the various services and activities
- To study the logistical requirements of the novel multi-use platform
- To assess the economic feasibility and viability of the platform
- To develop a comprehensive environmental impact methodology and assessment
- To configure at least three complete solutions, for the Mediterranean, Sub-tropical and tropical areas

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

4,877,911

PROJECT N°

288192

DURATION

36 months

PROJECT START DATE

February 2012

LIST OF PARTNERS

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2. THE UNIVERSITY OF EDINBURGH (UK)
3. UNIVERSITAET BREMEN (DE)
4. WAVE ENERGY CENTRE. CENTRO DE ENERGIA DAS ONDAS (PT)
5. UNIVERSIDAD POLITECNICA DE MADRID (ES)
6. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V (DE)
7. TOULON VAR TECHNOLOGIES (FR)
8. NORSK INSTITUTT FOR VANNFORSKNING (NO)
9. DANMARKS TEKNISKE UNIVERSITET (DK)
10. INSTALACIONES INABENSA SA (ES)
11. PHYTOLUTIONS GMBH (DE)
12. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
13. NATIONAL SUN YAT-SEN UNIVERSITY (TW)
14. ADVANCE INTELLIGENT DEVELOPMENTS S.L. (ES)
15. BUREAU VERITAS-REGISTRE INTERNATIONAL DE CLASSIFICATION DE NAVIRES ET D AERONEFS SA (FR)
16. ECOLE CENTRALE DE NANTES. (FR)
17. ENEROCEAN S.L. (ES)
18. UNIVERSITY OF STRATHCLYDE (UK)

FP7-OCEAN-2011

Multi-use offshore platforms

TROPOS

www.troposplatform.eu

European Commission

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

MERMAID

Innovative Multi-purpose off-shore platforms: planning, Design and operation

European oceans will be subject to massive development of marine infrastructure in the near future. The most obvious is the energy facilities e.g. offshore wind farms, exploitation of wave energy, expansion of electricity connections, and also further development and implementation of marine aquaculture. This will also lead to an increased need for marine infrastructure to support installation and the on-going operation of the facilities. However both economical costs and environmental impact have to be reduced in order to increase the feasibility of the use of ocean space.

Marine structures for offshore wind farms and aquaculture have to be installed at various sites and on much larger scale than earlier implementation of offshore structures in order to fulfil EU strategies (1) for reduction of fossil-based energy and (2) to become a major player in sustainable aquaculture. However the feasibility is much more sensitive to the costs of structures and the installation of the structures than for instance Oil & Gas facilities.

Novel innovative design concepts should address different physical conditions in order to make the best use of the ocean space.

Going from deep water (north of Spain) to shallow water with high morphological activity (the Wadden sea) and further to inner waters like the inner Danish/Baltic areas and the Adriatic sea changes the focus from a strong physical aspect to environmental impact. This will make it possible to develop, test and integrate different technologies but also to address site specific challenges.

Both for offshore renewables and for aquaculture a substantial part of the costs is variable cost related to operations and maintenance of the plants. It is obvious that optimization of the use of ocean space for different purposes might benefit from shared resources such staff allocation, transportation of staff and material from and to the platforms, use of forecasting systems, ships etc.

FP7-OCEAN-2011

MERMAID

Multi-use offshore platforms

www.mermaidproject.eu

European Commission

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,483,411

PROJECT N°

288710

DURATION

48 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. DANMARKS TEKNISKE UNIVERSITET (DK)
2. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
3. UNIVERSIDAD DE CANTABRIA (ES)
4. STICHTING DELTARES (NL)
5. DHI (DK)
6. ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS. RESEARCH CENTER (EL)
7. VLAAMS INSTITUUT VOOR DE ZEE VZW (BE)
8. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
9. STATOIL PETROLEUM AS (NO)
10. ISTITUTO SUPERIORE PER LA PROTEZIONE E LA RICERCA AMBIENTALE (IT)
11. TECHNISCHE UNIVERSITAET BRAUNSCHWEIG (DE)
12. HAVFORSKNINGSINSTITUTTET (NO)
13. THE CYPRUS RESEARCH AND EDUCATIONAL FOUNDATION (CY)
14. HORTIMARE BV (NL)
15. UNIVERSITA DEGLI STUDI ROMA TRE (IT)
16. HVALPSUND NET AS (DK)
17. BOLDING & BURCHARD APS (DK)
18. INSTYTUT BUDOWNICTWA WODNEGO POLSKIEJ AKADEMII NAUK (PL)
19. ISTANBUL TEKNIK UNIVERSITESI (TR)
20. CHALMERS TEKNISKA HOEGSKOLA AB (SE)
21. MUSHOLM AS (DK)
22. DANSK AKVAKULTUR FORENING (DK)
23. UNIVERSITY OF DUNDEE (UK)
24. STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND (NL)
25. DONG ENERGY POWER AS* (DK)
26. ENEL INGEGNERIA E RICERCA SPA (IT)
27. KEFALONIA FISHERIES INDUSTRIAL AND COMMERCIAL COMPANY AE (EL)
28. NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS (EL)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

H2OCEAN

Development of a wind-wave power open-sea platform equipped for hydrogen generation with support for multiple users of energy

The rational exploitation of oceans' space and resources is increasingly seen as crucial to enhance European competitiveness in key areas such as Renewable Energy and Aquaculture. The H2OCEAN consortium aims at developing an innovative design for an economically and environmentally sustainable multi-use open-sea platform. The H2OCEAN platform will harvest wind and wave power, using part of the energy on-site for multiple applications – including a multi-trophic aquaculture farm, and convert on-site the excess energy into hydrogen that can be stored and shipped to shore as green energy carrier. The project builds on already on-going R&D and commercial activities of a partnership involving European leading industrial and academic partners from 5 countries within the fields of renewable energy, fish farming, hydrogen generation, radar systems, maritime transports and related research disciplines. The unique feature of the H2OCEAN concept, besides the integration of different activities into a shared multi-use platform, lies in the novel approach for the transmission of offshore-generated renewable electrical energy through hydrogen. This concept allows effective transport and storage the energy decoupling energy production and consumption, thus avoiding the grid imbalance problem inherent to current offshore renewable energy systems. Additionally, this concept also circumvents the need for a cable transmission system which takes up a significant investment share for offshore energy generation infrastructures, increasing the price of energy. The envisaged integrated concept will permit to take advantage of several synergies between the activities within the platform significantly boosting the Environmental, Social and Economic potential impact of new maritime activities, increasing employment and strengthening European competitiveness in key economic areas.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

4,525,934

PROJECT N°

288145

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. METEOSIM TRUEWIND S.L. (ES)
2. VIRTUALPIE LTD (UK)
3. DEXA WAVE ENERGY APS (DK)
4. UNIVERSIDAD DE VALLADOLID (ES)
5. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V (DE)
6. CHLAMYS S.R.L (IT)
7. VIKING FISH FARMS LIMITED (UK)
8. INSTITUT FUER SEEVERKEHRSWIRTSCHAFT UND LOGISTIK (DE)
9. DANMARKS TEKNISKE UNIVERSITET (DK)
10. SETA SOCIEDAD ESPANOLA DE TRATAMIENTO DE AGUA SL (ES)
11. FUSION MARINE LIMITED (UK)
12. TREELOGIC TELEMATICA Y LOGICA RACIONAL PARA LA EMPRESA EUROPEA SL (ES)
13. D'APPOLONIA SPA (IT)
14. UNIVERSIDAD DE OVIEDO (ES)
15. IT POWER LTD (UK)
16. CRANFIELD UNIVERSITY (UK)
17. SUSTAINABLE TECHNOLOGIES SL (ES)

FP7-OCEAN-2011

Multi-use offshore platforms

H2OCEAN

www.h2ocean-project.eu

European Commission

ACTIVITY 2.2 Fork to farm: food (including seafood), health and well-being

ACTIVITY 2.2 - FORK TO FARM

AFTER

Sharing food technology research and development by means of international collaboration – SICA

AFTER aims to revisit traditional African products, knowledge and know-how in the light of new technologies for the benefit of consumers, producers and processors in Africa and Europe. By applying European science and technology to African traditional food products, AFTER seeks to turn research into quantifiable and innovative technologies and products that are commercially viable in both European and African markets.
The 10 selected products representing 3 families of foods, (fermented cereal-based, fermented salted fish and meat, and vegetable and fruit based functional foods), fit into a matrix of technologies and processes shared between Europe and Africa that will be jointly developed within the framework of AFTER. The 10 products will be characterised according to existing knowledge on technologies and processes. The improved products, produced through reengineering and new processing technologies, will be tested for consumer acceptance, safety and nutritional quality. The market and entry requirement for new products will be assessed. Involving EU and African companies in production trials for the improved products will translate the results into ready-to-use information for food companies. AFTER has 8 workpackages: Management and Coordination; Characterisation of traditional products and know-how; Process reengineering of fermented cereal based products; Process reengineering of meat and fish products; Process reengineering for traditional functional foods; Consumer and market acceptance; Appropriation of the improved processes and technologies and Dissemination and exploitation. Creating new markets and trade opportunities for improved traditional foods and novel products in Europe and Africa will increase economic returns for all stakeholders involved in the production chain, down to the community level. Due consideration will be accorded to regulatory, ethical and IPR issues while also protecting the intellectual rights of Africans.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,929,585

PROJECT N°

245025

DURATION

45 months

PROJECT START DATE

September 2010

LIST OF PARTNERS

1. CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
2. UNIVERSITE D ABOMEY CALAVI UAC (BJ)
3. COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (ZA)
4. ALEXANDRIA UNIVERSITY (EG)
5. UNIVERSITY OF ANTANANARIVO (MG)
6. ASSOCIATION DE COORDINATION TECHNIQUE POUR L'INDUSTRIE AGROALIMENTAIRE (FR)
7. UNIVERSITE CHEIKH ANTA DIOP DE DAKAR (SN)
8. UNIVERSITE DE NGOUNDERE (CM)
9. UNIVERSIDADE CATOLICA PORTUGUESA (PT)
10. UNIVERSITY OF GREENWICH (UK)
11. ASSOCIATION AFRIQUE AGRO EXPORT (SN)
12. SPREAD EUROPEAN SAFETY GEIE (IT)
13. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
14. COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (GH)
15. RACINES SA (FR)
16. NATIONAL RESEARCH CENTER (EG)

FP7-KBBE-2009-3

African Food Tradition Revisited by Research

AFTER

www.after-fp7.eu

European Commission

ACTIVITY 2.2 - FORK TO FARM

COLORSPORE

(Bio-)technologies for the production of food additives, colorants and flavours

Functional foods provide a buoyant growth sector and the use of carotenoids is the most dynamic not only as colorants but as food additives. One issue with these products is their instability both on the shelf and upon digestion. Recently, gastric-stable bacterial-derived carotenoid preparations have been discovered by members of this consortium and these 2nd generation carotenoid preparations, and the bacteria that produce them will be studied. Existing prototypes will be developed as potential food additives but an extensive screen for new 2nd generation prototypes will also be made from marine environments. The consortium includes microbiologists, biochemists and food bio-technologists and will determine the identity of new carotenoid preparations and the bacteria that produce them. The nutritional value of these bacteria will be assessed and a risk-benefit assessment made using modern metabolomic technologies as well as traditional toxicology in order to designate the prototypes as QPS (ie, qualified presumption of safety). Bioprocessing of these bacterial carotenoid preparations will eliminate traditional chemical synthesis and the use of organic solvents. Also the delivery system will utilise a synergistic biological matrix making it a sustainable source. The use of these bacteria as colour-nutritional additives will be assessed by process optimisations, colour and texture analysis. The consortium includes 9 partners, including one ICPC and one associated country. Two IND partners, one an SME, will work together to exploit prototypes as additives, colourants and as functional foods. This will include patenting, licensing and the opening of new markets. Both IND partners are looking for new markets in the food additive/functional food sector and this project will enable them to identify new markets. The project will directly impact the food industry by developing new, natural as well as novel food additives and ingredients that can replace synthetic ones.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,101

PROJECT N°

207948

DURATION

42 months

PROJECT START DATE

June 2008

LIST OF PARTNERS

1. ROYAL HOLLOWAY AND BEDFORD NEW COLLEGE. (UK)
2. JOHANN WOLFGANG GOETHE UNIVERSITAET FRANKFURT AM MAIN (DE)
3. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. (IT)
4. AQUAPHARM BIODISCOVERY LIMITED (UK)
5. THE UNIVERSITY OF MEDICINE & PHARMACY AT HO CHI MINH CITY (VN)
6. TECHNICAL UNIVERSITY OF ISTANBUL (TR)
7. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (INRA) (FR)
8. NESTEC S.A (CH)

FP7-KBBE-2007-1

COLORSPORE

New Sources of Natural, Gastric Stable, Food Additives, Colourants and Novel Functional Foods

n.a.

