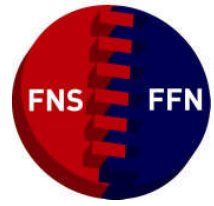


FRANSK-NORSK STIFTELSE FOR VITENSKAPELIG OG TEKNISK
FORSKNING OG INDUSTRIELL UTVIKLING (FNS)

FONDATION FRANCO-NORVEGIENNE POUR LA RECHERCHE
SCIENTIFIQUE ET TECHNIQUE ET LE DEVELOPPEMENT INDUSTRIEL
(FFN)



FRENCH-NORWEGIAN FOUNDATION: ANNUAL REPORT 2011

<http://www.forskningsradet.no/fns>

<http://www.ffn-fns.fr/>

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ANNUAL REPORT 2011

THE BOARD OF THE FOUNDATION

The Board of Directors of the Foundation consists of twelve voting members. To be in accordance with the Norwegian legislation for Foundations, both French and Norwegian members of the Boards are from 2011 registered in the Brønnøysund Register Centre. The Board elects its Chairman for a period of 3 years. Chairmanship alternates between France and Norway every third year. From January 1st 2012, the chairmanship is transferred to Jan Erik Strand, as Olivier Appert had chaired the Board for three years. As of 31/12/2011, the Board of Directors had the following composition:

France:

Olivier Appert, President and C.E.O
IFP Energies Nouvelles
Chairman

Elisabeth Legrand *
Ministry of Higher Education and Research

Donatienne Hissard*
Ministry of Foreign and European Affairs

Pierre Souchet *
Ministry of Economy, Industry and Employment

Marie Marguerite Bourbigot
Pôle Mer Bretagne

Nathalie Trannois
OSEO

Nakita Vodjdani
French National Research Agency

Claire Tutenuit
Entreprises pour l'Environnement

Norway:

Jan Erik Strand
Statoil
Vice-Chairman

Kari Rossum
Ministry of Trade and Industry

Marit Aursand
SINTEF Fisheries and Aquaculture

Krsitin Danielsen
Norwegian Research Council

Henning Reier-Nilsen
HNR Invest

Sigrid Fossheim
Clavis Pharma ASA

* The members representing the three French Ministries have one vote only.

The Board of FFN/FNS held two meetings in 2011, May 20th in Oslo and November 9th in Caen.

On the French side, Ludovic Zekian, from the French Ministry of Economy, Industry and Employment, left the Board in 2011 and was replaced by Pierre Souchet, from the same Ministry. On the Norwegian side, Egil Eike, from the Norwegian Research Council, left the Board after six years and was replaced by Kristin Danielsen, also from the Research Council.

MEMBERS OF THE FOUNDATION

At the end of 2011 the Foundation had 47 members: 30 members in Norway and 17 members in France.

THE SECRETARIAT OF THE FOUNDATION

The secretariat of FNS/FFN is located at the Research Council of Norway in Oslo and at IFP Energies Nouvelles in Rueil Malmaison.

In Norway the head of secretariat is Randi Aarekol Basmadjian. In France the head of the secretariat is Gérard Momplot. Isabelle Morelon is scientific and technical advisor. They are both assisted by Roxana Madec.

Associated secretariats:

Helga Helland Stai and Guri Skoklefeldt, Norwegian Embassy in Paris

Jean-Louis Duclos, French Embassy in Oslo, until August 2011

Francois-Xavier Lannuzel, French Embassy in Oslo, from August 2011

GOAL AND ROLE OF THE FOUNDATION

Goal

- Promoting long-term French/Norwegian co-operation through joint R&D projects.

Main objectives

- Support joint R & D projects where French and Norwegian industrial firms are main partners
- R & D projects have to lead to processes and products with industrial applications
- Connect French and Norwegian industry partners
- Organize and support workshops and seminars
- Promote cooperation between French and Norwegian researchers and industrialists

Research priorities

- aquaculture and food industry
- biotechnology and biomedical industry
- informatics and information technology
- environmental technologies and energy
- marine science and technology
- material science and technology
- oil and gas exploration and production

Requirements for proposal and project funding

The French-Norwegian Foundation promotes long-lasting French/Norwegian cooperation through the financing of joint R&D projects in which both industry and research institutes/universities are involved with the aim of creating cooperation lasting beyond the project-period.

- At least one French and one Norwegian industrial company should be partner. Preference is given to small and medium enterprises (as defined by the EU standards). A subsidiary of a foreign company having only manufacturing or commercial activities in France does not qualify for support on the French side.
- Applicants (at least one on each side) are required to be members of FFN/FNS. The applicants can become members at the time of submitting the proposal.
- The proposals shall demonstrate that the project is of interest for all participants in the project and contribute to the goals of FFN/FNS, including enhancing French-Norwegian industry cooperation.
- The scientific, technical, industrial and economic aspects of the project shall be clearly identified and the planned R & D activities shall identify the technological solutions having potential for industrial applications and marketing. The proposal (application form and project description) shall include a business plan dealing with the exploitation of the results.
- The proposal shall give a short description including the type of organisation for each partner.
- When large enterprises and research organisations are partners, exchange of research scientists, either post-doctoral fellows or graduate students, should be considered. If possible, the project shall also provide for such educational exchange.
- The maximum level of funding from the Norwegian and French public institutions or programs (including FFN/FNS) cannot exceed 50% of the projects costs.
- Project support can be obtained for a maximum of 3 years. FFN/FNS usually approves the project for one year, stating an intention of funding the subsequent year(s), subject to FFN/FNS having enough funds and the project reaching the milestones agreed to upon signature of the contract.
- "High risk" projects and projects with long term horizon qualify for funding. FFN/FNS funding is usually limited to the first phase of such long-term research.
- A consortium agreement governing the relationship between the project participants must be drawn up and signed before the parties enter into a contract with the Foundation. This agreement shall state that the parties agree on the ownership and sharing of any rights and products resulting from the project. The intention of this principle is to ensure that the collaborative parties have clarified all questions and issues related to implementation of the results of the project. The agreement should also cover the relationship to researchers participating in or working for the project.
- The Foundation also supports pilot studies and feasibility studies, including finding new and suitable partners, establishing agreements and working out joint R&D program and pilot studies for future EU or EUREKA programs.

- The Foundation can also support workshops and seminars contributing to the main objectives of the Foundation.
- An annual report must be submitted. A final report including three slides with results achieved must be submitted within three months after the project is finished.

Funding

In Norway the projects are financed as a grant by the Foundation. In France funding is provided from other sources such as the Ministries (Research and Industry), Agencies (The French Agency of Research/ANR, OSEO) and programmes or networks entitled to back R&D activities.

MAIN ACTIVITIES IN 2011

1. FUNDING OF PROJECTS

A total of 9 projects received funding in 2011 (Appendix 1), one within aquaculture, two projects within biomedicine/biomedical instrumentation, two within information technology, one within civil engineering, two within material sciences and technology, and one within marine technology. Four ongoing projects are approved by EUREKA/Eurogia/Euripides.

9 new project proposals and one feasibility study were put forward to the Board for approval in 2011. One proposal was rejected. Four proposals will be resubmitted with updates for the meeting taking place in May 2012. Four proposals were approved for funding, but three of them are waiting for funding to be confirmed on the French side, and one of them is abandoned lack of suitable funding in France. A feasibility study conducted by Oslo University Hospital and Institut Claudius Regaud was approved for funding and has started. In addition the Secretariats have followed up applications approved in 2010 or earlier but still waiting for funding on the French side.

A short summary of results from projects completed in 2011 is available in Appendix 2.