European Commission

ACTIVITY 2.2 - FORK TO FARM

BASELINE

Food sampling strategies for risk analysis

Food Safety Objectives (FSO) and Performance Objectives (PO) are new criteria complementing the existing concepts of microbiological criteria and MRL for many chemical contaminants. However, to achieve these objectives it is critically important a harmonisation of food safety control procedures. BASELINE project intends to obtain the following objectives: 1) To review the sampling schemes currently available for food authorities and food producers to perform food safety quantitative risk assessment in a European level; 2) To assess the relevance and suitable limit values of POs and FSOs for biological and chemical risks; 3) To evaluate the need for new or adapted methods for sampling and testing of the risk factors identified. The selected protocols and methods should be able to produce suitable data for risk analysis; 4) To develop predictive mathematical models for biological risks and investigate and model sources and pathways of chemical contaminants to improve sampling schemes; 5) To validate and harmonise the sampling schemes developed in the project and alternative detection methods; 6) To share and disseminate the scientific knowledge deriving from the project to stakeholders.The BASELINE work plan has been divided in 9 work packages: WP1- management, WP2-WP6 sampling protocols for specific food matrixes, WP7-risk modelling, WP8-validation and harmonisation of sampling protocols, WP9-dissemination and training.The major output of the project is to generate new knowledge on sampling schemes for risk assessment by using a mathematical approach for different groups of food products as seafood, eggs and egg products, fresh meats, milk and dairy products and plant products. The project results will be translated in clear recommendations to the EC and end users and they will have a significant impact on protecting human and veterinary health.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,154,885

PROJECT N°

222738-2

DURATION

48 months

PROJECT START DATE

August 2009

LIST OF PARTNERS

1. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
2. VETERINAERINSTITUTTET. NATIONAL VETERINARY INSTITUTE (NO)
3. CENTRO NACIONAL DE TECNOLOGÍA Y SEGURIDAD ALIMENTARIA (CNTA). LABORATORIO DEL EBRO (ES)
4. DEUTSCHES KREBSFORSCHUNGSZENTRUM (DE)
5. UNIVERSITE DE BRETAGNE OCCIDENTALE (FR)
6. MAGYAR ÉLELMISZER-BIZTONSÁGI HIVATAL (HU)
7. ISTITUTO SUPERIORE DI SANITA (IT)
8. INSTITUTO TECNOLOGICO AGRARIO DE CASTILLA Y LEON (ES)
9. STIFTUNG TIERAERZTLICHE HOCHSCHULE HANNOVER (DE)
10. UNIVERSITY OF ZAGREB-FACULTY OF VETERINARY MEDICINE (HR)
11. UNIVERSIDAD DE CORDOBA (ES)
12. KØBENHAVNS UNIVERSITET (DK)
13. UNIVERSIDAD DE NAVARRA (ES)
14. AGENCE NATIONALE DE SECURITE SANITAIRE DE L'ALIMENTATION, DE L'ENVIRONNEMENT ET DU TRAVAIL (FR)
15. TEAGASC. AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
16. TECNOALIMENTI S.C.P.A. (IT)
17. NORDLAKS PRODUKTER AS (NO)
18. CASTELSALUMI SRL (IT)
19. ORTOREALE SRL (IT)

FP7-KBBE-2007-2A

BASELINE

Selection and improving of fit-for-purpose sampling procedures for specific foods and risks

www.baselineeurope.eu

European Commission

ACTIVITY 2.2 - FORK TO FARM

CONFFIDENCE

Detecting contaminants in the food and feed chain

RASFF alerts show that monitoring of chemical contaminants in food and feed is very relevant in European food safety. Also consumers placed chemical contaminants on top of the "worry-scale" of food-related risks. According to the General Food Law, food and feed industries are responsible for the safety of their products. Often expensive instrumental single-analyte methods are being applied by regulatory and industrial laboratories. There is an urgent need for replacement by validated screening tools which are simple, inexpensive and rapid, but also show multiplex capability by detecting as many contaminants in parallel as possible. The CONffIDENCE proposal has been designed to provide long-term solutions to the monitoring of persistent organic pollutants, perfluorinated compounds, pesticides, veterinary pharmaceuticals (coccidiostats, antibiotics), heavy metals and biotoxins (alkaloids, marine toxins, mycotoxins) in high-risk products such as fish and fish feed, cereal-based food/feed and vegetables. A balanced mix of novel multiplex technologies will be utilized, including dipsticks, flow cytometry with functionalised beads, SPR optical and electrochemical biosensors, cytosensors and metabolomics-like comprehensive profiling. After validation, the simplified methods will be applied in impact demonstrators that contribute to exposure assessment and validation of hazard models. Moreover, hazards of emerging contaminants will be assessed through toxicological testing. Dissemination to scientists and to relevant stakeholders, including the food and feed industry, regulatory control bodies, DG-SANCO, EFSA, exporting countries, CRLs, routine laboratories, CEN and consumers will be assured by e-communication, press releases, public workshops, open days, presentations, publications and a science education module. The consortium consists of 17 partners from 10 countries, representing 9 research institutes, 5 universities, 2 large food and feed industries and 1 SME.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,800,100

PROJECT N°

211326

DURATION

56 months

PROJECT START DATE

May 2008

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE (CZ)
3. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
4. CHEMISCHES UND VETERINARUNTERSUCHUNGSAMT STUTTGART (DE)
5. COMMISSION OF THE EUROPEAN COMMUNITIES, DIRECTORATE GENERAL JOINT RESEARCH CENTRE, JRC (BE)
6. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
7. DANMARKS TEKNISKE UNIVERSITET (DK)
8. RIJKSINSTITUUT VOOR VOLKSGEZONDHEID EN MILIEU (NL)
9. QUEEN'S UNIVERSITY BELFAST (UK)
10. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
11. CENTRE WALLON DE RECHERCHES AGRONOMIQUES (BE)
12. TAMPEREEN TEKNILLINEN YLIOPISTO (FI)
13. MASTERLAB BV (NL)
14. NESTEC S.A (CH)
15. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
16. CENTRE D'ECONOMIE RURALE (BE)
17. UNISENSOR SA (BE)

FP7-KBBE-2007-1

CONFFIDENCE

CONtaminants in Food and Feed: Inexpensive DEtectioN for Control of Exposure.

www.conffidence.eu

European Commission

ACTIVITY 2.2 - FORK TO FARM

ECSAFESEAFOOD

Contaminants in seafood and their impact on public health (The Ocean of Tomorrow)

Seafood has been recognized as a high quality, healthy and safe food item. Yet, some seafood can accumulate environmental contaminants with potential impact on human health. Limited information is available for those without maximum limits set by authorities for seafood, like priority contaminants, biotoxins from harmful algal blooms and marine litter. In order to increase seafood safety to consumers and reduce human health risks, ECsafeSEAFOOD aims to assess safety issues mainly related to non-regulated priority contaminants and evaluate their impact on public health.

ECsafeSEAFOOD addresses these objectives with eight work packages (WPs) targeting priority environmental contaminants, including biotoxins from harmful algal blooms and marine litter. WP1 will elaborate a database with relevant information required for risk assessment gathered from literature and national monitoring programmes. WP2 will monitor contaminants in seafood using an ambitious sampling strategy following the recommendations of the Marine Strategy Framework Directive (Descriptor 9) and assess the effect of seafood processing/cooking on contaminants. In WP3, risk assessment (with data from WP1-2) and mitigation strategies will be implemented to reduce the impact of risky contaminants on human health. WP4 will develop fast screening/detection methods for relevant contaminants tailored to suit stakeholders needs to promote consumers' confidence in seafood. WP5 will carry out the toxicological characterization of contaminated seafood in realistic conditions and will use alternative toxicological methods to provide tools for the risk assessment (WP3). WP6 will assess the links between the level of contaminants in the environment and that in seafood through controlled trials and case-study species, taking into account the effect of climate changes. WP7 details a strategy for education, training with clear and practical dissemination of results. WP8 will ensure efficient project management.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

3,999,874

PROJECT N°

311820

DURATION

48 months

PROJECT START DATE

February 2013

LIST OF PARTNERS

1. INSTITUTO NACIONAL DE RECURSOS BIOLOGICOS I.P. INRB (PT)
2. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
3. UNIVERZA V MARIBORU (SI)
4. UNIVERSITEIT GENT (BE)
5. VETERINAERINSTITUTTET. NATIONAL VETERINARY INSTITUTE (NO)
6. INSTITUT CATALÀ DE RECERCA DE L'AIGUA, FUNDACIÓ PRIVADA (ES)
7. DANMARKS TEKNISKE UNIVERSITET (DK)
8. EIGEN VERMOGEN VAN HET INSTITUUT VOOR LANDBOUW EN VISSERIJONDERZOEK (BE)
9. ICETA. INSTITUTO DE CIÊNCIAS E TECNOLOGIAS AGRÁRIAS E AGRO-ALIMENTARES (PT)
10. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. (ES)
11. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
12. UNIVERSITAT ROVIRA I VIRGILI (ES)
13. AEIFORIA S.R.L. (IT)
14. AQUATT UETP LTD (IE)
15. AGENCE POUR LA RECHERCHE ET LA VALORISATATION MARINE (FR)
16. POLYINTELL SAS (FR)
17. HORTIMARE PROJECTS & CONSULTANCY BV (NL)
18. DANSALMON (DK)

FP7-KBBE-2012-6-singlestage

Priority environmental contaminants in seafood: safety assessment, impact and public perception

ECSAFESEAFOOD

n.a.

European Commission

ACTIVITY 2.2 - FORK TO FARM

NAFISPACK

Innovative and safe packaging

The main objective of the present project is to develop novel packaging technologies that will avoid/reduce and detect the growth of pathogens and spoilage microoganism responsible for product lost in perishable food products of interest: fresh fish, fresh chicken and minimally processed vegetables (MPVs). The target foods were selected among many, for different reasons: the consumption of MPVs is hugely increasing in all European countries and therefore, it is important to heighten the vigilance around that products; it is necessary to rebuild a consumers' confidence for chicken; fish is probably the most perishable product. Anyway, any of them is an increasing area of consumption and interest. The new technologies will improve food quality and extend the relatively short life of these fresh food products. The concern about synthetic preservatives is steadily rising, due to a limited documentation on safety and tolerance. Instead, Natural Antimicrobials (NAs), which occur abundantly in environment where they evolved as host defence mechanisms, are generally considered as safer and better tolerable. Though NAs will be used in the active material development, a systematic and scientific based work will be carried out in order to fully assess the safety of the new packages developed. Thus, along three years, NAFISPACK will develop novel food packaging technologies and novel tools for risk-benefit assessment of these technologies (basis for a risk management tool and address policy needs in the area of food contact materials): i) Active packaging technologies based on natural antimicrobials ii) Intelligent packaging technologies based on monitoring of quality indicating metabolites iii) Combination of both antimicrobial and intelligent packaging technologies aimed to increase safety and quality of fresh food products during longer periods of time.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,971,360

PROJECT N°

212544

DURATION

38 months

PROJECT START DATE

November 2008

LIST OF PARTNERS

1. INSTITUTO TECNOLOGICO DEL EMBALAJE, TRANSPORTE Y LOGISTICA (ES)
2. UNIVERSITA DEGLI STUDI DI MILANO (IT)
3. INNVENTIA AB (SE)
4. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
5. SIK INSTITUTET FOER LIVSMEDEL OCH BIOTEKNIK AB (SE)
6. NOFIMA AS (NO)
7. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
8. UNIVERSIDAD DE ZARAGOZA (ES)
9. VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (DE)
10. DANISCO A/S (DK)
11. METALVUOTO S.P.A. (IT)
12. ARTIBAL S.A. (ES)
13. ENVAFLEX SA (ES)
14. NORDISCHES LACHSKONTOR GMBH (DE)
15. VERDIFRESH SL (ES)
16. TOMMEN GRAM FOLIE AS (NO)
17. NUTRECO SERVICIOS,S.A. (ES)

FP7-KBBE-2007-1

NAFISPACK

Natural Antimicrobials For Innovative and Safe Packaging

www.nafispack.com

European Commission

ACTIVITY 2.2 - FORK TO FARM

PERFOOD

Perfluorinated organic compounds in food

Anthropogenic perfluorinated compounds (PFCs) have recently gained socio-economic and scientific interest. PFCs constitute a newly emanating group of environmental contaminants, with physico-chemical as well as toxicological properties different from those of other halogenated compounds. PFCs are generally persistent in the environment, and can be found over a broad concentration range and within most parts of the aquatic and terrestrial ecosystems. Food, produced with natural ingredients, and possibly beverages, including drinking water, are likely to be contaminated with PFCs, giving rise to human exposure. Whether or not industrial food processing and packaging may give rise to additional contamination of food and beverages is currently not understood. Whatever the sources, PFCs have indeed been found to be present at a global scale in blood of the general population. PERFOOD brings together the institutes most renowned in Europe and the Globe for their chemical analytical work on PFCs with experts in food consumption and drinking water quality as well as food processing and packaging. The aims of the present project are to develop robust and reliable analytical tools including reference materials for the determination of PFCs in food items, and to use these to (i) qualify and quantify PFCs in our diet, employing a large European sampling campaign; (ii) understand how PFCs are transferred from the environment into dietary items, and (iii) quantify the possible contribution of food/beverage contact materials and food and water processing to the overall PFC levels in our diet. The newly gained knowledge will enable us to evaluate the possible routes, including their relative importance, of human exposure to PFCs via our diet, to assess the role of the technosphere in the contamination of our food, and to identify ways to reduce the PFC contamination of dietary articles.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,432

PROJECT N°

227525

DURATION

40 months

PROJECT START DATE

August 2009

LIST OF PARTNERS

1. UNIVERSITEIT VAN AMSTERDAM (NL)
2. STOCKHOLMS UNIVERSITET (SE)
3. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V (DE)
4. NORSK INSTITUTT FOR LUFTFORSKNING (NO)
5. ISTITUTO SUPERIORE DI SANITA (IT)
6. VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG (NL)
7. VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE (CZ)
8. UNIVERSITEIT ANTWERPEN (BE)
9. BUNDESINSTITUT FUR RISIKOBEWERTUNG (DE)
10. KWR WATER B.V. (NL)

FP7-KBBE-2008-2B

PERFluorinated Organics in Our Diet

PERFOOD

www.perfood.eu

European Commission

ACTIVITY 2.2 - FORK TO FARM

PROMETHEUS

Identification of the effect of processing on food contaminants

The PROMETHEUS project will help the European food industry reduce consumer exposure to food processing contaminants without affecting food quality or microbiological safety. PROMETHEUS builds on the previous EU projects HEATOX and ICARE. Its aims are (1) to understand the dynamics of formation of major Processing Contaminants, (2) to provide on-line real time methods to monitor reactions leading to contaminant formation, (3) to develop new processing technologies to mitigate contaminants but maintain the safety and sensory properties of the food and (4) to demonstrate scaling the new technologies to the industry level. Foods (infant formulas, biscuits, canned baby foods, and canned fish and vegetables) have been chosen for their nutritional importance. Processing contaminants (acrylamide, 3-monochloropropanediol esters, glycidol esters, furan, hydroxymethylfurfural and carboxymethyllysine) have been chosen for their toxicity, consumer exposure and relevance to the foods. PROMETHEUS will use a novel holistic approach of continuous realtime on-line monitoring of contaminant formation during food processing. Ambient mass spectrometry, fluorescence spectroscopy and image analysis will measure the contaminants simultaneously and allow modelling of the reactions that form contaminants and affect food quality. Innovative processing technologies will be used: vacuum baking, high hydrostatic pressure, ohmic heating, and ingredient microencapsulation. Improvement strategies will be demonstrated at industry level. The PROMETHEUS consortium has 8 research organisations and 6 industrial partners (including 4 SMEs, 1 large company and the European Confederation of Agro Food industries). The project outcome will help to protect the consumer. It will improve the competitiveness of the food industry by anticipating future contamination regulations, and help it to innovate by implementing new technologies in order to better control the safety and overall quality of their products.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,573

PROJECT N°

265558

DURATION

36 months

PROJECT START DATE

May 2011

LIST OF PARTNERS

1. ASSOCIATION DE COORDINATION TECHNIQUE POUR L'INDUSTRIE AGROALIMENTAIRE (FR)
2. SPECTRALYS INNOVATION (FR)
3. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
4. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. (IT)
5. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
6. HACETTEPE UNIVERSITESI (TR)
7. TECHNISCHE UNIVERSITAT BERLIN (DE)
8. VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE (CZ)
9. CONFEDERATION DES INDUSTRIES AGRO-ALIMENTAIRES DE L'UE (BE)
10. EUROQUALITY SARL (FR)
11. ETI MAKINE SANAYI VE TICARET AS (TR)
12. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
13. SIRO AGUILAR, S.L. (ES)
14. CAPSULAE (FR)

FP7-KBBE-2010-4

PROMETHEUS

PROcess contaminants: Mitigation and Elimination Techniques for High food quality and their Evaluation Using Sensors & Simulation

www.prometheus-fp7.eu

European Commission

ACTIVITY 2.2 - FORK TO FARM

GMSAFOOD

Assessment of short and long term effects of GMOs on human and animal health

The function of post market monitoring is to further assess possible nutritional and health effects of authorized GM foods on a mixed population of human and animal consumers. Currently, however, little is known about exposure levels, whether adverse effects are predictable, and the occurrence of any unexpected effects following market release of GM foods. Our objective is to identify a panel of anatomic, physiologic, biochemical, molecular, allergenic, and immunogenic biomarkers, which could be used to predict harmful GMO effects after product authorization. Using a prototype allergenic a-amylase inhibitor GM-pea, we will extrapolate multiple biomarker databases that correlate GMO effects during gestation, growth, maturation in various animal models with humans. We will establish biomarkers in GMO-fed pigs, salmon, rats, and mice, in addition to indirect effects of GM feeding in the food chain and GMO influence during an underlying allergic disorder. These experiments will yield data on general health with a specific focus on allergy and immunology. To extrapolate our data to humans, we will establish a comparative database with antigenic epitopes and antibody crossreactivity in legume allergic patients and human-mouse chimera in which a human immune system is transplanted into a mouse lacking an immune system. Taken together, these results will yield databases from multiple biological systems that will be used in a mathematical modeling strategy for biomarker discovery and validation. Our consortium consists of partners from Austria, Turkey, Hungary, Ireland, Norway, and Australia and constitutes a diverse interdisciplinary team from veterinary medicine, nutrition, agriculture, immunology, and medicine that is dedicated to the development and validation of biomarkers to be used for post market monitoring of animals and humans consuming newly authorized GMOs.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,606,622

PROJECT N°

211820

DURATION

44 months

PROJECT START DATE

August 2008

LIST OF PARTNERS

1. MEDIZINISCHE UNIVERSITAET WIEN (AT)
2. COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION (AU)
3. NORGES VETERINAERHOGSKOLE (NO)
4. TEAGASC, AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
5. KOZPONTI ELELMISZER-TUDOMANYI KUTATOINTEZET (HU)
6. TROYKA MAKINA GIDA INSAAT MUHENDISLIK ENERJI CEVRE BILISIM ARASTIRMA GELISTIRME DANISMANLIK SANAYI VE PAZARLAMA LIMITED SIRKETI (TR)

FP7-KBBE-2007-1

GMSAFOOD

Biomarkers for post market monitoring of short and long-term effects of genetically modified organisms (GMOs) on animal and human health

www.gmasfoodproject.eu

European Commission

ACTIVITY 2.2 - FORK TO FARM

SEAT

Sustainability of the food chain

Trade in aquatic products is the largest global food sector, by value, and Asia represents the main external source of aquatic products into the EU. Current EU policy supporting international trade between Asia and Europe concentrates on issues of food safety as measures of quality, whilst market-forces drive development of standards and labels that identify social and environmental parameters. This project proposes to establish an evidence-based framework to support current stakeholder dialogues organised by a third party certifier. This will contribute to harmonising standards, helping consumers to make fully informed choices with regards to the sustainability and safety of their seafood. The 'Ethical Aquatic Food Index', a qualitative holistic measure of overall sustainability to support consumers' purchasing decisions, will be based on detailed research centred around a Life Cycle Assessment of current processes involved in ensuring aquatic products reach consumers, aligned with analyses from the sustainable livelihoods approach and systems thinking. SMEs based in the EU will participate in this project, particularly the action research phase, enhancing their relative competitiveness. By strengthening the knowledge base surrounding EU-Asia seafood trade the project will provide the evidence required to support further expansion whilst ensuring a fair deal for producers who are meeting appropriate social and environmental goals and offering a safe and sustainable product for consumers. The sectors covered represent the main aquaculture products reaching EU markets; tilapia, catfish, shrimps and prawns. Known case study stakeholders include SMEs in Bangladesh, China, Thailand and Vietnam where sustainability is essential in the face of rapid growth. The research will secondarily improve understanding of opportunities for European exports to supply the expanding middleclass in Asia. Outputs will be promoted through workshops, websites, journal and press articles.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,815,578

PROJECT N°

222889-2

DURATION

48 months

PROJECT START DATE

August 2009

LIST OF PARTNERS

1. THE UNIVERSITY OF STIRLING (UK)
2. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
3. KØBENHAVNS UNIVERSITET (DK)
4. WAGENINGEN UNIVERSITEIT (NL)
5. UNIVERSITEIT LEIDEN (NL)
6. SHANGHAI OCEAN UNIVERSITY (CN)
7. CAN THO UNIVERSITY (VN)
8. KASETSART UNIVERSITY (TH)
9. BANGLADESH AGRICULTURAL UNIVERSITY (BD)
10. WWF VERDENSNATURFONDEN (DK)
11. INTERNATIONAL CENTER FOR LIVING AQUATIC RESOURCES (MY)
12. FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO (IT)
13. UNIVERSITETET I BERGEN (NO)
14. DANISH CENTRE FOR INTERNATIONAL STUDIES AND HUMAN RIGHTS (DK)

FP7-KBBE-2007-2A

Sustainable trade in ethical aquaculture

SEAT

www.seatglobal.eu

European Commission

ACTIVITY 2.2 - FORK TO FARM

SECUREFISH

Reducing post-harvest losses for increased food security — SICA

Food security is a major concern for all countries in the face of population increase and diminishing energy and water supplies. Over one billion people in low and middle income countries suffer from malnutrition. To meet the UN Millennium Development Goals to eradicate hunger and poverty, it is essential to reduce post harvest losses, including in the fisheries sector. The overall objectives of SECUREFISH are to strengthen capacity in low cost technology; to improve the preservation of existing fish supplies; to utilise waste and bycatch to produce value-added products; to develop an integrated quality management tool and finally to test the developed technology and quality management tool in different real third country conditions.

There are six work packages (WP). WP1 will ensure the efficient management of the project. WP2 will develop low cost innovative processing tools based on traditional technology for preserving fish including a solar tunnel drier, a modified solar assisted extruder and fast freezing/ continuous atmosphere freeze-drier (CAFD). In WP3, underutilised bycatch and waste by-products of fish processing will be recovered and converted to high value products. WP4 will develop an effective total quality management tool (safety and risk assessment; HACCP quality cost and traceability, nutritional and eating quality and carbon footprint) of three fish product chains (solar dried, extruded and frozen/CAFD) which will be tailored to suit local needs.

The technological advances (WP2) and quality management tool (WP4) will be evaluated in the three fish product chain case studies in Africa (Kenya, Namibia, Ghana), Asia (India and Malaysia) and Latin America (Argentina) to include different economic, cultural and social conditions. The case studies involve stakeholders including SMEs to ensure sustained implementation of project results. WP6 details a strategy for education, training and dissemination to widely promote the results and guidelines.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,997,422

PROJECT N°

289282

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. UNIVERSITY OF SURREY (UK)
2. INSTITUTO NACIONAL DE RECURSOS BIOLOGICOS I.P. INRB (PT)
3. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
4. KENYA MARINE AND FISHERIES RESEARCH INSTITUTE (KE)
5. COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (GH)
6. UNIVERSITY OF NAMIBIA (NA)
7. KARNATAKA VETERINARY ANIMAL AND FISHERIES SCIENCES UNIVERSITY (IN)
8. UNIVERSITI TEKNOLOGI MARA (UTM) (MY)
9. INSTITUTO NACIONAL DE TECNOLOGIA INDUSTRIAL (AR)
10. EBBENS ENGINEERING INGENIEURSBUREAU BV (NL)
11. MILLENNIUM EXPORTS PARTNERSHIP (IN)
12. MAYFAIR HOLDINGS LTD (KE)
13. KARNATAKA FISHERIES DEVELOPMENT CORPORATION LTD (IN)

FP7-KBBE-2011-5

SECUREFISH

Improving food security by reducing post harvest losses in the fisheries sector

www.securefish.net

European Commission

ACTIVITY 2.2 - FORK TO FARM

SENSE

Environmental sustainability in the European food and drink chain

SENSE will deliver a harmonised system for the environmental impact assessment of food&drink products. The research will evaluate existing relevant environmental impact assessment methodologies, and consider socio-economical, quality and safety aspects, to deliver a new integral system that can be linked to monitoring and traceability data. The system will integrate: (a) (regionalised) data gathering system; (b) matrix of key environmental performance indicators; (c) methodology for environmental impact assessment; and (d) a certification scheme. The methodology will be transferred to food&drink sectors and stakeholders by means of specific communications strategies. SENSE will validate the new harmonised system in the juice, meat&dairy and aquaculture chains. However, the methodology and its associated software will be modular allowing its implementation in any food product.

The sustainability information collected along the production cycle of any food stuff and reflected into the EID (Environmental Identification Document) will be accessible by the EID-Communication Platform, contributing to make the environmental sustainability part of the usual purchasing behaviour of consumers and provide a competitive advantage to those products which choose to use the EID.

Main results of SENSE will be: (i)Standard key environmental performance indicators (KEPI); (ii)Harmonised methodology for environmental impact assessment; (iii)SENSE-tool for environmental data collection; (iv)EID and EID-Communication Platform; (v)Certification Scheme Concept (CSC) for sustainability; (vi)Roadmap for policy and governance implementation.

SENSE consortium is formed by a multidisciplinary team involving 21 partners from 12 countries made up by a combination of complementary profiles: research organisations, food and drink SMEs, environmental and LCA experts, SMEs for dissemination and communication and European food Associations.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,890,067

PROJECT N°

288974

DURATION

36 months

PROJECT START DATE

February 2012

LIST OF PARTNERS

1. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
2. AALBORG UNIVERSITET (DK)
3. THE CITY UNIVERSITY (UK)
4. DANMARKS TEKNISKE UNIVERSITET (DK)
5. SIK INSTITUTET FOER LIVSMEDEL OCH BIOTEKNIK AB (SE)
6. HASKOLI ISLANDS (IS)
7. SGF SERVICE PLUS GMBH (DE)
8. EUROPEAN AQUACULTURE SOCIETY (BE)
9. BIOZOON GMBH (DE)
10. CONSUMER INSIGHT . ANNE CATHARINA BECH (DK)
11. ESU-SERVICES GMBH (CH)
12. TRITECC SRL (RO)
13. INGENET INGENIERIA DE INFORMATICA YCONTROL SL (ES)
14. EFLA HF (IS)
15. ZUMOS VALENCIANOS DEL MEDITERRANEO SA (ES)
16. FODIX GROUP SAS (FR)
17. PROVAC IMPEX SRL (RO)
18. VERENIGING CENTRE DE LIAISON DES INDUSTRIES TRANSFORMATRICES DE VIANDES DE L UE (NL)
19. CALION PROD SRL (RO)
20. TUNAY GIDA SANAYI VE TICARET ANONIM SIRKETI (TR)
21. CHRISTIANSEN PARTNER AS (NO)
22. BA CREATIVOS SL (ES)
23. ZABALA INNOVATION CONSULTING, S.A. (ES)

FP7-KBBE-2011-5

HarmoniSed ENvironmental Sustainability in the European food and drink chain

SENSE

www.senseproject.eu

European Commission

ACTIVITY 2.2 - FORK TO FARM

NAMASTE

Valorisation of by-products in food processing

According to the EU-India Science and Technology Cooperation Agreement, there is a converging Indian and European interest in finding promising valorization routes and markets for fruit and cereal processing byproducts and wastes. NAMASTE will develop innovative, comprehensive and industry-relevant approaches for the valorization of citrus, mango and pomegranates by-products and wastes as well as of wheat and rice bran, thought the environmentally and economically sustainable conversion of these by-products/wastes into healthy food ingredients, foods and feeds. NAMASTE-EU will particularly focus on citrus and wheat bran processing, and will develop and assess laboratory-scale experimental protocols to convert by-products/ wastes into food ingredients and new foods with improved nutritional properties (e.g. fruit paste, citrus filled snacks, citrus-based snacks, fruit enriched breakfast cereals, citrus paste-based self-stable fillers for bakery products, a new citrus/mango based feed for aquaculture). NAMASTE-India will adopt complementary/ synergic strategies, technologies and processes for turning by-products/wastes of mango/pomegranate processing and rice bran in similar ingredients, new foods and feeds. A proactive EU-India cooperation effort will be adopted to enhance mutual benefits, in terms of both knowledge generation and market expansion for the global food and drink industry. NAMASTE joint consortia will strictly collaborate on common byproducts and shared food technologies as well as on activities aimed at investigating the nutritional quality, chemical and microbial safety of the resulting foods/feeds, and the environmental benefits and economic opportunities associated to industrial production. The direct involvement of strongly committed EU and Indian industries (and of an external Industrial Platform) will provide the high added value of guaranteeing the validation of developed processes and products, thus ensuring fast and effective industrial uptake.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,499,995