ONGOING PROJECTS BY FIELD OF ACTIVITY IN 2011

AQUACULTURE

Molecular markers to estimate algal diets of molluscs (KLEM)

UNI MILJØ (Christofer Troedsson)

IFREMER (Marianne Alumno-Bruscia)

Duration: 2010 - 2011

BIOMEDICINE AND BIOMEDICAL INSTRUMENTATION

Novel sonosensitive liposomes and systems for targeted ultrasound mediated drug delivery

Epitarget Therapeutica (former CancerCure AS) (Esben A. Nilssen)

EDAP-TMS SA (Emmanuel Blanc)

Duration: 2007 – 2011 (Σ!4056)

Monitoring of physiological pressure by implantable MEMS-MOPP-MEMS

SINTEF ICT (Ingelin Clausen, Fabrice Lapique)

Tronics S.A. (Stephane Renard)

Duration: 2010 – 2012

CIVIL ENGINEERING

TMS (TEMASI) System

Saint-Gobain Byggevarer as (former Maxit) (Oddvar Hyrve)

MDB Texinov (Jacques Tankere)

Duration: 2009 – 2011 (Σ! 4572)

INFORMATION TECHNOLOGY

Compact Photo-Acoustic Mid-Infrared Spectroscopy Sensor for Extended Range of Chemical Agents (AcousticNose)

Norsk Elektro Optikk AS (Peter Kaspersen)

Alcatel Thales III-V Lab (Xavier Marcadet/Dominique Pons)

Duration: 2010 – 2011 (Euripides)

LUCIDMAN Local User-Centric Identity Management

Vallvi AS (Petter Taugbøl)

CEV SA (Cedric Ouvry)

Duration: 2011 – 2113

MATERIAL SCIENCE AND TECHNOLOGY

Spark plasma sintering of ceramic proton conductors for solid oxide fuel cells

SINTEF Materialer og Kjemi (Marie-Laure Fontaine)

CIRIMAT, PNF2, EDF (Calude Estournes)

Duration : 2009 – 2012

ALU-NANO Development of spherical submicron-nano-sized alumina for advanced refractories

Elkem Silicon Materials (Harald Schreiner)

Kerneos SA (Chris Parr)

Duration: 2010 – 2011

This project was terminated in 2011 by Elkem Silicon Materials who did not want to make the necessary investments to continue the project.

MARINE TECHNOLOGY

New Solution for Deck Installation and Decommissioning : Deck Structure Installation Vessel

Det Norske Veritas AS (Henning Carlsen)

Technip (Marc Cahay)

Duration: 2009 - 2011 (Eurogia EOG-0604)

2. FUNDING OF SEMINARS

The Foundation supports bilateral seminars. The main objectives are:

- Bring together French and Norwegian key actors in priority fields,
- Stimulate private-public and research-industry collaborations,
- Initiate cooperation projects in the R&D sectors, including demonstration projects

The Foundation received five new applications for funding in 2011. Two of them were approved for funding. **Appendix 4** gives a list of the 45 seminars funded by the Foundation since 1984.

In 2011, a special effort was made by the Foundation to organize the bilateral seminar on nanotechnology held in Paris in June 2011.

SEMINARS ORGANIZED IN 2011

- **Workshop "Sustainable Culture of Marine Micro-Algae"**

Meze (Montpellier), *February 2011*

Organizers

(F) Greensea

(N) SINTEF Fisheries and Aquaculture

Thematics

Elaboration of a research project on sustainable culture of marine micro-algae to design new aquaculture products, particularly for the cosmetic industry.

- **Taste-Nutrition and Health: Networking Dijon**

Dijon, *March 2011*

Organizers

(F) French cluster Vitagora

(N) Nofima Mat

with Norwegian food companies, Norwegian research institutes, members of Vitagora, members of Enterprise Europe Network.

Thematics for the networking

Processed foods with lower content of sugar, salt and fat.

Molecular gastronomy (creativity/sensory analysis/chemistry).

- **Seminar on Water Resource Management**

Trondheim, *April 2011*

Organizers

(N) Sintef Energy Research

(F) Cemagref Lyon

Thematics

Improvement of the optimization of water resources management with a special focus on management of natural risks and social decisions.

- **Fourth International Workshop – Technologies for Search and Rescue (SAR) and other Emergency Marine Operations**

Brest, *May 2011(at the 2011 Saferseas Conference)*

Organizers

(F) Ifremer

(N) The Norwegian Meteorological Institute

(US) The US Coast Guards

Thematics

Operational ocean modelling and its use in SAR modelling,

State of the Art Technology for SAR assistance,

SAR problems in the cases of aircraft crashes at sea,

SAR problems on new maritime routes and polar areas,

Drifting objects,

Standardization of the exchange and communication between different SAR services.

- **Seminar on Nanotechnologies**

Paris, June 2011

Organizers

FFN/FNS

(F) Ministry of Higher Education and Research,
French Embassy in Norway

(N) Research Council of Norway

Thematics

Enhance French-Norwegian cooperation in "Nanotechnologies and nanosciences, knowledge-based multifunctional Materials and new production Processes and devices" programme (NMP Programme, 7th and 8th European Framework Programmes).

To follow up the decisions made by the bilateral committee held in Paris 2010, a French-Norwegian working-group devoted to nanotechnology was appointed to translate the intentions of more cooperation within this field into action. The working group decided to organize a seminar.

The main objectives by organizing the joint seminar were to

- Bring together French and Norwegian key actors in the Nanotechnology field,
- Stimulate private and public collaborations on a bilateral or multilateral basis (FP7),
- Submit common applications to the last calls from NMP in FP7
- Propose topics for the last calls from NMP in FP7
- Suggest structure and topics for NMP in FP8

The first day of the seminar focused on general presentations of five research groups from Norway and five from France. During the afternoon-session more than 14 short presentations were given to launch project ideas for the coming calls from the NMP-program. The program also allowed the researchers to meet in small, thematic networking groups. SEM Tarald Brautaset, the Norwegian Ambassador to France, and M. Robert Plana, from the French Ministry of Higher Education and Research, officially opened the seminar.



Photo: Karin Totland

SEM Tarald Brautaset, Ambassador of Norway to France, opened the seminar, which was chaired by M. Francois Piuze, National Contact Point in France for the NMP-program, and Ms Isabelle Morelon, Scientific Advisor at the French Norwegian Foundation.

The second day included visits to the following sites:

- Synchrotron SOLEIL
- CEA- CNRS Laboratoire Francis Perrin
- Ecole Polytechnique Laboratoire de Physique de la Matière Condensée
- Laboratoire Chimie de la Matière Condensée de Paris (Collège de France)

Participants and funding

65 persons, 40 from France and 25 from Norway, already involved in European research, were selected to participate at the seminar. Some persons only attended the program day 1. The participants came from universities, public and private research institutions as well as private companies. The French Ministry of Higher Education and Research, The NANOMAT Research Program at the Research Council and the French-Norwegian Foundation contributed to fund the seminar. UBIFRANCE contributed by offering their meeting facilities.

Results

As a result of the seminar, one proposal for project funding has been submitted to the Foundation, five proposals to the joint call for proposals from Agence Nationale de la Recherche and Research Council of Norway, and some proposals have been submitted to calls from FP7 (names and numbers of applicants not yet available).

NEW SEMINAR DECISIONS

- **The Norwegian Chemistry Society: Marie Curie Day, November 7, 2011.**

Several events have taken place in Norway within the international Year of Chemistry. One of them has been devoted to the life and science of Marie Skłodowska-Curie, and her cooperation with Ellen Gleditsch. The FFN-FNS has decided to support this event because it can contribute to make its promotion, even if such events are not in the main scope of the Foundation.

- **Workshop "Strengthening of SFI-FACE and University of Toulouse research collaboration through common workshop series "**

Place and date to be specified

Organizers

(F) Université de Toulouse, et Institut de Mécanique des Fluides (IMF, Toulouse)

(N) Norwegian Centre for Research-based Innovation FACE

Thematics

Separation of oil, gas and water with a particular emphasis on the importance of surface active ingredients such as asphaltenes. Separation is the focus in one of the 4 sub-projects FACE is organized in. Additionally, there are common interests in two of the other projects which are working with multiphase transport and rheology respectively.