PROJECT N°

245267

DURATION

36 months

PROJECT START DATE

February 2010

LIST OF PARTNERS

1. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
2. INSTITUTE OF FOOD RESEARCH (UK)
3. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
4. CAMPDEN BRI MAGYARORSZAG NONPROFIT KORLATOLT FELELOSSEGU TARSASAG (HU)
5. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
6. GRUPO LECHE PASCUAL (ES)
7. J. RETTENMAIER & SÖHNE GMBH + CO KG (DE)

FP7-KBBE-2009-3

NAMASTE

New Advances in the integrated Management of food processing wAste in India and Europe: use of Sustainable Technologies for the Exploitation of byproducts into new foods and feeds

www.namaste-eu-india.org

European Commission

ACTIVITY 2.3 - Life sciences, biotechnology and biochemistry

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

AQUATERRE

BIOMASS SUPPLY AND IMPACT - Identification of optimal terrestrial and aquatic biomass and waste for Bioproducts

AquaTerrE will promote the cooperation between research centres, business and other stakeholders in Europe devoted to the research, development and application of biomass and biofuel production and valorisation. It will aim integration and unification of efforts and the exchange of knowledge and expertise between partners, to promote the creation of a network for improving biomass and waste reutilisation. Mainly, AquaTerrE aims to make an inventory of existing biomass feedstocks in Europe and quantify the potential and identify of the best ones. In addition, to study the best possibilities for implementing different biomass sources in different environments to improve their utilisation. Pursuing this target, literature and data survey and current research review will be carried out. Furthermore, the scope of AquaTerrE consists also in mapping European biomass feedstocks using different tools as Geographical Information Systems (GIS). Additionally, AquaTerrE expert members will identify economic and environmental impacts schemes to define the optimum Life Cycle Assessment (LCA). LCA is a standardized and structured method for calculating the environmental load of a product, process or activity throughout all its phases. The implementation of a new bio-product/bio-fuel in the market requires the analysis of economical, social and environmental aspects, with the objective of attaining enough information for the decision making progress. The contribution of a LCA study to this project can be framed in the identification of best sources of biomass feedstock as well as other agricultural waste for the sustainable obtaining of bio-fuels and other added value products..

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

775,003

PROJECT N°

212654

DURATION

24 months

PROJECT START DATE

April 2008

LIST OF PARTNERS

1. HASKOLINN A AKUREYRI (IS)
2. EUROPEAN FOREST INSTITUTE (FI)
3. ENTE PER LE NUOVE TECNOLOGIE, L'ENERGIA E L'AMBIENTE (IT)
4. NORTH WALES MOULDINGS LTD (UK)
5. PROCEDE BIOMASS BV (NL)
6. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
7. CENTIV GMBH (DE)
8. LIETUVOS ENERGETIKOS INSTITUTAS (LT)
9. UNIVERSITATEA TEHNICA CLUJ-NAPOCA (RO)
10. AGRICULTURAL UNIVERSITY (BG)
11. DANMARKS TEKNISKE UNIVERSITET (DK)
12. BIOZOON GMBH (DE)
13. EUROPEAN BIOMASS INDUSTRY ASSOCIATION (BE)
14. UKRAINIAN SCIENTIFIC AND RESEARCH INSTITUTE OF ECOLOGICAL PROBLEMS (UA)
15. HOEGSKOLAN KRISTIANSTAD (SE)
16. CHAMBRE D'AGRICULTURE DU CENTRE (FR)
17. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
18. PLANT SCIENCE SERVICES GMBH (DE)

FP7-KBBE-2007-1

Integrated European Network for biomass and waste reutilisation for Bioproducts

AQUATERRE

n.a.

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

BAMMBO

Sustainable culture of marine microorganisms, algae and/or invertebrates for high added value products

Innovation is the most important engine of growth and jobs in knowledge-based bio-economies. The scope of BAMMBO (Biologically Active Molecules of Marine Based Origin) is ambitious. This is intentional. BAMMBO will provide innovative solutions to overcome existing bottle-necks associated with culturing marine organisms in order to sustainably produce high yields of value-added products for the pharmaceutical, cosmetic and industrial sectors. BAMMBO will screen and identify target marine organisms (e.g. bacteria, fungi, sponges, microalgae, macroalgae and yeasts) from diverse global locations for potential as sustainable producers of high–added value molecules (HVAB's). Our project will apply analytical methods for the extraction, purification and enrichment of targeted bioactive compounds. A detailed life cycle analysis of the production pathways developed in the project will be undertaken to fully evaluate the sustainability of production of biologically active products from marine organisms. BAMMBO will exploit knowledge and technologies developed during the project and effectively manage their transfer to relevant stakeholders in industry and the research community, as well as to policy-makers. We have brought together a multidisciplinary consortium of specialist Research and SME partners representing 8 countries including partners from ICPC countries Russia and Brazil, and from EU member states at Mediterranean, Adriatic and Atlantic coasts. In adhering to the European Strategy for Marine and Maritime Research this three year project will encourage capacity-building, integration and synergies across relevant marine sectors. Innovative technologies developed in the project will be demonstrated with the involvement of industry partners, and the results will be of interest not only to companies directly involved in the marine sector, but to other large scale industry players such as pharmaceutical companies with interest in added-value bioactive compounds.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,992,421

PROJECT N°

265896

DURATION

36 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. LIMERICK INSTITUTE OF TECHNOLOGY (IE)
2. UNIVERSITE DE NICE. SOPHIA ANTIPOLIS (FR)
3. UNIVERSIDADE ESTADUAL DE CAMPINAS (BR)
4. ALGAE HEALTH LIMITED (IE)
5. GREENSEA SAS (FR)
6. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
7. INSTITUTO POLITECNICO DE LEIRIA (PT)
8. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
9. UNIVERSITEIT GENT (BE)
10. FEDERAL STATE UNITARY ENTERPRISE STATE SCIENTIFIC-RESEARCH INSTITUTE OF GENETICS AND BREEDING OF INDUSTRIAL MICROORGANISMS (RU)
11. UNIVERSITA DEGLI STUDI DI GENOVA (IT)

FP7-KBBE-2010-4

BAMMBO

Sustainable production of biologically active molecules of marine based origin

www.bammbo.eu

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

BLUEGENICS

Innovative marine biodiscovery pipelines for novel industrial products

Marine organisms, in particular sponges and their associated microorganisms, are an inexhaustible source of novel bioactive (lead) compounds for biomedical application. Industrial exploitation of this natural resource using traditional approaches is, however, hampered, with a few exceptions, by unsolvable supply problems - despite of numerous efforts in the past. Therefore, there is, very likely, only one way: to start from the genes encoding the bioproducts, or their biosynthetic pathways, to sustainably obtain the active molecules in sufficient amounts. The aim of the presented industry-driven integrating project is to combine the knowledge in marine genomics, chemogenetics and advanced chemistry to produce recombinantly prepared novel secondary metabolite (lead) compounds and analogous from them, as well as pharmacologically active peptides, and to bring them up to the pre-clinical, and hopefully also to the clinical studies. This ambitious approach is based on breakthrough discoveries and the results of previous successful EU projects of members of the applying consortium, including European leaders (or worldwide leaders) in marine (sponge) genomics, metagenomics (polyketide synthase clusters), combinatorial biosynthesis and marine natural product chemistry/ structure elucidation. This multidisciplinary project, driven by high-tech genomics-based SMEs with dedicated interest in bringing marine-biotechnology-derived products to the market, will also involve the discovery and sustainable production of bioactive molecules from hitherto unexploited extreme environments, such as hydrothermal vents and deep-sea sources, and the expression/scale-up of unique enzymes/proteins of biomedical and biotechnological interest. The molecular-biology-based strategies developed in this project for a sustainable exploitation of aquatic molecular biodiversity will further strengthen the international position and effectiveness of European (SME-based) blue biotechnology industry.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,869

PROJECT N°

311848

DURATION

48 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. UNIVERSITATS MEDIZIN DER JOHANNES GUTENBERG-UNIVERSITAET MAINZ (DE)
2. MANROS THERAPEUTICS (FR)
3. BIOALVO S.A. (PT)
4. NANOTECMARIN GMBH (DE)
5. SAEBYLI EHF (IS)
6. PROKAZYME EHF (IS)
7. GALAPAGOS ISTRAZIVACKI CENTAR DOO ZA ISTRAZIVANJE I RAZVOJ (HR)
8. BIOTREND, INOVACAO E ENGENHARIA EM BIOTECNOLOGIA SA (PT)
9. MATIS OHF (IS)
10. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. (IT)
11. UNIVERSITY OF EAST ANGLIA (UK)
12. RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN (DE)
13. MUSEUM NATIONAL D'HISTOIRE NATURELLE (FR)
14. UPPSALA UNIVERSITET (SE)
15. RUDER BOSKOVIC INSTITUTE (HR)
16. NATIONAL RESEARCH CENTER FOR GEOANALYSIS (CN)

FP7-KBBE-2012-6-singlestage

BLUEGENICS

BlueGenics – From gene to bioactive product: Exploiting marine genomics for an innovative and sustainable European blue biotechnology industry

n.a.

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

GIAVAP

Modification of marine or freshwater algae to better suit industrial applications

Microalgae are a highly promising resource for the sustainable production of a wide variety of biomaterials for a wide range of applications. Microalgae can transform solar energy at high efficiency directly into valuable biological products using marginal water resources, waste nutrients and exhaust CO2 without the needs for high value cropland. A wide variety of eukaryotic microalgae of high evolutionary diversity produce naturally valuable products like polyunsaturated fatty acids, carotenoids, medically active carbohydrates etc. Nevertheless only a few commercially viable algal products have entered the market. Algal cultivation and induction of high value product accumulation is a complex problem, algae grow in diluted solutions and require large areas and water volumes, causing high cultivation and harvesting costs and posing contamination problems and variable productivities due to climate variability. Genetic modifications to make microalgae better suit industrial applications are possible over a wide range of target mechanisms: stress tolerance, product accumulation pathways, cellular chlorophyll contents, novel metabolic pathways, resistance to pathogens and competition, etc. Due to the wide variability of algal strains under consideration, available techniques for genetic manipulations have to be adapted or developed for all algal strains of interest. Our consortium will adapt genetic engineering techniques to various algal strains of economic interest focusing on carotenoid and PUFA production and the overexpression of peptides of commercial value. In parallel we will develop cultivation technologies, harvesting and extraction methods for lipids, carotenoids and proteins using existing model algae strains that will then be adapted to suitable improved strains. Furthermore products will be tested for energy, pharmaceutical, nutritional or medical applications for economic evaluation of the production processes and their economic exploitation.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,596,607

PROJECT N°

266401

DURATION

36 months

PROJECT START DATE

January 2011

LIST OF PARTNERS

1. BEN-GURION UNIVERSITY OF THE NEGEV (IL)
2. ROTHAMSTED RESEARCH LIMITED (UK)
3. JOHANN WOLFGANG GOETHE UNIVERSITAET FRANKFURT AM MAIN (DE)
4. GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS (DE)
5. UNIVERSITY COLLEGE LONDON (UK)
6. A4F ALGAFUEL SA (PT)
7. ROSETTA GENOMICS LTD (IL)
8. UNIVERSITE LE MANS (FR)
9. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
10. UNIVERSITA DEGLI STUDI DI FIRENZE (IT)
11. ALGATECHNOLOGIES (1998) LTD (IL)
12. NIMROD SHAHAM & AMOS ZAMIR CERTIFIED PUBLIC ACCOUNTANTS (IL)
13. ROSETTA GREEN LTD (IL)

FP7-KBBE-2010-4

GIAVAP

Genetic Improvement of Algae for Value Added Products

www.giavap.eu

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

LIPOYEASTS

LIPID ENZYMES - Development of enzymes for lipid modification and activation

This proposal aims at developing a versatile fermentation platform for the conversion of lipid feed stocks into diverse added-value products. It is proposed to develop the oleaginous yeast Yarrowia lipolytica into a microbial factory by directing its versatile lipid metabolism towards the production of industrially valuable compounds like wax esters (WE), polyhydroxyalkanoates (PHA's), free hydroxyl fatty acids (HFA's) and isoprenoid-derived compounds (carotenoids, polyenic carotenoid ester). Conversion of lipid intermediates into these products will be achieved by introducing heterologous enzyme functions isolated from marine hydrocarbonoclastic bacteria into Yarrowia. To achieve these goals we have assembled a team with a broad set of complementary expertise in microbial physiology, metabolic engineering, yeast lipid metabolism, metagenomics, biochemical and protein engineering. Already available for this project are a number of genetically engineered Yarrowia strains as well as a collection of genes encoding enzymes for the production of WE's, 3-HFA's, PHA's and carotenoids. The following complementary research focus areas are proposed: (1) Engineering of metabolic precursor pools in Yarrowia lipolytica for the production of added-value products from lipids (INRA, UGe). (2) Conversion of metabolic precursor pools in Yarrowia to added-value products by overexpressing heterologous biosynthetic enzymes (UGe, INRA, UoM). (3) Discovery and characterization of novel aliphatic enzyme activities by metagenomic screening of marine hydrocarbonoclastic and other oiland fat-metabolizing microbial communities (TUBS, UoN). The project is further complemented by: (i) the activity of a professional valorization company (Ascenion) providing IP protection and commercialization services; (ii) by proactive efforts to expand the project's target products' application potential (Avecom).

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

911,111

PROJECT N°

213068

DURATION

36 months

PROJECT START DATE

August 2008

LIST OF PARTNERS

1. UNIVERSITEIT GENT (BE)
2. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (INRA) (FR)
3. TECHNISCHE UNIVERSITAET BRAUNSCHWEIG (DE)
4. UNIVERSITY OF NAIROBI (KE)
5. UNIVERSITY OF MINNESOTA (US)
6. AVECOM N.V. (BE)
7. ASCENION GMBH (DE)

FP7-KBBE-2007-1

LIPOYEASTS

Mobilising the enzymatic potential of hydrocarbonoclastic bacteria and the oleaginous yeast Yarrowia lipolytica to create a powerful cellular production platform for lipid-derived industrial materials

www.lipoyeasts.ugent.be

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

MACUMBA

Improved cultivation efficiency of marine microorganisms

Marine microorganisms form an almost untapped resource of biotechnological potential. However, its use is hindered by the low success rate of isolation of novel microorganisms and often by poor growth efficiency. Hence, the vast majority of marine microorganisms has not been cultivated and is often considered as 'unculturable'. MaCuMBA aims at improving the isolation rate and growth efficiency of marine microorganisms from conventional and extreme habitats, by applying innovative methods, and the use of automated high throughput procedures. The approaches include the co-cultivation of interdependent microorganisms, as well as gradient cultures and other methods mimicking the natural environment, and the exploitation of cell-to-cell communication. Signaling molecules produced by microorganisms may be necessary for stimulating growth of the same or other species, or may prevent their growth. Signaling molecules also represent an interesting and marketable product. MaCuMBA will make use of high throughput platforms such Cocagne, using gel micro-droplet technology, or MicroDish in which many thousands of cultures are grown simultaneously. Various single-cell isolation methods, such as optical tweezers, will aid the isolation of specific target cells. Isolated microorganisms as well as their genomes will be screened for a wide range of bioactive products and other properties of biotechnological interest, such as genetic transformability. Growth efficiency and expression of 'silent' genes of selected strains will be increased also by using the clues obtained from genomic information. MaCuMBA is targeted to SMEs and industry and they make a significant part of the consortium, ensuring that the project focuses on the interests of these partners. Moreover, MaCuMBA has adopted a comprehensive and professional exploitation, dissemination, implementation, and education strategy, ensuring that MaCuMBA's results and products will be directed to end-users and stakeholders.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

8,999,948

PROJECT N°

311975

DURATION

48 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) (NL)
2. UNIVERSITEIT VAN AMSTERDAM (NL)
3. UNIVERSITE DE BRETAGNE OCCIDENTALE (FR)
4. AQUAPHARM BIODISCOVERY LIMITED (UK)
5. CYANO BIOTECH (DE)
6. MICRODISH BV (NL)
7. POLYMARIS BIOTECHNOLOGY (FR)
8. ECOAST RESEARCH CENTRE OSTEND BVBA (BE)
9. AQUATT UETP LTD (IE)
10. MATIS OHF (IS)
11. UNIVERSIDAD MIGUEL HERNANDEZ DE ELCHE (ES)
12. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
13. THE UNIVERSITY OF WARWICK (UK)
14. DANMARKS TEKNISKE UNIVERSITET (DK)
15. UNIVERSITA DEGLI STUDI DI MILANO (IT)
16. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
17. HERIOT-WATT UNIVERSITY (UK)
18. ALBERT-LUDWIGS-UNIVERSITAET FREIBURG (DE)
19. PHARMAMAR, S.A.U. (ES)
20. LEIBNIZ-INSTITUT DSMZ-DEUTSCHE SAMMLUNG VON MIKROORGANISMEN UND ZELLKULTUREN GMBH (DE)
21. BIOALVO S.A. (PT)
22. RIBOCON GMBH (DE)
23. FERMENTALG SA (FR)

FP7-KBBE-2012-6-singlestage

Marine Microorganisms: Cultivation Methods for Improving their Biotechnological Applications

MACUMBA

n.a

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

MAMBA

Industrially relevant products and processes from marine biotechnology

The Project aims at the mining of individual enzymes and metabolic pathways from extremophilic marine organisms and the metagenomes from microbial communities from peculiar marine environments and consequent funnelling the new enzymatic reactions and processes towards the new biotechnological applications. Project builds up on the scientific and technological excellence of individual academic and industrial partners, and beyond that, on application of the state-of-the-art technologies for archiving, molecular screening for the activities (using a unique Surface Plasmon Resonance screening platform), protein structure elucidation, enzyme engineering and directed evolution and establishing new biotechnological processes (biocatalysis, synthesis of fine chemicals, etc.). Marine sampling hotspots to produce the metagenomic resources for their further exploration will cover the whole diversity of marine microbial life at its limits (hypersaline, low and high temperature, high pressure and low water activity conditions, etc.). Individual enzymes interacting with the substrates will be identified, and in case they are new, hyperexpressed and crystallized and their structures will be elucidated. Consequently, the most promising candidates will be scored against the chiral substrates of relevance for biocatalysis and their ability to perform in water-free systems will be evaluated, the directed evolution will be implemented to improve the performance, and specificity of the enzymes. A comprehensive bioinformatic survey throughout the whole tree of cellular life will reveal and suggest the new candidates homologous to the discovered new proteins, from other organisms to be cloned and assayed. The implementation of the set of new enzymes in the biotechnological processes for fine chemical synthesis and drug discovery will be conducted in a strong alliance with competent industrial partners.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,875,245

PROJECT N°

226977

DURATION

48 months

PROJECT START DATE

July 2009

LIST OF PARTNERS

1. BANGOR UNIVERSITY (UK)
2. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
3. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
4. HEINRICH-HEINE-UNIVERSITAET DUESSELDORF (DE)
5. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS) (FR)
6. UNIVERSITE DE BRETAGNE OCCIDENTALE (FR)
7. THE GOVERNING COUNCIL OF THE UNIVERSITY OF TORONTO (CA)
8. MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. (DE)
9. PHARMAMAR, S.A.U. (ES)
10. EVOCATAL GMBH (DE)
11. INSTITUT DE RECHERCHE PIERRE FABRESAS (FR)

FP7-KBBE-2008-2B

Marine Metagenomics for New Biotechnological Applications

MAMBA

hhtp://mamba.bangor.ac.uk

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

MAREX

Novel marine bioactive compounds for European industries

Biodiversity in the seas is only partly explored, although marine organisms are excellent sources for many industrial products. Through close co-operation between industrial and academic partners, the MAREX project will collect, isolate and classify marine organisms, such as micro- and macroalgae, cyanobacteria, sea anemones, tunicates and fish from the Atlantic, Pacific and Indian Oceans as well as from the Mediterranean, Baltic and Arabian Seas. Extracts and purified compounds of these organisms will be studied for several therapeutically and industrially significant biological activities, including anticancer, anti-inflammatory, antiviral and anticoagulant activities by applying a wide variety of screening tools, as well as for ion channel/receptor modulation and plant growth regulation. Chromatographic isolation of bioactive compounds will be followed by structural determination. Sustainable cultivation methods for promising organisms, and biotechnological processes for selected compounds will be developed, as well as biosensors for monitoring the target compounds. The work will entail sustainable organic synthesis of selected active compounds and new derivatives, and development of selected hits to lead compounds. The project will expand marine compound libraries. MAREX innovations will be targeted for industrial product development in order to improve the growth and productivity of European marine biotechnology. MAREX aims at a better understanding of environmentally conscious sourcing of marine biotechnology products and increased public awareness of marine biodiversity and potential. Finally, MAREX is expected to offer novel marine-based lead compounds for European industries and strengthen their product portfolios related to pharmaceutical, nutraceutical, cosmetic, agrochemical, food processing, material and biosensor applications.

PROJECT COORDINATOR

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- HELSINGIN YLIOPISTO (FI)

FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,974

PROJECT N°

245137

DURATION

48 months

PROJECT START DATE

August 2010

LIST OF PARTNERS

1. HELSINGIN YLIOPISTO (FI)
2. UNIVERZA V LJUBLJANI (SI)
3. UNIVERSIDAD DE LA LAGUNA (ES)
4. UNIWERSYTET GDANSKI (PL)
5. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
6. ABO AKADEMI (FI)
7. AMERICAN UNIVERSITY OF BEIRUT (LB)
8. UNIVERSIDAD DE ANTOFAGASTA (CL)
9. UNIVERSITE DE STRASBOURG (FR)
10. EGE UNIVERSITESI (TR)
11. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. (IT)
12. UNIVERSIDAD CATOLICA DEL NORTE (CL)
13. VALTION TEKNILLINEN TUTKIMUSKESKUS (FI)
14. NATIONAL INSTITUTE OF OCEANOGRAPHY (IN)
15. IMEGO AB (SE)
16. XENTION LTD (UK)
17. BIOVICO SP. ZOO (PL)
18. EUROESPES BIOETCNOLOGIA S.A. (ES)
19. BIOTECHMARINE (FR)

FP7-KBBE-2009-3

Exploring Marine Resources for Bioactive Compounds: From Discovery to Sustainable Production and Industrial Applications

MAREX

www.marex.fi

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

MARINEBIOTECH

Marine biotechnology ERA-NET preparatory action

Marine biotechnology has the potential to provide a major contribution towards addressing some of the most pressing societal challenges including environmental degradation, human health and delivering sustainable supplies of food and energy. The main goal of the CSA will be to prepare the foundation for a potential ERA-NET in the area of Marine Biotechnology which will require: a) Gaining better understanding of the Marine Biotechnology landscape in Europe and beyond. To this end the consortium envisages carrying out an analysis of the current landscape (research effort, infrastructures, stakeholders, strategies and programmes, gaps and barriers to cooperation). b) Mobilisation of key stakeholders: extending the partnership of funding agencies and European Stakeholders. To this end the consortium envisages pro-active engagement with relevant and potentially interested funding agencies and stakeholders through development of appropriate fora, the organisation of information sessions, workshops and other project activities. c) Sketching the contours of future cooperation between funding agencies in the area of Marine Biotechnology. To this end the consortium envisages workshops involving the extended network of funding agencies and representative governmental organisations to set the stage for the set-up of appropriate cooperation tools to develop joint programmes and pool resources for collaborative research on a European scale. d) Managing information relevant to marine biotechnology research, technology development and innovation, and making this available via a dedicated web-site (including Wiki pages), newsletters, reports and briefing documents.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,870

PROJECT N°

289311

DURATION

18 months

PROJECT START DATE

October 2011

LIST OF PARTNERS

1. NORGES FORSKNINGSRAD (NO)
2. VLAAMS INSTITUUT VOOR DE ZEE VZW (BE)
3. NORGENTA NORDDEUTSCHE LIFE SCIENCE AGENTUR GMBH (DE)
4. DANMARKS TEKNISKE UNIVERSITET (DK)
5. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
6. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
7. FONDATION EUROPEENNE DE LA SCIENCE (FR)
8. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
9. FUNDACAO PARA A CIENCIA E A TECNOLOGIA (PT)
10. TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU (TR)
11. BIOBRIDGE LIMITED (UK)

FP7-KBBE-2011-5

CSA (Coordinating) in Marine Biotechnology

MARINEBIOTECH

www.marinebiotech.eu

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

PHARMASEA

Innovative marine biodiscovery pipelines for novel industrial products

The PharmaSea project focuses on obstacles in marine biodiscovery research, development and commercialization and brings together a broad interdisciplinary team of academic and industry researchers and specialists to address and overcome these. The partners are ideally placed to demonstrate how to widen the bottlenecks and increase the flow of ideas and products derived from the marine microbiome towards a greater number of successes in a larger number of application areas. Despite the tremendous potential of marine biodiscovery, exploitation, particularly at a commercial scale, has been hampered by a number of constraints. These relate to access (physical and legal), genetics of the organisms, compound isolation, structure elucidation, early reliable validation of biological activity and best mechanisms of flow-through into exploitation. PharmaSea will solve these chronic bottlenecks by developing essential actions beyond the state of the art and linking them with best practice and appropriate pragmatic approaches. The robust pipeline structure established within PharmaSea will process a wide genetic basis including marine microbial strain collections held by partners and new strain collections from extreme environments (deep, cold and hot vent habitats) to produce new products with desirable characteristics for development by the SME partners in three accessible market sectors, health (infection, inflammation, CNS diseases), personal care and nutrition. The global aim of PharmaSea is to produce two compounds at larger scale and advance them to pre-clinical evaluation. To address relevant challenges in marine biodiscovery related to policy and legal issues, PharmaSea will bring together practitioners, legal experts, policy advisors/makers and other stakeholders, focusing on the feasibility of harmonising, aligning and complementing current legal frameworks with recommendations and ready to use solutions tailored to marine biodiscovery.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

9,465,907

PROJECT N°

312184

DURATION

48 months

PROJECT START DATE

October 2012

LIST OF PARTNERS

1. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
2. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
3. AQUAPHARM BIODISCOVERY LIMITED (UK)
4. UNIVERSITETET I TROMSOE (NO)
5. ECOAST RESEARCH CENTRE OSTEND BVBA (BE)
6. BIOBRIDGE LIMITED (UK)
7. FUNDACION CENTRO DE EXCELENCIA EN INVESTIGACION DE MEDICAMENTOS INNOVADORES EN ANDALUCIA (ES)
8. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
9. BIOCOM (DE)
10. STAZIONE ZOOLOGICA ANTON DOHRN (IT)
11. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
12. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
13. THE ROYAL SOCIETY OF CHEMISTRY (UK)
14. G-LECTA GMBH (DE)
15. DANMARKS TEKNISKE UNIVERSITET (DK)
16. DEEP TEK LIMITED (UK)
17. ADVANCED CHEMISTRY DEVELOPMENT UK LIMITED (UK)
18. WUHAN UNIVERSITY (CN)
19. INSTITUTE OF MICROBIOLOGY, CHINESE ACADEMY OF SCIENCES (CN)
20. UNIVERSITY OF THE WESTERN CAPE (ZA)
21. INSTITUTO DE DINAMICA CELULAR Y BIOTECNOLOGIA (CL)
22. ASOCIACION INSTITUTO NACIONAL DE BIODIVERSIDAD (CR)
23. UNION INTERNATIONALE POUR LA CONSERVATION DE LA NATURE ET DE SES RESSOURCES (CH)
24. UNIVERSITY OF WAIKATO (NZ)

FP7-KBBE-2012-6-singlestage

Increasing Value and Flow in the Marine Biodiscovery Pipeline

PHARMASEA

n.a.