3. THE ÅSGARD PROGRAMME

In 2006 the Scientific mission of the French Embassy in Norway and the Foundation launched the programme Åsgard, in order to invite French researchers to Norway. The programme is open to all researchers, with emphasis on those 35 to 45 years old, whose scientific work is internationally recognised and who have just been, or will be, appointed group leaders in their home institutions.

The French scientists are invited for a one-week visit to Norway to meet specialists working within their field of interest. The goal of the visits is to create links between French and Norwegian researchers and research institutions in order to exchange scientific knowledge and skills that will lead to effective collaborations. 23 French scientists applied for a travel grant in 2011. 7 of them were selected to spend one week in Norway in order to visit private and public research institutions. The French Embassy prepares and organizes the visits in Norway. Several new contacts are established during these visits. A detailed program for all the visits can be consulted in Appendix 5.

Selected candidates 2011:

1. **Christophe ROSENBERGER**, Computing sciences - Biometrics, University of Caen - GREYC
2. **Alexandre DE BREVERN**, Bioinformatics and computational biology, University of Paris 7 Diderot - DSIMB
3. **Christel VAN BESIEN**, Neurosciences and neurodegenerative disorders, University of Lille 1 – Early stages of Parkinson's disease
4. **Catherine GAUTHIER**, Polymers and heterogeneous materials, INSA Lyon - GEMPPM
5. **Jean-Louis BOBET**, Renewable energies: hydrogen storage and fuel cells, University of Bordeaux 1 - ICMB
6. **Pascale JOLINAT**, Optoelectronics, University of Paul Sabatier Toulouse - LAPLACE
7. **Valérie MICARD**, Biochemistry - Health and nutrition, Montpellier SupAgro - IATE

Norwegian specialists can apply for a travel grant to visit researchers in France. In 2011, two Norwegian specialists (Geir Ersland and Knut Arne Birkedal, University of Bergen, working on CCS by using gas hydrates) have obtained funding to go to France. There is no specific deadline for Norwegians wanting to apply for a short stay in France. Travel and accommodation expenses can be covered with a maximum of 15.000 NOK per person.

Appendix 5 provides a historical summary of all the scientist exchanges funded by FFN/FNS since 1990. In the beginning, The National Academies of Sciences selected the candidates to be supported. In the agreement from 1989 it was expected that one to two exchanges per year would be realistic. Exchange activity in certain years has been somewhat higher than the expected level and from 1997 somewhat lower than expected. From 1990 to 2003 a total of 12 French scientists and 10 Norwegian scientists have been financed within the agreement. Unfortunately there has been no exchange since 2003 between the Academies.

4. FOLLOW UP THE BILATERAL AGREEMENT BETWEEN FRANCE AND NORWAY

Together with Ministries and Embassies in France and Norway, the Foundation has also in 2011 been active in following up the recommendations from the French-Norwegian scientific and technical Committee that met in Paris in January 2010. This committee follows up the the bilateral agreement signed by the Ministers of Research in the two countries in 2008. France is the only country with which Norway has a bilateral scientific agreement. Concrete actions were proposed to increase the number of research cooperations within the following fields:

- High North and Arctic
- Infrastructure
- Space
- Nano-Materials
- Agriculture and Food
- Mathematics

Several meetings have taken place to follow up initiatives within these selected fields (nanomaterials, infrastructure, mathematics in particular). A particular effort was made by the Foundation and by the Embassies to organize the seminar on nanotechnology that took place in Paris in June 2011.

The Research Council of Norway, together with the Foundation, has continued the discussions with the French National Agency for Research (ANR) in order to make a common call for proposals. In the frame of the Memorandum of Understanding (MoU) signed between the two institutions in 2008, a coordinated call for proposals was launched at the end of 2011 within nanotechnology, with deadline in February 2012 in both countries. Five bilateral proposals have been submitted to this joint call.

5. OTHER ACTIVITIES

The Foundation, together with the respective Embassies in France and Norway, has continued to promote cooperation between French clusters and equivalent centres in Norway. In particular, close contacts have been made with the pôles TENERDIS, AQUIMER, AVENIA, AXELA and Pôle Mer Bretagne during 2011, in order to identify possible cooperations with equivalent partners in Norway.

A particular effort has also been made to initiate new research cooperations between the regions of Hordaland and Basse-Normandie.

The Foundation has participated in several meetings during 2011 in order to present the Foundation:

- Innovation Day, organized by the the French-Norwegian Chamber of Commerce in Oslo, October 2011,
- Information meeting about Eurogia+, organized in Oslo in May 2011,
- Information meetings about Eurostars, held in Oslo in January and August 2011

In addition, the Secretariats have participated in project meetings to follow up the projets more closely. A meeting between OSEO and the Research Council was also set up in March 2011 in Oslo, in order to exchange information about national schemes for project funding.

During the year, the Secretariats of the Foundation continuously assist researchers and specialists from both country who are seeking information or partners in the other country.

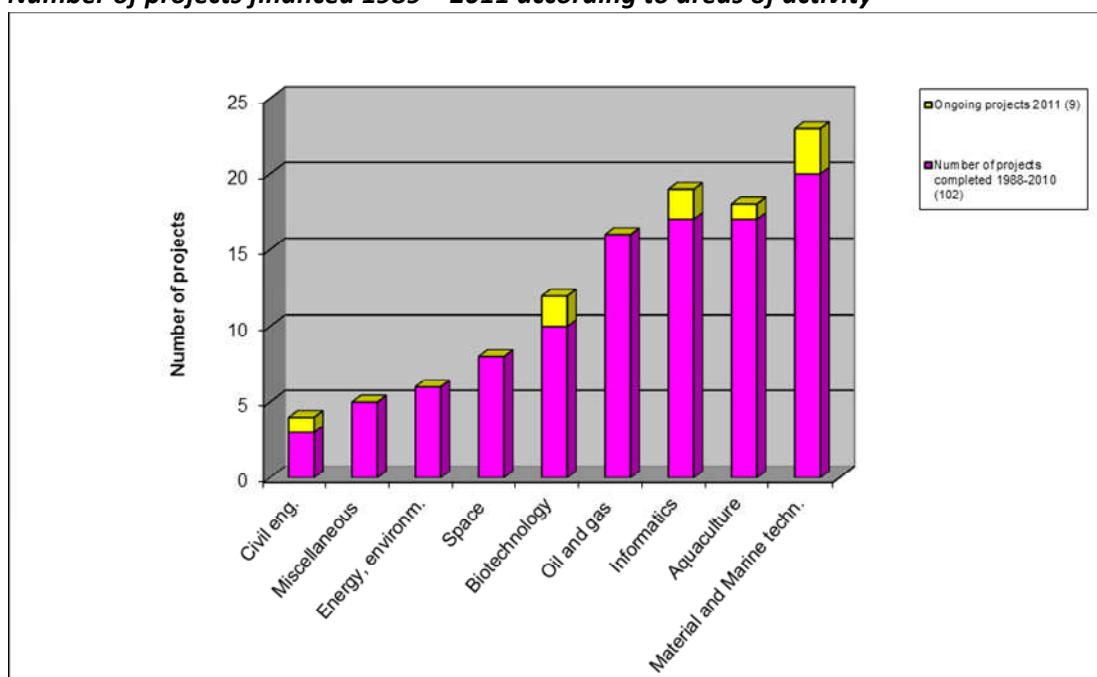
FIGURES AND FACTS

PROJECT FUNDING 1988 – 2011

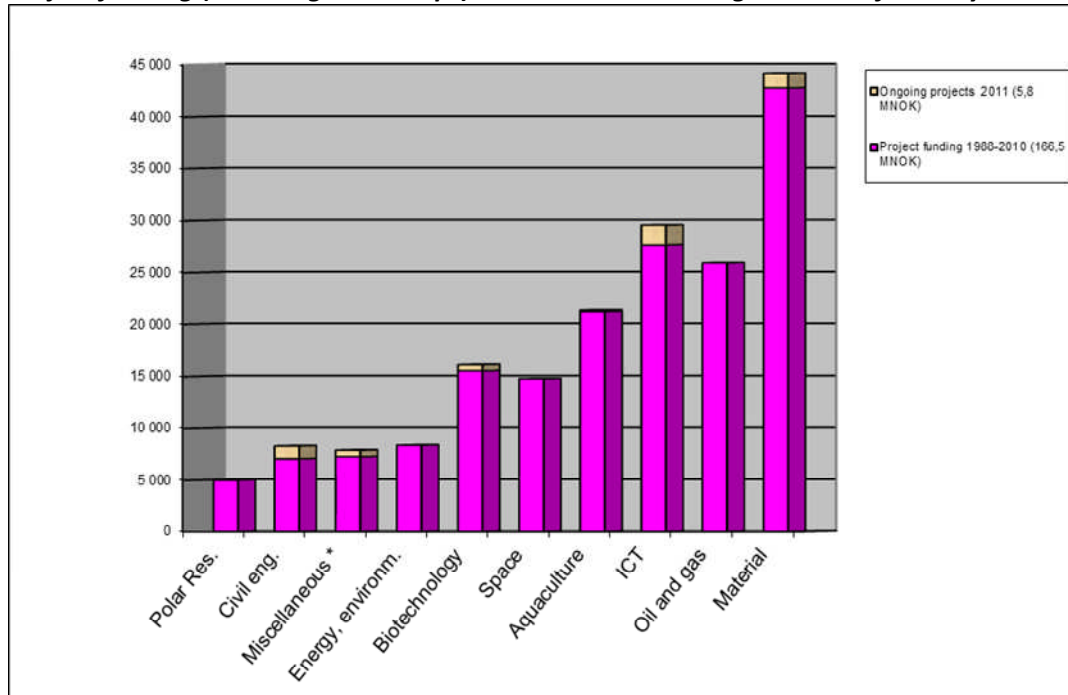
Up to mid-nineties oil, gas and offshore technology dominated the areas of activity. This has changed since and the fields of material sciences and technology, information technology and aquaculture have been dominant from 1999. Over the period 1988 – 2011 the number of projects within material science and technology have prevailed oil/gas.

Number and funding of completed and ongoing projects according to fields of activity are shown in the two figures below.

Number of projects financed 1989 – 2011 according to areas of activity

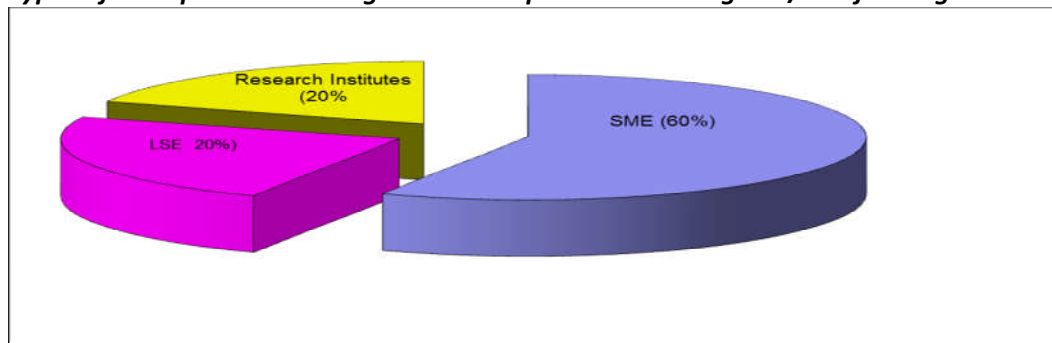


Project funding (including workshops) 1989 - 2011 according to areas of activity in 1000 NOK



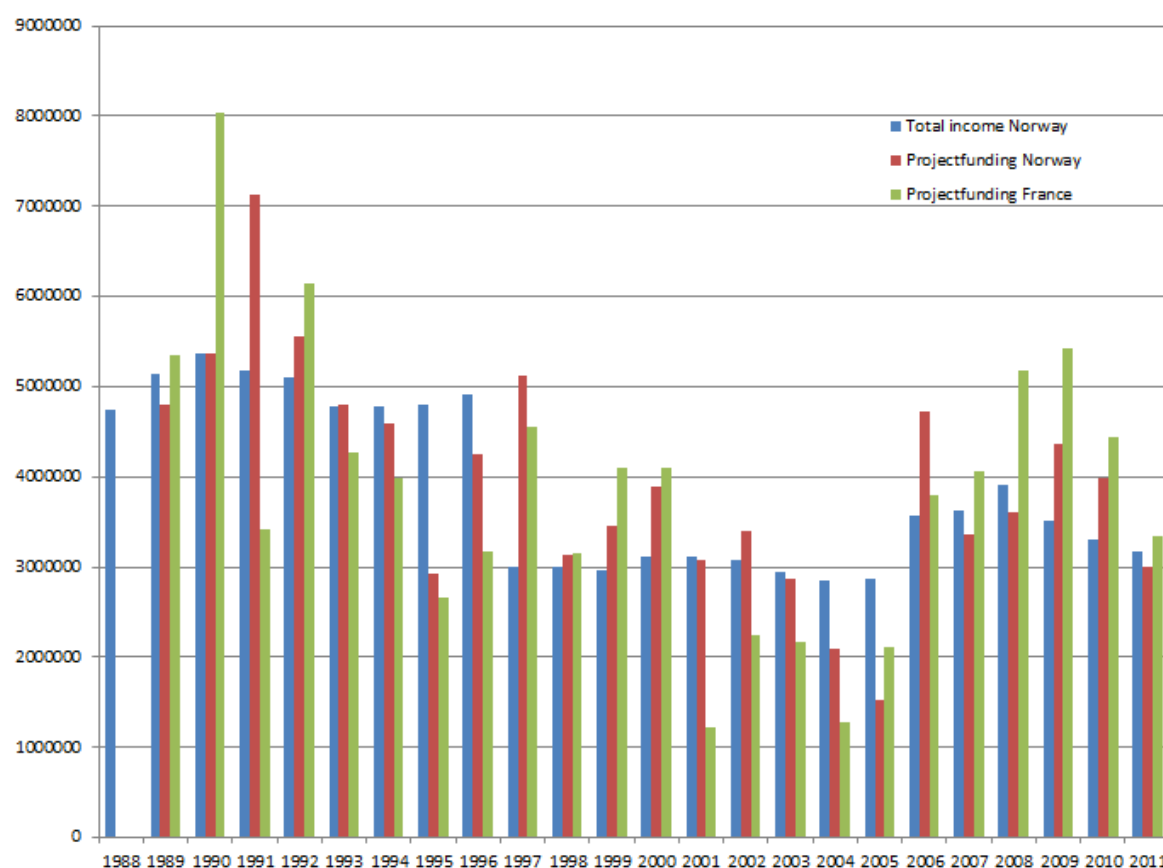
Of the total of 111 projects, more than half (60%) have been awarded to Small and Medium-sized Enterprises (SMEs), 20% to Research institutes and 20% to Large Scale Enterprises (LSEs). Research institutes and Universities are required to have an industry partner. Both LSE and Research institutes are strongly encouraged to include doctoral students in the projects and over the years more than 50 doctoral theses have been performed through FFN/FNS projects.

Types of enterprises according to contract partner receiving FFN/FNS funding 1989 - 2011:



Project funding – income and expenditure

This figure shows the income and project allocations from 1988 to 2011. In Norway, the Ministry of Trade and Industry (through the Research Council of Norway) allocate an annual amount. The total income includes Eureka support and member fees. In France the income and project funding are the same amount as there is no allocation from the Ministries to the French part of the Foundation. Seminar funding is not included.