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

POLYMODE

NOVEL ENZYMES – The search for novel enzymes and micro-organisms for different bioprocesses

The PolyModE project convenes an international, interdisciplinary, and intersectorial consortium to identify, characterise, and optimise novel polysaccharide modifying enzymes, and to develop robust fermentation strategies for their large-scale production, to exploit the potential of biopolymers for food, pharmaceutical, cosmetic, and technical applications. We have selected the six complex carbohydrates with the highest current market share or expected future market potential, namely alginate, carrageenan, chitosan, glycosaminoglycan, pectin, and xanthan gum. For each of these, the industrial partners have identified those enzymes which will answer to the most pressing needs or offer the most promising potential for improved production of polysaccharides with novel physico-chemical properties and biological functionalities. Primary targets will be alginate epimerases, carrageenan sulfatases, chitosan de-acetylases, glycosaminoglycan sulfatases, pectin de-acetylases, and xanthan gum de-acetylases. These enzymes together with secondary target enzymes, e.g. sequence specific lyases and hydrolases, will allow the generation and analysis of polymers and oligomers with novel, non-random patterns of modification. Two parallel approaches will be followed for each type of polysaccharide modifying enzyme, namely a knowledge-based genomic approach and a broad, un-biased metagenomic approach, e.g. using soil or sludge samples with a history of contact with the polysaccharide in question. A pipeline of three levels of fermentation systems will be established, ranging from lab-scale innovative expression systems with features shaped according to the specific characteristics of our target enzymes, through medium-scale, novel and unusual fermentation systems provided by a number of SME with highly specialised knowledge and expertise in developing and using such systems, to the established large-scale fermentation systems and facilities of market leaders in White Biotechnology.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,948

PROJECT N°

222628-2

DURATION

48 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. WESTFAELISCHE WILHELMS-UNIVERSITAET MUENSTER (DE)
2. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
3. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS) (FR)
4. WAGENINGEN UNIVERSITEIT (NL)
5. SVERIGES LANTBRUKSUNIVERSITET (SE)
6. THE STEPHAN ANGELOFF INSTITUTE OF MICROBIOLOGY, BULGARIAN ACADEMY OF SCIENCES (BG)
7. DANISCO A/S (DK)
8. SANOFI-AVENTIS RECHERCHE & DEVELOPPEMENT (FR)
9. GILLET CHITOSAN EURL (FR)
10. GENEART AG (DE)
11. LIBRAGEN (FR)
12. ARTES BIOTECHNOLOGY GMBH (DE)
13. GTP TECHNOLOGY SA (FR)
14. LYON INGENIERIE PROJETS (FR)
15. PETRA TEWES-SCHWARZER. CARE SENSE CONSULTING (DE)

FP7-KBBE-2007-2A

Novel Polysaccharide Modifying Enzymes to Optimise the Potential of Hydrocolloids for Food and Medical Applications

POLYMODE

www.polymode.eu

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

SEABIOTECH

Innovative marine biodiscovery pipelines for novel industrial products

SeaBioTech is a 48-month project designed and driven by SMEs to create innovative marine biodiscovery pipelines as a means to convert the potential of marine biotechnology into novel industrial products for the pharmaceutical (human and aquaculture), cosmetic, functional food and industrial chemistry sectors. SeaBioTech will reduce barriers to successful industrial exploitation of marine biodiversity for companies more accustomed to 'terrestrial' biotechnology. SeaBioTech directly addresses five key challenges to remove bottlenecks in the marine biodiscovery pipeline, leading to (1) improvements in the quality of marine resources available for biotechnological exploitation, (2) improvement in technical aspects of the biodiscovery pipeline to shorten time to market, and (3) developing sustainable modes of supply of raw materials for industry. The two last challenges centre on enabling activities to enhance the marine biodiscovery process: first, clarification of legal aspects to facilitate access to marine resources, their sustainable use, and their secure exploitation; second, to create an improved framework for access to marine biotechnology data and research materials. To achieve its goals, SeaBioTech brings together complementary and world-leading experts, integrating biology, genomics, natural product chemistry, bioactivity testing, industrial bioprocessing, legal aspects, market analysis and knowledge exchange. The expertise assembled within the consortium reflects the industry-defined needs, from the SME partners' initial definition of market and product opportunities to their ultimate proof-of-concept demonstration activities. SeaBioTech will have significant impact on research and technology, on innovation, on European competitiveness and on economic growth. It will provide a model to accelerate the development of European biotechnology into a world leading position.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

7,461,716

PROJECT N°

311932

DURATION

48 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. UNIVERSITY OF STRATHCLYDE (UK)
2. INGENZA LIMITED (UK)
3. PROKAZYME EHF (IS)
4. MARINE BIOPOLYMERS LIMITED (UK)
5. PHARMAQ AS* (NO)
6. AXXAM SPA (IT)
7. HORIZON DISCOVERY LIMITED (UK)
8. MATIS OHF (IS)
9. LUNDS UNIVERSITET (SE)
10. JULIUS-MAXIMILIANS UNIVERSITAET WUERZBURG (DE)
11. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
12. THE SCOTTISH ASSOCIATION FOR MARINE SCIENCE (UK)
13. NOVAMEN SAS (FR)
14. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)

FP7-KBBE-2012-6-singlestage

From sea-bed to test-bed: harvesting the potential of marine microbes for industrial biotechnology

SEABIOTECH

n.a.

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

SUNBIOPATH

Sustainable use of seas and oceans - Biomass from micro- and macro-algae for industrial applications

SUNBIOPATH - towards a better sunlight to biomass conversion efficiency in microalgae - is an integrated program of research aimed at improving biomass yields and valorization of biomass for two Chlorophycean photosynthetic microalgae, Chlamydomonas reinhardtii and Dunaliella salina. Biomass yields will be improved at the level of primary processes that occur in the chloroplasts (photochemistry and sunlight capture by the light harvesting complexes) and in the cell (biochemical pathways and signaling mechanisms that influence ATP synthesis). Optimal growth of the engineered microalgae will be determined in photobioreactors, and biomass yields will be tested using a scale up approach in photobioreactors of different sizes (up to 250 L), some of which being designed and built during SUNBIOPATH. Biomethane production will be evaluated. Compared to other biofuels, biomethane is attractive because the yield of biomass to fuel conversion is higher. Valorization of biomass will also be achieved through the production of high-value antigens in the chloroplast. Significant progress has been made in the development of chloroplast genetic engineering in microalgae such as Chlamydomonas, however the commercial exploitation of this technology still requires additional research. SUNBIOPATH will address the problem of maximising transgenic expression in the chloroplast and will develop a robust system for producing vaccines by developing mecthodologies such as inducible expression and trans-operon expression.A techno economic analysis will be made to evaluate the feasibility of using these algae for the purposes proposed (antigen production in the chloroplast and/or biomethane production) taking into account their role in CO2 mitigation.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,998,182

PROJECT N°

245070

DURATION

36 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. UNIVERSITE DE LIEGE (BE)
2. UNIVERSITAET BIELEFELD (DE)
3. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
4. UNIVERSITA DEGLI STUDI DI VERONA (IT)
5. WESTFAELISCHE WILHELMS-UNIVERSITAET MUENSTER (DE)
6. WEIZMANN INSTITUTE OF SCIENCE (IL)
7. UNIVERSITE DE GENEVE (CH)
8. UNIVERSITY COLLEGE LONDON (UK)
9. KARLSRUHER INSTITUT FÜR TECHNOLOGIE (DE)
10. WAGENINGEN UNIVERSITEIT (NL)

FP7-KBBE-2009-3

SUNBIOPATH

Towards a better sunlight to biomass conversion efficiency in microalgae

www.ulg.ac.be/genemic/sunbiopath

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

MARINE FUNGI

Sustainable culture of marine microorganisms, algae and/or invertebrates for high added value products

The aim of MARINE FUNGI is the demonstration of sustainable exploitation of marine natural resources providing appropriate culture conditions for the underutilised group of marine fungi, thus enabling efficient production of marine natural products in the laboratory and also in large scale cultures, avoiding harm to the natural environment. The focus of MARINE FUNGI are new anti-cancer compounds The project will carry out the characterisation of these compounds to the stage of in vivo proof of concept ready to enter further drug development in order to valorise the results of the project. MARINE FUNGI covers two approaches to gain effective producer strains:a) Candidate strains originating from one partner's strain collection will be characterised and optimised using molecular methods. b) New fungi will be isolated from unique habitats, i.e. tropical coral reefs, endemic macroalgae and sponges from the Mediterranean. Culture conditions for these new isolates will be optimised for the production of new anti-cancer metabolites. MARINE FUNGI will develop a process concept for these compounds providing the technological basis for a sustainable use of marine microbial products as result of "Blue Biotech". The project will explore the potential of marine fungi as excellent sources for useful new natural compounds. This will be accomplished by the formation of a new strongly interacting research network comprising the scientific and technological actors, including 3 SMEs and 2 ICPC partners, necessary to move along the added-value chain from the marine habitat to the drug candidate and process concept. The generated and existing knowledge will be disseminated widely for the valorisation of the project results.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,898

PROJECT N°

265926

DURATION

36 months

PROJECT START DATE

May 2011

LIST OF PARTNERS

1. HELMHOLTZ ZENTRUM FUR OZEANFORSCHUNG KIEL (DE)
2. HYPHA DISCOVERY LIMITED (UK)
3. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
4. AARHUS UNIVERSITET (DK)
5. CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL (DE)
6. TEKNOLOGISK INSTITUT (DK)
7. UNIVERSITAS DIPONEGORO (ID)
8. UNIVERSIDAD DE ANTOFAGASTA (CL)
9. EUROPEAN SCREENINGPORT GMBH (DE)
10. PROBIODRUG AG (DE)
11. UNIVERSITETET I OSLO (NO)

FP7-KBBE-2010-4

Natural products from marine fungi for the treatment of cancer

MARINE FUNGI

www.marinefungi.eu

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

METAEXPLORE

ACTIVITY MININING IN METAGENOMES – Exploring molecular microbial diversity in aquatic environment or the soil

This proposal will (further) develop and apply metagenomics tools to access the enzymatic potential borne in the cryptic biota of selected natural habitats, in particular target soil-related and aquatic ones. In the light of the environmental relevance of chitins and lignins (as natural compounds recalcitrant to degradation) and halogenated aliphatic and aromatic compounds (anthropogenic recalcitrant compounds), the enzymatic activities that we will target are functions able to degrade these compounds. A database of gene functions will be established and maintained. Next to its great relevance to environmental biotechnology including bioremediation, a spin-off of the work will be the discovery of novel biocatalytic functions of industrial relevance. We will in particular address the catabolic potential that is encoded by the mobilome, the collective pool of mobile genetic elements in the microbiota. We will further apply high-throughput (454-based) sequencing to rapidly unravel the metabolic complement in this mobile gene pool. The project brings together a suite of 15 contractors across Europe, encompassing 21 laboratories spread over 11 copuntries and including 4 SMEs. Most of the partners are renowned laboratories which have vast experience in metagenomics of environmental samples, biotechnology, enzymology, bioinformatics, the mobilome, waste management and bioremediation and enzyme production.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,991

PROJECT N°

222625-2

DURATION

60 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. RIJKSUNIVERSITEIT GRONINGEN (NL)
2. RIJKSUNIVERSITEIT GRONINGEN (NL)
3. KØBENHAVNS UNIVERSITET (DK)
4. SODERTORNS HOGSKOLA (SE)
5. THE UNIVERSITY OF WARWICK (UK)
6. WAGENINGEN UNIVERSITEIT (NL)
7. ECOLE CENTRALE DE LYON (FR)
8. UNIVERSITAET BIELEFELD (DE)
9. JULIUS KUHN INSTITUT BUNDESFORSCHUNGSINSTITUT FUR KULTURPFLANZEN (DE)
10. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
11. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
12. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
13. UNIVERSITA DEGLI STUDI DELL'INSUBRIA (IT)
14. UNIVERZA V LJUBLJANI (SI)
15. UNIVERSIDAD NACIONAL DE LA PLATA (AR)
16. BIODETECTION SYSTEMS B.V. (NL)
17. WHITBY SEAFOODS LTD (UK)
18. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)

FP7-KBBE-2007-2A

METAEXPLORE

Metagenomics for bioexploration - Tools and application

www.rug.nl/metaexplore

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

MG4U

Learning from research projects: specific dissemination action to potential users in marine genomics

Marine waters provide resources and services estimated at 60% of the total economic value of the biosphere. The application of cutting-edge genomic approaches has generated significant new understanding the marine environment. Rapid progress will continue given the fast rate of technological development in this field. Methods and information are sufficiently mature for direct application to achieve a more competitive European economy, and the generation of knowledge economies in the marine sector. Applications include improving the efficiency of characterisation and mining of marine diversity for biotechnology products and processes that will contribute to the welfare of mankind in a sustainable and environmentally compatible manner. Marine genomics knowledge has enormous potential to assist organisations involved in governance and sustainable management of the marine environment and its resources. However, the direct utility of marine genomics in developing commercial advantage, and in general problem solving is not understood by many decision makers in government and industry. A large amount of valuable marine genomics knowledge is inaccessible to users or exists in non-user-friendly contexts. Marine Genomics 4 Users (MG4U) responds to the specific call “Learning from research projects: specific dissemination to potential users in marine genomics” designed to address this critical bottleneck. The call was generated since it is crucial that putative end-users are aware of both the potential of genomics approaches and the state-of-the-art developments that have taken place in recent EU and other research programmes for genomics to be exploited effectively end users. MG4U brings together a project consortium containing both scientific excellence and knowledge management specialists to design an innovative and realisable project that can have a measurable impact on the current situation and become a best practice example of effective knowledge transfer.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

997,826

PROJECT N°

266055

DURATION

30 months

PROJECT START DATE

January 2011

LIST OF PARTNERS

1. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
2. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
3. AQUATT UETP LTD (IE)
4. GOETEBORGS UNIVERSITET (SE)
5. WESNIGK JOHANNA B (DE)
6. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. (ES)
7. CENTRO DE CIENCIAS DO MAR DO ALGARVE (PT)

FP7-KBBE-2010-4

Marine Genomics for Users

MG4U

www.mg4u.eu

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

RADAR

Innovative aquatic biosensors

RADAR is a 7-member consortium that aims to develop a robust, sensitive, and versatile label-free, biosensor platform for spot measurements and on-line monitoring of toxins and pollutants in food production processes and in the aquatic environment. Specificity towards chemical pollutants and toxins is achieved by using recombinant receptors (namely the estrogen receptor and the aryl hydrocarbon receptor) whose amino acid sequences have been rationally designed based on genomic and functional information from aquatic organisms.Sensitivity of the biosensor is increased by the unique combination of isotachophoretic pre-concentration step, and surface nanostructuring & chemical modification. The integration of the label-free detection sensors with an on-line automated sample handling and a wireless communication system will yield a best-in-class biosensor platform for robust, specific and sensitive detection of EDCs and PAHs in difficult operating conditions. To validate the RADAR biosensor the consortium will test the biosensors in fresh and marine water, in fish farms, and in food products such as fish, fruit juices, and milk. Through their contacts in these industries, the partners will evaluate the performance of the biosensors in such environments, analyzing a representative number of samples and reporting on the stability, ruggedness and accuracy of the sensors used under laboratory and real test conditions. This project is expected to have a high economic impact, since our cost-effective sensor could find a worldwide distribution in most food production and water testing lines as supported by Agilent Technologies Inc.