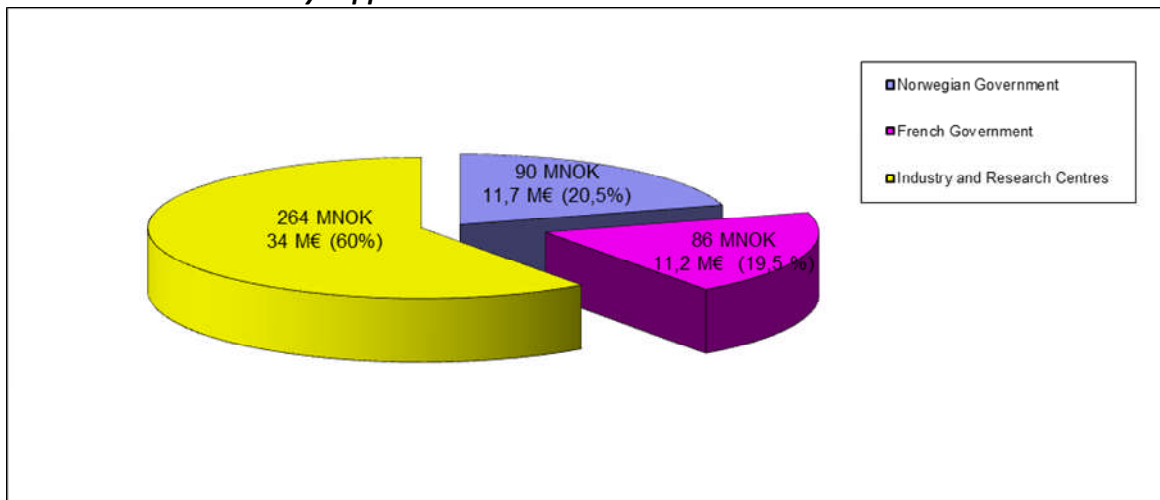
The allocation from the Norwegian Ministry of Trade and Industry started in 1988 but project funding started in 1989.

REVIEW OF THE FUNDING OF THE FOUNDATION

Since its establishment in 1983, the Foundation has been an important tool for the development of bilateral co-operation for scientific and technical research and industrial development between France and Norway. Until 1988 the Foundation mainly served as a catalyst for the technical co-operation between the two countries. After the Troll agreement was signed in 1986, the two parties agreed to use the Foundation to actively promote and co-ordinate bilateral research and development projects. Each country agreed to support the Foundation with up to 50 MNOK over a period of 10 years (1989-1999). A substantial industry involvement of at least 50 percent financing was set as a requirement. The intention of funding FFN/FNS over a 10-year period with a total of 100 MNOK on a 50/50 basis has been fulfilled and the industry has in fact covered 60 percent of the total costs. Since 1989 more than 111 projects and more than 45 workshops/seminars have been supported. As shown in the figure below, the total R&D budget

(1989-2011) is 458 MNOK of which the industry has covered 60 percent while the Norwegian and French governments have granted the remaining 40 percent.

Government and industry support 1988 – 2011



FFN/FNS' BASIC CAPITAL

In 2011 the total income including interest and bank costs was 7,3 MNOK, while the total expenditures ended up with 7,5 MNOK.

FFN/FNS ON THE INTERNET

<http://www.ffn-fns.fr>

<http://www.forskningsradet.no/fns>

Appendix:

1. FFN/FNS ongoing projects by field of activity in 2011
2. Results of ongoing projects completed in 2011
3. Projects completed: 1988 – 2011
4. Workshops and seminars: 1984 – 2011
5. Exchanges of scientists 1990 – 2011
6. The Foundation in a Nutshell
7. Account report 2011

The Board approves the annual report for 2011.
May 25, 2012, Trondheim, Norway

Olivier Appert (s)
Vice-Chairman

Jan Erik Strand (s)
Chairman

Donatienne Hissard (s)
Board member

Kari Rossum (s)
Board member

Marie Marguerite Bourbigot (s)
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Board member

G rard Momplot (s)
Secretariat leader

Randi Aarekol Basmadjian (s)
Secretariat leader

FFN/FNS ONGOING PROJECTS BY FIELD OF ACTIVITY IN 2011

Definition of "ongoing projects": ongoing projects or projects still waiting for funding payment or projects whose final report has not been sent to the FFN/FNS

AQUACULTURE

Molecular markers to estimate algal diets of molluscs (KLEM)

UNI MILJØ (Christofer Troedsson)

IFREMER (Marianne Alumno-Bruscia)

Duration: 2010 - 2011

BIOMEDICINE AND BIOMEDICAL INSTRUMENTATION

Novel sonosensitive liposomes and systems for targeted ultrasound mediated drug delivery

Epitarget Therapeutica (former CancerCure AS) (Esben A. Nilssen)

EDAP-TMS SA (Emmanuel Blanc)

Duration: 2007 – 2011 (Σ!4056)

Monitoring of physiological pressure by implantable MEMS-MOPP-MEMS

SINTEF ICT (Ingelin Clausen, Fabrice Lapique)

Tronics S.A. (Stephane Renard)

Duration: 2010 – 2012

CIVIL ENGINEERING

TMS (TEMASI) System

Saint-Gobain Byggevarer as (former Maxit) (Oddvar Hyrve)

MDB Texinov (Jacques Tankere)

Duration: 2009 – 2011 (Σ! 4572)

INFORMATION TECHNOLOGY

Compact Photo-Acoustic Mid-Infrared Spectroscopy Sensor for Extended Range of Chemical Agents (AcousticNose)

Norsk Elektro Optikk AS (Peter Kaspersen)

Alcatel Thales III-V Lab (Xavier Marcadet/Dominique Pons)

Duration: 2010 – 2011 (Euripides)

LUCIDMAN Local User-Centric Identity Management

Vallvi AS (Petter Taugbøl)

CEV SA (Cedric Ouvry)

Duration: 2011 – 2113

MATERIAL SCIENCE AND TECHNOLOGY

Spark plasma sintering of ceramic proton conductors for solid oxide fuel cells

SINTEF Materialer og Kjemi (Marie-Laure Fontaine)

CIRIMAT, PNF2, EDF (Calude Estournes)

Duration : 2009 – 2012

ALU-NANO Development of spherical submicron-nano-sized alumina for advanced refractories

Elkem Silicon Materials (Harald Schreiner)

Kerneos SA (Chris Parr)

Duration: 2010 – 2011

This project was terminated in 2011 by Elkem Silicon Materials who did not want to make the necessary investments to continue the project.

MARINE TECHNOLOGY

New Solution for Deck Installation and Decommissioning : Deck Structure Installation Vessel

Det Norske Veritas AS (Henning Carlsen)

Technip (Marc Cahay)

Duration: 2009 - 2011 (Eurogia EOG-0604)

RESULTS FROM PROJECTS COMPLETED IN 2011

UNI MILJØ (Christofer Troedsson)
IFREMER (Marianne Alunno-Bruscia)

Molecular marks to estimate algal diets fo molluscs (KLEM)

FNS Norway: 425 000 NOK
FFN France: 20 000 Euro

Industry/other sources: 425 000 NOK
Industry/other sources: 17 740 Euro

Duration: 18 months, 2010 – 2011

Abstract:

Accurate quantitative understanding of feeding preferences and diets of molluscs is crucial both in a context of commercial development of intensive (e.g. hatchery, nursery) seed production in controlled conditions and establishment of sustainable aquaculture of shellfish under natural conditions (e.g. coastal zones, fjords, seabased farms). It is also important for understanding the potential impact of exploited molluscs on ecosystem food webs. However, most classical approaches are not well adapted to investigate feeding preferences, especially for in situ identification and quantification. Recently, the use of molecular techniques to detect and quantify specific prey particles consumed by key marine mesozooplankton (copepods, appendicularians) and a benthic crustacean (lobster) has yielded promising results. The major strengths of these methods are that they can investigate species specific interaction involving e.g. molluscs. In this study we have evaluated a protocol for dissecting organs suitable for molecular quantification of mollusc gut content and performed a proof-of-concept that molecular analyses can be used on mollusc species. Our results suggest that the crystalline style and the gastric shield are the most suitable tissues for molecular assessment of prey particles yielding the highest and most consistent cell number (i.e. high strength of signal) as well as yielding quantitative estimates in the range of independent methods. These tissues were also relatively easy to sample, which would be essential for use in routine samplings. Because we cannot sample the whole digestive system for adult molluscs and that the cells are partially digested, our qPCR approach will not give absolute cells ingested, but should rather be used as a proxy for filtration and ingestion of specific prey species. Additional calibration is needed in order to make absolute cell number estimates. In a factorial feeding experiment with 4 molluscs, 2 prey species, 3 food concentrations and 2 different feeding histories, our developed qPCR assay detected clear effects based on feeding behaviour in the experimental setup. The current project has therefore demonstrated that molecular gut content assays will be much helpful in monitoring species-specific interactions involving the molluscs at a much higher resolution than through the use of classical approaches. The assay developed here will generate more reliable energy budget calculations for molluscs and provide a more predictable culturing system.

Epitarget Therapeutica, former CancerCure AS (Esben A. Nilssen)
EDAP TMS SA (Emmanuel Blanc)

Novel sonosensitive liposomes and systems for targeted ultrasound mediated drug delivery (Σ!4056)

FNS Norway:	1 200 000 NOK	Industry/other sources:	1 300 000 NOK
FFN France:	31 000 Euros (INSERM)	Industry :	26 000 Euros
		INSERM :	133 000 Euros

Duration: 2007 – 2011

Abstract:

Studies performed in this programme were designed to optimise specific aspects of a potential treatment regimen based upon ultrasound sensitive liposomal drug delivery. Proof of concept by tumour treatment was also performed. Targetted ultrasound of tumours was performed using a therapeutic US transducer and an imaging US transducer in order to localise the tumour. This imaging system was developed using B-mode imaging for sucessful tumour visualisation. The tumour was treated with a therapeutic "ultrasound dose" and a dose monitoring mechanism was developed to ensure an homogenous dose was applied throughout the tumour volume. Methodology was developed to measure the cavitation dose (ultrasound activity) within the tumour. The methodology allows spatial information to be gathered which further increases the ability to deliver the required amount of ultrasound energy at the correct place within the tumour. The accurate delivery of therapeutic ultrasound was improved by using two confocally positioned ultrasound transducers instead of the traditional single transducer. This allows a more precise three dimensional focussing of the therapeutic ultrasound at a controllable focal point. Settings were optimised to reduce the level of mechanical damage.

The liposomes used in the project were designed to stably contain the drug of choice, accumulate around and within a tumour due to their small size, and then release the drug upon ultrasound stimulation. Stability and sonosensitivity have previously been demonstrated in vitro but not in vivo. Imaging studies were therefore performed to demonstrate the accumulation of liposomes at the tumour site, and to demonstrate drug release upon sonication. Liposomes loaded with an MRI sensitive agent were used to show the accumulation of liposomes at the tumour site. The liposomes reached a peak accumulation at 24-48 hours. This result has also been confirmed with doxorubicin measurements and is an expected result with pegylated liposomal nanoparticles. Drug release was determined using optical imaging. A fluorescent marker that undergoes self-quenching at high concentrations was encapsulated into the liposomes. Within the liposome there was minimal fluorescence due to quenching. The liposomes were unstable compared to doxorubicin formulations and were therefore injected directly into the tumour. Without ultrasound, a low signal was seen suggesting slow leakage of the fluorophore. After ultrasound, the signal was greatly increased suggesting the release of fluorophore from the liposomes. Finally, an efficacy study was performed with an AT-2 Dunning model (prostate) in rats. Animals were given a single injection of liposomes and underwent ultrasound stimulation of the tumour 24-48 hours after liposome administration. Tumour growth was significantly reduced in rats that received both the liposomal drug and ultrasound. Ultrasound alone showed no effect on tumour. These results show a promising therapeutic effect of ultrasound sensitive liposomes and encourage further research into this potentially beneficial therapy.

EUREKA has supported this project under the project number Σ!4056

Det Norske Veritas AS (Henning Carlsen)
Technip (Christian Perol)

Development of wind farm installation vessel under Eurogia+ Label

FNS Norway:	560 000 NOK	Industry/other sources:	560 000 NOK
FFN France:	211 000 Euro	Industry :	633 000 Euros
		Industry (Acciona, Spain):	175 000 Euros

Duration: 2009 - 2011 (Eurogia EOG-0604)

Technip France has completed a conceptual design development of a special purpose catamaran vessel which safely can load up, transport and install 2 offshore wind turbines in one go. The catamaran has an H shape hull with two parallel pontoons that are linked together by a stiff truss beam placed transversally at the center of the vessel. The center beam is supporting a vertical truss tower which has the shape of a traditional jack-up leg, allowing the wind turbine towers to be sea fastened during transport and jacket up and down with a conventional rack and pinion system during installation.

The benefit of this vessel is that it can install two complete wind turbines (tower + nacelle + hub + blades) which have been pre-assembled onshore and loaded onboard the vessel at the quayside. This will allow for a cost effective installation process since no lifting and a minimum of marine operations are required offshore. The vessel can operate on various drafts and is equipped with an installation system which ensures the following capabilities:

- Air gap up to 20 m.
- Quick mating with a fix installation.
- Installation and decommissioning of the wind turbine.

The Wind Farm Installation Vessel is equipped with a dynamic positioning (DP) system for accurate positioning. In addition a specialized motion stabilization (slo-roll) system shall be adapted that will be activated during the installation phase. The purpose of the slo-roll system is to reduce the vessel roll and pitch motions to a minimum during the installation process. With this system activated, the vessel can operate in higher sea states since the vessel motions are reduced which again will reduce down time due to waiting for appropriate weather conditions.

The vessel is built up by the following main parts:

- 2 hulls with slo-roll and DP system
- Interface structure between hulls (linking beam)
- Vertical leg (tower)
- Mobile platform and elevating system
- Handling and shimming system of the wind turbines
- Wind turbines

FFN/FNS PROJECTS COMPLETED: 1988 – 2011

AQUACULTURE, AGRICULTURE AND FOOD INDUSTRY

- Developing system Biofish – Sea Bass, Sea Bream in Mediterranean (Project A and B)
Oppdrett Service AS, Norway (Geirulv)
Scorsa, France (van Obbergen and Guy Lebrun)
Duration 1989 - 1991
- Study of Inter-relations Carotenoides-Vitamines A at salmon
Akvaforsk, Sunndalsøra, Norway (Storebakken)
INRA, Ascain, France (Coubert)
Duration 1989 - 1990
- Air transportation – Norwegian Aquaculture – by ATR 72
Air West A/S, Norway (Wågsæther)
Avions de Transport Régional (ATR), France (Valerio)
Duration 1990 - 1991
- Turbot grower feed. Protein requirement Feed production technology
Norsk Bioakva A/S, Norway (Einar Wathne)
UCAAB, France (Antoine Bon)
Duration 1994 - 1997
- Scallop production – plan for co-operation
Centre for Studies of Environment and Resources, UiB, Norway (Thorolf Magnesen)
IFREMER-Brest-Drv, France (Jean-Claude Dao)
Duration 1994 - 1997
- Control and management of quality with nutrition and feeding regime
Domstein Salmon AS, Norway (Ola Sveen)
Labeyrie SA, France (Laurent de Baynast)
Duration 1995 - 1997
- Biactive compounds in fish and shellfish waste
Institute for Fisheries and Aquaculture, Norway (Asbjørn Gildberg)
Collège de France, Marine Biology Laboratory, France (Yves Le Gal)
Duration 1995 - 1997
- Cellular immune system in salmoned fish
University of Bergen, Fisheries and Marine Biology, Bergen, Norway (Curt Endresen)
Université Pierre et Marie Curie, CNRS and INRA, Paris, France (Jacques Charlemagne)
Duration 1996 - 1998
- Oral use of *Propionibacterium acnes* to improve health and growth in fish
Nutreco ARC, Norway, (Alex Obach)
Vétoquinol S.A., France (A. Rigoulot)
Duration 1998 - 1999