F

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,926,127

PROJECT N°

265721

DURATION

48 months

PROJECT START DATE

January 2011

LIST OF PARTNERS

1. CSEM CENTRE SUISSE D'ELECTRONIQUE ET DE MICROTECHNIQUE SA. RECHERCHE ET DEVELOPPEMENT (CH)
2. JRC.JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
3. OPTICS BALZERS AG (LI)
4. FONDAZIONE PER L'ISTITUTO DI RICERC A IN BIOMEDICINA (CH)
5. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
6. ELYSIUM PROJECTS LIMITED (UK)
7. NACIONALNI INSTITUT ZA BIOLOGIJO (SI)

P7-KBBE-2010-4

Rationally Designed Aquatic Receptors integrated in label-free biosensor platforms for remote surveillance of toxins and pollutants

RADAR

www.fp7-radar.eu

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

SPECIAL

Sustainable culture of marine microorganisms, algae and/or invertebrates for high added value products

The SPECIAL project aims at delivering breakthrough technologies for the biotechnological production of cellular metabolites and extracellular biomaterials from marine sponges. These include a platform technology to produce secondary metabolites from a wide range of sponge species, a novel in vitro method for the production of biosilica and recombinant technology for the production of marine collagen. Research on cellular metabolites will be based upon our recent finding that non-growing sponges continuously release large amounts of cellular material. Production of biosilica will be realized through biosintering, a novel enzymatic process that was recently discovered in siliceous sponges. Research on sponge collagen will focus on finding the optimal conditions for expression of the related genes. Alongside this research, the project will identify and develop new products from sponges, thus fully realizing the promises of marine biotechnology. Specifically, the project will focus on potential anticancer drugs and novel biomedical/ industrial applications of biosilica and collagen, hereby taking advantage of the unique physico-chemical properties of these extracellular sponge products.The consortium unites seven world-class research institutions covering a wide range of marine biotechnology-related disciplines and four knowledge-intensive SMEs that are active in the field of sponge culture, drug development and nanobiotechnology.The project is clearly reflecting the strategic objectives outlined in the position paper European Marine Strategy (2008); it will enhance marine biotechnology at a multi-disciplinary, European level and provide new opportunities for the European industry to exploit natural marine resources in a sustainable way. In particular the biotechnological potential of marine sponges, which has for a long time been considered as an eternal promise, will be realized through the SPECIAL project.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,991,682

PROJECT N°

266033

DURATION

36 months

PROJECT START DATE

December 2010

LIST OF PARTNERS

1. UNIVERSIDADE DO MINHO (PT)
2. TEL AVIV UNIVERSITY (IL)
3. PORIFARMA BV (NL)
4. STUDIO ASSOCIATO GAIA SNC DEI DOTTORI ANTONIO SARA E MARTINA MILANESE (IT)
5. UNIVERSITA DEGLI STUDI DI GENOVA (IT)
6. UNIVERSITAETSMEDIZIN DER JOHANNES GUTENBERG-UNIVERSITAET MAINZ (DE)
7. NATIONAL RESEARCH CENTER FOR GEOANALYSIS (CN)
8. KAROLINSKA INSTITUTET (SE)
9. ATRAHASIS SRL (IT)
10. UNIVERSIDADE DOS AÇORES (PT)
11. NANOTECMARIN GMBH (DE)

FP7-KBBE-2010-4

SPECIAL

Sponge Enzymes and Cells for Innovative AppLications

www.project-special.eu

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

APROPOS

BioWASTE - Novel biotechnological approaches for transforming industrial and/or municipal biowaste into bioproducts – SICA

The focus of APROPOS is to develop novel eco-efficient bio-mechanical processing solutions to enrich intermediate fractions from industrial high protein and oil-containing process residues originating from agriculture and fisheries. Enzyme-aided modification steps are developed for the intermediate fractions to obtain value-added nutritive and bio-active components, chemical as well as functional bio-materials suitable for exploitation in food, skin care, wound healing, bio-pesticide and soil improvement product applications. Mentioned residues are voluminous in Europe and globally significant. Zero waste concepts to be developed aim at avoidance of unnecessary purification of the components, establishment of local and distributed processing units in connection with the primary production and new business opportunities essentially for SMEs in Europe and beyond. An emphasis is directed to East Africa and India to support their needs to process local residues to components directed to nourish infants and fight against pests, respectively, in rural areas of both regions. The success of technological developments will be assessed in terms of economical feasibility, raw material efficiency and environmental impacts. The assessment will also include study on how the developed residue producer-end use value chain will affect the existing value chain from the residue producer to feed or energy. The multidisciplinary research group and cross-industrial SME group together cover the whole value chain from residue producers and processors to various end-users. The expertises of the partners include crop and fish processing, process hard ware manufacture, mechanical, chemical and biotechnical biomaterial processing, biomaterial up-grading and analytics, enzyme technology, end-product applications, assessment of eco-efficiency and value chains, technology transfer and commercialization. Feasibility of the developed processes is verified by demonstrations. Bio-mechanical processi

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,874,468

PROJECT N°

289170

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
2. UNIVERSITAT POLITECNICA DE CATALUNYA (ES)
3. IGV INSTITUT FUR GETREIDEVERARBEITUNG GMBH (DE)
4. SINTEF FISKERI OG HAVBRUK AS (NO)
5. MANITOBA AGRI-HEALTH RESEARCH NETWORK INC CORP (CA)
6. UNIVERSITY OF NAIROBI (KE)
7. THE ENERGY AND RESOURCES INSTITUTE (IN)
8. LIETUVOS ZEMES UKIO UNIVERSITETAS (LT)
9. NUTRIMAR AS (NO)
10. SYBIMAR OY (FI)
11. KANKAISTEN OELJYKASVIT OY (FI)
12. LASTING SOLUTIONS LTD (UG)
13. MECPRO HEAVY ENGINEERING PRIVATE LIMITED (IN)
14. TRUE COSMETICS SL (ES)
15. TEXTIL PLANAS OLIVERAS SA (ES)
16. KROPPENSTEDTER OLMUHLE WALTER DOPELHEUER GMBH (DE)
17. ECOFOSTER GROUP OY (FI)

FP7-KBBE-2011-5

APROPOS

Added value from high protein & high oil industrial co-streams

www.euapropos.eu

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

CHIBIO

BioWASTE - Novel biotechnological approaches for transforming industrial and/or municipal biowaste into bioproducts – SICA

The fishing industry in the EU and elsewhere produces an increasing mass of negative value crustacean shell waste (>6 MTPA), whose current disposal in landfills results in significant costs and risks to human health as well as to the environment. While in Asia small amounts of shrimp waste are processed to chitosan, the high CaCO3 content of EU crab shell waste has prevented cost effective conversion to value adding products. The project will develop an integrated biorefinery platform transforming the chemical constituents of EU, African and Asian crustacean shell waste into “drop-in” and novel chemical intermediates to produce high value, high performance bio-based polymers at high atom efficiencies. The innovative process comprises pretreatment steps to facilitate downstream enzymatic depolymerisation and conversion of sugars into chemical building blocks utilizing enzymatic and whole-cell biocatalysis routes. Biocatalyst development requires application of genomics techniques in combination with green-chemical and process-engineering know-how. Sustainable purification technologies will enable integration of monomers into current industrial polymerization processes. Biowaste streams will be valorised for the production of bioenergy to improve process efficiency and greenhouse gas footprint. The environmental impact of the process chain will be evaluated by a cradle-to-product life cycle analysis. Process scale-up will be linked with modelling and optimization studies to demonstrate economic viability. The consortium of 5 academic, 4 SME and 2 large industrial partners has the technical and management expertise to rapidly transfer laboratory scale results into novel industrial product lines at an accelerated pace. Key consortium members are from 5 different EU and 2 associated ICP states, which allows for strategic technology transfer from high- to low-tech driven countries, fostering the development of sustainable economies in the EU and beyond.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,904,425

PROJECT N°

289284

DURATION

36 months

PROJECT START DATE

November 2011

LIST OF PARTNERS

1. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V (DE)
2. TECHNISCHE UNIVERSITAET MUENCHEN (DE)
3. LETTERKENNY INSTITUTE OF TECHNOLOGY (IE)
4. UNIVERSITETET FOR MILJO OG BIOVITENSKAP (NO)
5. INSTITUT NATIONAL DES SCIENCES ET TECHNOLOGIES DE LA MER (TN)
6. APRONEX S.R.O (CZ)
7. EARAGAIL EISC TEORANTA (IE)
8. EVONIK INDUSTRIES AG (DE)
9. SUD CHEMIE AG (DE)
10. ENERGIEINSTITUT AN DER JOHANNES KEPLER UNIVERSITAT LINZ GMBH (AT)
11. BIOTECH SURINDO PT (ID)

FP7-KBBE-2011-5

CHIBIO

Development of an integrated biorefinery for processing chitin rich biowaste to specialty and fine chemicals

www.chibiofp7.fraunhofer.de

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

SPLASH

Biotechnology for novel biopolymers

The 4-year SPLASH project will develop a new biobased industrial platform using microalgae as a renewable raw material for the sustainable production and recovery of hydrocarbons and (exo)polysaccharides from the species Botryococcus braunii and further conversion to renewable polymers. The project comprises 20 partners of which 40% SME and several large corporates plus universities and research institutes. Two bioproduction platforms will be explored: (1) green alga Botryococcus braunii on its own and (2) the green microalga Chlamydomonas reinhardtii, to which the unique hydrocarbon and polysaccharides producing genes from Botryococcus will be transferred. SPLASH will deliver knowledge, tools and technologies needed for the establishment of a new industry sector: Industrial Biotechnology with algae and/or algal genes for the manufacture of polyesters and polyolefins. The building blocks for these polymers will be derived from the sugars (polyesters) and hydrocarbons (polyolefins) exuded by the algae: adipic acid from galactose, 2,5-furandicarboxylic acid from glucose, rhamnose and fucose, 1,4-pentanediol from rhamnose and fucose, ethylene from 'green naphtha', propylene from 'green naphtha'. The conversion of ethylene and propylene to polyolefins is common technology, and will not be included in the project. The sugar-derived building blocks will be converted to new condensation polymers, including poly(ethylene 2,5-furandioate) (PEF) and poly(1,4-pentylene adipate-co-2,5-furandioate). End-use applications include food packaging materials and fibres for yarns, ropes and nets.
The project encompasses (1) development of Botryococcus as an industrial production platform, (2) Systems biology analysis, (3) Development of procedures for production, in situ extraction and isolation, (4) product development.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

8,942,933

PROJECT N°

311956

DURATION

48 months

PROJECT START DATE

under negotiation

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS (EL)
3. ORGANIC WASTE SYSTEMS NV (BE)
4. PAQUES BV (NL)
5. NIELS-HENRIK NORSKER (DK)
6. VALUE FOR TECHNOLOGY BVBA (BE)
7. AVANTIUM CHEMICALS BV (NL)
8. LIFEGLIMMER GMBH (DE)
9. PURSUIT DYNAMICS PLC (UK)
10. NOVA-INSTITUT FUR POLITISCHE UND OKOLOGISCHE INNOVATION GMBH (DE)
11. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V (DE)
12. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UK)
13. PNO CONSULTANTS BV (NL)
14. UNIVERSIDAD DE HUELVA (ES)
15. WAGENINGEN UNIVERSITEIT (NL)
16. UNIVERSITAET BIELEFELD (DE)
17. WESTFAELISCHE WILHELMS-UNIVERSITAET MUENSTER (DE)
18. EGE UNIVERSITESI (TR)
19. LANKHORST EURONETE PORTUGAL SA (PT)
20. RHODIA OPERATIONS (FR)

FP7-KBBE-2012-6-singlestage

Sustainable PoLymers from Algae Sugars and Hydrocarbons

SPLASH

n.a.

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

BIOCLEAN

Biotechnological solutions for the degradation of synthetic polymeric materials (The Ocean of Tomorrow)

In BIOCLEAN project, novel and robust microorganisms (aerobic and anaerobic bacteria, and fungi) able to extensively degrade polyethylene (PE), polypropylene (PP), polystyrol (PS) and polyvinyl chloride (PVC) polymers and plastics will be isolated from actual-site aged plastic wastes obtained from several European marine and terrestrial sites, composting facilities and landfills, and obtained via tailored screenings from existing European collections of microbes. Robust enzymes able to fragment the target plastics with the production of valuable chemicals and building blocks will be obtained from the selected microbes and enzyme collections. Untreated and physically/chemically pre-treated PE, PS, PP and PVC polymers and plastics will be employed in such isolation/ screening activities, and an integrated methodology, relying on advanced analytical methods (determining plastics physicochemical changes and breakdown products resulting from biological attack), and tailored enzymatic, microbiological and ecotoxicological methods, will be adopted for the characterization of actual industrial relevance of the obtained microbes and enzymes. Physical and chemical pretreatments improving biodegradability of target plastics will be identified and transferred on the pilot scale. The most promising microbial cultures and enzymes will be exploited in the development of pilot scale, slurry or solid-phase bioprocesses for the bioremediation and controlled depolymerization, respectively, of target pretreated plastics and in the set up of tailored bioaugmentation protocols for enhancing plastic waste biodegradation in marine water systems, composting and anaerobic digestor facilities. The processes developed will be assessed for their economical and environmental sustainability. Field scale validation of the most promising bioaugmentation protocols in a composting and a marine site and attempts to develop a plastic pollution reduction strategy for the Aegean Sea have been planned too

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,995,988

PROJECT N°

312100

DURATION

36 months

PROJECT START DATE

September 2012

LIST OF PARTNERS

1. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
2. FACHHOCHSCHULE NORDWESTSCHWEIZ (CH)
3. TECHNICAL UNIVERSITY OF CRETE (EL)
4. HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH. UFZ (DE)
5. MADEP SA (CH)
6. INTERNATIONALES HOCHSCHULINSTITUT ZITTAU (DE)
7. OSTRAVSKA UNIVERZITA V OSTRAVE (CZ)
8. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
9. CENTRUM MATERIALOW POLIMEROWYCH IWEGLOWYCH POLSKA AKADEMIA NAUK*CMPIW PAN (PL)
10. ORGANIC WASTE SYSTEMS NV (BE)
11. FELSILAB SRL (IT)
12. BIOBASIC ENVIRONNEMENT SARL (FR)
13. TECHNIKI PROSTASIAS PERIVALLONTOS ANONYMI ETAIREIA (EL)
14. NANJING UNIVERSITY (CN)
15. DIADIMOTIKI EPICHEIRISI DIACHEIRISIS STEREON APOVLITON ANONYMI ETAIREIA OTA (EL)
16. MARITIM MILJO BEREDSKAP AS (NO)
17. PLASTICSEUROPE (BE)
18. SIMA-TEC GMBH (DE)
19. HAVFORSKNINGSINSTITUTTET (NO)

FP7-KBBE-2012-6-singlestage

New BIOtechnologiCaL approaches for biodegrading and promoting the environmEntal biotrAnsformation of syNthetic polymeric materials

n.a.

BIOCLEAN

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

KILL●SPILL

Innovative biotechnologies for tackling oil spill disasters (The Ocean of Tomorrow)

Kill●Spill delivers innovative (bio)technologies, which can be integrated to the real sequences of state-of-the-art actions used currently to cleanup oil spills. The catalogue of Kill●Spill products & technologies is based on a review of technology & knowledge gaps in approaches of oil spill disasters and brings appropriate tools for 1st response, follow-up, and longer-term actions, specifically tailored to the versatility of oil spills. Kill●Spill develops chemicals & biochemicals to be used for 1st response actions to disperse/emulsify oil and materials enabling the containment and sorption of oil, preparing the field for the follow-up actions. Kill●Spill develops (Bio)technologies aiming at intensified biodegradation processes by bioaugmentation/biostimulation as follow-up and longer term actions in aerobic/slight anoxic compartments. Kill●Spill develops (bio) technologies adapted for the remediation of anoxic/anaerobic fresh & chronically polluted sediments. Kill●Spill compiles knowledge on dispersion/sorption and biodegradation processes to produce multifunctional products, which are suited for follow-up and longer term actions. The multifunctional products address the necessity for integrated bioremediation (bioavailability, metabolic requirements, etc.) and are efficient along the whole redox gradient from surface water to sediments. The products/technologies are field-tested in open sea oil spills and large mesocosms to unravel the champions products & technologies. The (bio)tools are benchmarked with existing solutions using cutting-edge analytics, biosensors, and omics and checked for eco-efficiency to merit green label. Kill●Spill consortium is multidisciplinary and gathers 38 partners from 11 EU and EU-associated countries and USA; 22 research & academic institutions, 14 SMEs, 1 large company, and 1 association of oil spill companies work together with the support of a high level advisory board to cover the whole chain of oil spill (bio)remediation.

PROJECT COORDINATOR
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FUNDING SCHEME
CP

EC CONTRIBUTION €
8,996,599

PROJECT N° 312139

DURATION
48 months

PROJECT START DATE
January 2013

LIST OF PARTNERS
1. TECHNICAL UNIVERSITY OF CRETE (EL)
2. FACHHOCHSCHULE NORDWESTSCHWEIZ (CH)
3. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
4. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
5. THE GEOLOGICAL SURVEY OF DENMARK AND GREENLAND (DK)
6. UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA (IT)
7. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
8. UNIVERSITY OF ULSTER (UK)
9. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
10. UNIVERSITA DEGLI STUDI DI MILANO (IT)
11. UNIVERSITEIT GENT (BE)
12. VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE (CZ)
13. KØBENHAVNS UNIVERSITET (DK)
14. BANGOR UNIVERSITY (UK)
15. HELMHOLTZ ZENTRUM MUENCHEN DEUTSCHES FORSCHUNGSZENTRUM FUER GESUNDHEIT UND UMWELT GMBH (DE)
16. MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM (UK)
17. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
18. NATIONAL UNIVERSITY OF IRELAND, GALWAY (IE)
19. BIOBASED EUROPE LIMITED (UK)
20. BIOREM ENGINEERING BVBA (BE)
21. GORTON CONSULTANCY LTD (UK)
22. CREATIVE RESEARCH SOLUTIONS BVBA (BE)
23. TECHNIKI PROSTASIAS PERIVALLONTOS ANONYMI ETAIREIA (EL)
24. MADEP SA (CH)
25. HEIQ MATERIALS AG (CH)
26. MARITIM MILJO BEREDSKAP AS (NO)
27. INSTITUT ZA FIZIKALNO BIOLOGIJO D.O.O. (SI)
28. ECOTECHSYSTEMS SRL (IT)
29. UK SPILL LIMITED (UK)
30. VERMICON AKTIENGESELLSCHAFT (DE)
31. ACTYGEA SRL (IT)
32. OMYA DEVELOPMENT AG (CH)
33. THE RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK (US)

FP7-KBBE-2012-6-singlestage

Integrated Biotechnological Solutions for Combating Marine Oil Spills

KILL●SPILL

n.a.

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

MAGICPAH

Molecular approaches to bioremediation of polyaromatic hydrocarbon compounds

MAGICPAH aims to explore, understand and exploit the catalytic activities of microbial communities involved in the degradation of persistent PAHs. It will integrate (meta-) genomic studies with in-situ activity assessment based on stable isotope probing particularly in complex matrices of different terrestrial and marine environments. PAH degradation under various conditions of bioavailability will be assessed as to improve rational exploitation of the catalytic properties of bacteria for the treatment and prevention of PAH pollution. We will generate a knowledge base not only on the microbial catabolome for biodegradation of PAHs in various impacted environmental settings based on genome gazing, retrieval and characterization of specific enzymes but also on systems related bioavailability of contaminant mixtures. MAGICPAH takes into account the tremendous undiscovered metagenomic resources by the direct retrieval from genome/metagenome libraries and consequent characterization of enzymes through activity screens. These screens will include a high-end functional small-molecule fluorescence screening platform and will allow us to directly access novel metabolic reactions followed by their rational exploitation for biocatalysis and the re-construction of biodegradation networks. Results from (meta-) genomic approaches will be correlated with microbial in situ activity assessments, specifically dedicated to identifying key players and key reactions involved in anaerobic PAH metabolism. Key processes for PAH metabolism particularly in marine and composting environments and the kinetics of aerobic degradation of PAH under different conditions of bioavailability will be assessed in model systems, the rational manipulation of which will allow us to deduce correlations between system performance and genomic blueprint. The results will be used to improve treatments of PAH-contaminated sites.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,997,137

PROJECT N°

245226

DURATION

48 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. HELMHOLTZ-ZENTRUM FUER INFEKTIONSFORSCHUNG GMBH (DE)
2. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
3. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
4. BANGOR UNIVERSITY (UK)
5. DANMARKS TEKNISKE UNIVERSITET (DK)
6. AECOM CZ SRO (CZ)
7. COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (FR)
8. HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH. UFZ (DE)
9. AARHUS UNIVERSITET (DK)
10. SYNDIAL SPA. ATTIVITA DIVERSIFICATE (IT)
11. CORPORACION CORPOGEN (CO)
12. THE GOVERNING COUNCIL OF THE UNIVERSITY OF TORONTO (CA)
13. UNIVERSITAET LEIPZIG (DE)

FP7-KBBE-2009-3

MAGICPAH

Molecular Approaches and MetaGenomic Investigations for optimizing Clean-up of PAH contaminated sites

www.magicpah.org

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

ULIXES

Approaches towards bioremediation of the Mediterranean Sea by exploring its microbial diversity – SICA (Mediterranean Partner Countries)

The project ULIXES aims to unravel, categorize, catalogue, exploit and manage the microbial diversity available in the Mediterranean Sea for addressing bioremediation of polluted marine sites. The idea behind ULIXES is that the multitude of diverse environmental niches of the Mediterranean Sea contains a huge range of microorganisms and their components (e.g. catabolic enzymes) or products (e.g. biosurfactant) that can be exploited in pollutantand site-tailored bioremediation approaches. ULIXES intends to provide the proof of concept that it is possible to establish and exploit for bioremediation site-specific collections of microbial strains, mixed microbial cultures, enzymes, biosurfactants and other microbial products. These biotechnological resources will be mined by using approaches based on isolation of culturable microorganisms as well as by extensively applying advanced novel 'meta-omics' technologies recently developed by the project partners and exclusively available for ULIXES. Three pollutant classes recognized worldwide as environmental priorities will be considered: petroleum hydrocarbons, chlorinated compounds and heavy metals. A large set of polluted environmental matrices from sites located all over the Mediterranean Sea will be explored, including seashore sands, lagoon sediments, deep sea sediments polluted by heavy oil hydrocarbons at oil tanker shipwreck sites, hypersaline waters and sediments from polluted salty coastal lakes and natural deep hypersaline anoxic submarine basins and mud volcanoes where hydrocarbon seepages occur. The mined collections of microbial biotechnological products will be exploited for development of novel improved bioremediation processes whose effectiveness will be proved by ex situ and in situ field bioremediation trials. A careful dissemination action will be pursued to assure capillary information of the ULIXES results and products to stakeholders and SMEs operating in the sector of marine bioremediation.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,993,812

PROJECT N°

266473

DURATION

36 months

PROJECT START DATE

February 2011

LIST OF PARTNERS

1. UNIVERSITA DEGLI STUDI DI MILANO (IT)
2. UNIVERSITÉ DE TUNIS (TN)
3. YARMOUK UNIVERSITY (JO)
4. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
5. MUBARAK CITY FOR SCIENTIFIC RESEARCH AND TECHNOLOGY APPLICATIONS (EG)
6. UNIVERSITE HASSAN II AIN CHOCK CASABLANCA (MA)
7. BANGOR UNIVERSITY (UK)
8. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
9. TECHNICAL UNIVERSITY OF CRETE (EL)
10. UNIVERSITEIT GENT (BE)
11. ECOTECHSYSTEMS SRL (IT)
12. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)

FP7-KBBE-2010-4

Unravelling and exploiting Mediterranean Sea microbial diversity and ecology for Xenobiotics' and pollutants' clean up

ULIXES

n.a.

European Commission

ACTIVITY 2.3 - LIFE SCIENCES, BIOTECHNOLOGY AND BIOCHEMISTRY

MEM-S

Nanobiotechnology: functionalised membranes

There is strong interest in the development of novel functionalized membranes which can be used as microsieves, as a component of integrated analytical systems, in food processing, drug discovery and diagnostic applications. This project is based on a combination of three break-through technologies, developed by the applicants in the past, with high impact for nano(bio)technological application: (i) the S-layer technology allowing the construction of nanoporous protein lattices, (ii) the biocatalytic formation of inorganic materials by silicatein, a group of unique enzymes capable to catalyze the formation of porous silica from soluble precursors, and (iii) the sol-gel technique for encapsulation (immobilization) of biomolecules serving as biocatalyst or as a component of sensors. The goal of this project is to design and fabricate - based on molecular biology inspired approaches - nano-porous bio-inorganic membranes with novel functionalities for industrial application. These membranes will be formed by S-layer proteins, which are able to assemble to highly ordered structures of defined poresize, and recombinant silicateins or silicatein fusion proteins. The hydrated silica glass layer formed by silicatein will be used to encase biocatalysts (enzymes) or antibodies against small molecules as sample prep- or sensor components of integrated systems. The innovative type of the functionalized membranes developed in this project thus exploits two principles: (i) protein self-assembly and - and this has not been done before - (ii) enzymatic (silicatein-mediated) deposition of inorganic material used for reinforcement of the membranes as well as for encasing biomolecules, providing the membranes with new functionalities. The new technique will be exploited by three research-based SMEs and the enduser involved in the project, in microfluidics based sample processing and micro-array development, in industrial nanosieves, as well as in sensors in drinking water systems.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,816,819

PROJECT N°

244967

DURATION

36 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. UNIVERSITATS MEDIZIN DER JOHANNES GUTENBERG-UNIVERSITAT MAINZ (DE)
2. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
3. WAGENINGEN UNIVERSITEIT (NL)
4. UNIVERSITE PIERRE ET MARIE CURIE. PARIS 6 (FR)
5. NANOTECMARIN GMBH (DE)
6. AQUAMARIJN MICRO FILTRATION BV (NL)
7. LIONIX BV (NL)
8. IWW RHEINISCH WESTFALISCHES INSTITUT FUR WASSERFORSCHUNG GEMEINNUTZIGE GMBH (DE)

FP7-KBBE-2009-3

MEM-S

Bottom-up design and fabrication of industrial bio-inorganic nano-porous membranes with novel functionalities based on principles of protein self-assembly and biomineralization

www.eu-mem-s.de

European Commission

This interim catalogue presents 88 marine related projects selected for funding under Theme 2. While most projects directly deal with fisheries, aquaculture, seafood safety and quality or marine biotechnologies, some of them are only partially relevant to the marine sector (specific work packages, tasks or experiments). Most of the projects are already running and some of them are about to start (Call KBBE 2012).

Project information