- Alternative to antibiotic treatments in marine aquaculture. Application to bivalve larvae
Centre for studies of environment and resources, UiB / Scalpro AS, Norway (T. Magnesen)
UBO-IEUM-UMR CNRS, France (Christine Paillard)
Duration 1999 - 2000
- New quality assessment methods for the Norwegian salmon industry
SINTEF Fiskeri og havbruk and Norway Royal Salmon, Trondheim, Norway (Marit Aursand)
Eurofins Laboratories and Laiem, Nantes, France (Michèle Lees)
Duration: 1998-2001
- Substitution of fish meal by plant protein in diet of Atlantic Salmon and Rainbow Trout
EWOS Innovation AS (NorAqua Innovation AS), Dirdal, Norway (Jan Vidar Jakobsen)
UNCAA DPA UCAAB, Chateau-Thierry, France (Christine Azam)
Duration: 1999 – 2002
- High-energy diets in aquaculture: Effects on salmonid quality
Nutreco ARC AS, Stavanger, Norway (Wolfgang Koppe)
National Institute for Agronomic Research (INRA), France (Geneviève Corraze)
Duration: 2000 - 2003
- Structure, formation and daily growth of the scallop *Pecten maximus* shell
Institute of Marine Research, Bergen (Øivind Strand)
Institut Universitaire Européen de la Mer (Laurent Chauvaud)
Duration: 2001-2003
- Adaptation of French sea bream technology for cod fingerling production
Bergen Aqua AS, Bergen (Grethe Adoff)
Ferme Marine de Douhet (Frédéric Cachelou)
Duration 2001 - 2003
- Nutraceuticals from fish and shellfish hydrolysates
BioHenk AS, Tromsø (Even Stenberg)
Station de Biologie Marine du Muséum National d'Histoire Naturelle (Yves Le Gal)
Duration: 2002 – 2004
- Blue mussel bio-energetics in aquaculture as modelled with DEB (Dynamic Energy Budget) theory
IMR (Havforskningsinstituttet) (Øyvind Strand)
IFREMER (Marianne Alunno-Bruscia)
Duration: 2009 – 2010
- Molecular markers to estimate algal diets of molluscs (KLEM)
UNI MILJØ (Christofer Troedsson)
IFREMER (Marianne Alunno-Bruscia)
Duration: 2010 - 2011

BIOTECHNOLOGY / BIO-MEDICINE / BIOCHEMISTRY

- Development of ⁹⁹Tc-labelled drugs based upon Biological Substances
Axix Research A/S, Oslo, Norway (Heggli)
Compagnie ORIS Industrie, Gif-sur-Yvette, France (J.C. Saccavini)
Duration 1989 – 1990

- Purification of marine oils by supercritical fluid fractionation
Pronova Biocare, Norway (H. Breivik)
Separex, France (M. Perrut)
Duration 1991 - 1993
- Modelling of molecular recognition – a semi automatic approach
MR Center, Norway (Steffen Petersen)
Biostructure, France (Stéphane Boudon)
Duration 1992 – 1993
- Detection and counting of residual leukocytes
Dynal, Norway (Erik Ruud)
Biocytex, France (Philippe Poncelet)
Duration 1993 - 1994
- Repair of lesions induced in DNA by industrial compounds and drugs
University of Bergen Department of molecular Biology, Bergen, Norway (Niels Aarsæther)
Institut Gustave Roussy, Villejuif, France (Jacques Laval)
Duration: 1998-2001
- The immune system in scallop, Doctoral studies at SARS Centre in Bergen
Doctoral student Armaury Herpin, Laboratoire de Biologie et Biotechnologies Marine, Caen
Duration: 2000-2002
- Development of biochemical procedures and read out platforms for manipulating and analysing nucleic acids
LingVitae, Norway (Preben Lexow)
Pasteur Institut, France (Aaron Bensimon)
Duration: 2001-2003
- The Effect of Bioactive Fatty Acids on Atherosclerosis and Restenosis Development
Thia Medica AS / Clinical Biochemistry Haukeland Hospital, UiB, Norway (Rolf K. Berge)
Institut Pasteur de Lille, France (Bart Staels)
Duration: 2002 – 2004
- Developing genetic tools for real time non-invasive imaging of tumorigenesis in living mice
Cgene AS (Harald Karlsen) / University of Oslo (Joel Glover)
ENS Paris / IPSOGEN (Christo Goridis / Fabienne Hermitte)
Duration: 2 years 2005 – 2007
- Novel sonosensitive liposomes and systems for targeted ultrasound mediated drug delivery
Epitarget Therapeutica (former CancerCure AS) (Esben A. Nilssen)
EDAP-TMS SA (Emmanuel Blanc)
Duration: 2007 – 2011 (Σ!4056)

CIVIL ENGINEERING

- Prediction creep settlements for foundations in permafrost
Norwegian Geotechnical Institute, Oslo, Norway (Tom Lunne)
GEOCEAN, Marseille, France (Alain Puech)
Duration 1991

- Submarine Slides
Norwegian Geotechnical Institute, Oslo, Norway (Harald Norem)
CEMAGREF, Division Nivologie, St. Martin D'Heres, France (Gerard Brugnot)
Duration 1991 - 1992
- Geosynthetics for innovative sustainable solutions in Arctic climate
Store Norske Spitsbergen Grubekompan / SINTEF (Arnstein Watn)
TenCate Geosynthetics France (Philippe Delmas)
Duration: 3 years 2006 – 2009 (Σ! 3702)

ENERGY SAVING AND ENVIRONMENTAL TECHNOLOGY

- Technology transfer in water technology
Aquateam, Norway (Schanke Eikum)
Verseau, France (Lagarrique)
Duration 1990 – 1991
- Integration of a gas turbine in a high speed vessel
Ulstein International AS, Norway (Harald Nordal)
Turbomeca, France (Watier)
Duration 1991 - 1992
- Anode gas cleaning. Installation and operation of a Pilot Plant
Elkem Aluminium ANS, Norway (Arne G. Berg)
Procedair SA, France (Serge Commenges)
Duration 1997
- Wet Air Oxidation by Catalytic Membrane Contactor
SINTEF Material Technology / Due Miljø, Norway (Henrik Ræder)
Institut de Recherches sur la Catalyse (IRC)-CNRS, France (P. Gallezot)
Duration 1998 – 2000
- Current forecasting in the North Sea and the Gulf of Lion
Terra Orbit AS (Laurent Bertino)
Actimar SA (Raymond Nerzic)
Duration: 3 years 2006 - 2008
- Stabilisation of top of the line corrosion rate
Institutt for energiteknikk (IFE) / Total Norge / Norske Conoco Phillips (Arne Dugstad)
Total S.A / ENSEE Grenoble (Yves Gunaltun)
Duration: 3 years 2006 – 2008
- Industrialisation of the Watercatox process for waste water treatment and liquid oxidation
Due miljø (Eddy Torp and Partow Henriksen)
Tredi (Sylvain Durecu)
Duration: 2008 – 2010

INFORMATION / TELECOMMUNICATION TECHNOLOGIES / ROBOTICS

- Fibre Optic Technology
Alcatel STK, Norway (Flaarønning)
Lab. de Marcoussis, France (Torchin)
Duration 1989 – 1990
- Computer aided navigation of mobile robots using animated synthetic images
SINTEF, Norway (V. Kallevik)
CYBERNETIX, France (P. Baraona, D. Sangouard)
Duration 1990 - 1991
- ACM, Advanced Configuration Management (NOMADE + EPOS)
Norwegian Institut of Technology, Trondheim, Norway (Conradi)
LGI, Nomade Team, Grenoble, France (Estublier)
Duration 1991 - 1992
- Interactive home support systems for protected housing
Man Machine Technology AS, Norway (Anderson)
Pierron SA, France (Viala, Legrand)
Duration 1992 - 1993
- Eviacsim – An interactive evacuation simulation system tool
A/S Quasar Consultants, Norway (K. Harald Drager)
Simulog, France (Bruno Arbaud)
Duration 1992 - 1993
- High performance safety and security detector field bus
Autronica AS, Trondheim, Norway (Gunnar Haveland)
Automatismes Sicly, Le Blanc-Mesnil, France (Thierry Chabot)
Duration 1994 - 1997
- TRICAD – Triangulation of CAD geometries
ViewTech, Norway (Tor Helge Hansen)
Transvalor, France (Etienne Wey)
Duration 1999 - 2000
- Secure software distribution and payment over Internet
Sospita AS (Protective Technology), Mandal, Norway (Ulf Carlsen)
Gemplus, Gémenos, France (Pierre Girard)
Duration: 1999-2001
- HP-Sim: High Performance Seismic Imaging)
Para//ab / Norsk Hydro, Bergen, Norway (Tor Sørøvik)
Armines-Geophysique, Fontainebleau, France (Philippe Thierry)
Duration: 2000-2001

- 3D Geometry System integrated with haptic and kinaesthetic solutions
Compu Touch AS, Norway (Frank Robert Berg)
Atomic Energy Commission, France (CEA) (Guy Le Bras)
Duration: 2001-2002
- Software Components for Building Complex 3D Geological Models (2001-2003)
GeoCap AS, Norway (Olav Egeland)
Armines / IFP, France (Jean-François Rainaud)
- Medical Device Software Assessment for Certification
Det Norske Veritas AS, Oslo, Norway (Torbjørn Skramstad)
ISOSCOPE, Toulouse, France (Christian Rouve)
Duration: 2000 - 2004
- Simulation and planning for Robotic Education and Distant Surgery
Sim Surgery AS, Norway (Jan Sigurd Røtnes)
IRCAD, France (Luc Soler)
Duration: 2003-2004
- Development of innovative IT solutions for Shipbrokers
Unified Messaging Systems, Norway (UMS) (Harald Lindbäck)
AXS Marine SA, France (Fabrice Demichel)
Duration: 2003-2004
- Modelling electricity prices in European markets with an emphasis on risk analyses
Kjell Magnus Maribu – postdoctoral studies at École des Mines de Paris
Duration : Six months 2006
- Localisation of drifting objects and decision aid system for maritime search and rescue (SAR)
CMR Computing / Met.no (Kjell Røang)
ACTIMAR / IFREMER (Raymond Nerzic)
Duration: 2006 – 2008 (Σ! 3652)
- STERIPROBE – Development and industrialization of ultrasound probes for sterile processing
Sonowand AS (Atle Kleven)
Vernon S.A. (Philippe Auclair)
Duration: 2009 – 2010 (Σ! 4980)
- NextGenFSI: Next generation numerical code for fluid-structure interaction
Impetus Afea (Arve Grønsund Hanssen)
SARL Impetus Afea (Jean Luc Lacome)
Duration: 2010

MATERIAL SCIENCE AND TECHNOLOGY / MARINE TECHNOLOGY

- Advanced light metals for car engines
Hydro Aluminium, Sunndalsøra, Norway (L. Auran)
PSA Velizy, France (R. Moore)
Duration 1988-1992

- Postal container for ATR
Hydro Aluminium, Norway
Avions de Transport Regional (ATR), France
Duration 1990 - 1991
- Microstructurally based modelling of plastic anisotropy
Hydro Aluminium, Metallurgical R&D Center, Sunndalsøra, Norway (A. Aaflo) (A. Aaflo)
Pechiney Recherche, Voreppe, France (B. Marandet)
Duration 1991 -1992
- Recovery of Aluminium Alloys
Hydro Aluminium, R&D Materials Technology, Norway (Trond Furu)
Pechiney CRV, France (D. Duly)
Duration 1993 - 1996
- Modelling and improved cooling of aluminium extruded sections
Hydro Aluminium, R&D Materials Technology, Norway (Antonie Oosterkamp)
Bertin & Cie, France (J. Street)
Duration 1994 - 1997
- Electrophoretic and sol-gel methods for anticorrosive mineral coatings
SINTEF Materials Technology, Norway (Christian Simon)
Institut Français du Pétrole, France (Benjamin Cabot)
Duration 1994 – 1997
- Piezo-composites in underwater transducers
Simrad Norge AS, Horten, Norway (Helge Bodholt)
Imasonic, Besançon, France (Gerard Fleury)
Duration 1996 - 1998
- Carbon particle upgrading by plasma
SINTEF/NTNU, Norway (Jon Arne Bakken)
ARMINES, Centre d’Énergétique, Sophia Antipolis, France (Laurent Fulcheri)
Duration 1998
- Development of high performance and safety improved work clothing for the oil industry
SINTEF Unimed, Øglænd Pioner, Norway (Arvid Påsche)
Pinatel et Chapuis Textiles, France (Pierre Baleix)
Duration 1998 - 1999
- Inductive plasma purification of metallurgical silicon using inductive plasma in order to obtain silicon with purity suitable for solar cell manufacturing
Elkem ASA, Kristiansand, Norway (Pål Runde)
PREMIS Technologies, Ascoux, France (N. Perrodin)
Duration: 1999 – 2001
- High temperature pressure sensor (2000 - 2001)
PreSens, Oslo, Norway (Frode Meringdal)
Cea Leti, Grenoble, France (Bernard Diem)
Duration: 2000 - 2001

- Aluminium components subjected to impact loading conditions
SIMlab, NTNU / SINTEF / Hydro Aluminium, Norway (Magnus Langseth)
LMT-Cachan / Renault, France (Ahmed Benallal)
Duration: 2003-2005
- Novel silicon feedstock by agglomeration of silicon powder and further refining by thermal treatment and reactive metallurgy
Silicon Technologies AS, Norway (Bruno Ceccaroli)
EMIX SA, France (Didier Landaud)
Duration: 2005
- Up-scaling of advanced ceramic membrane processes for fish oil separation
Due Miljø and SINTEF Materia, Norway (Eddy Torp and Bente G. Tilset)
CTPP / IFREMER, France (Charles Delannoy) and NOVASEP Orelis
Duration 2004
- Up-scaling of advanced ceramic membrane processes for fish oil separation
Due Miljø/SINTEF, Norway (Eddy Torp and Bente G. Tilset)
CTPP / Novasep Orelis, France (Charles Delonnoy)
Duration: 3 years 2005 - 2007 (Σ! 3198)
- New process for solar silicon. Refining by thermal treatment and reactive metallurgy
Rec Silicon AS, Norway (Bruno Ceccaroli / Erik Sauar)
EMIX S.A, France. (Didier Landaud)
Duration: 3 years 2006 – 2008 (Σ! 3314)
- Intercepting HISC by ultrasonic residual stress measurements
Det Norske Veritas (Majid Anvari)
Ultra RS (Siamack Atiabi)
Duration: 1 year - 2006/07 (Finish in September 2009)
- Conception, development and testing of new aluminium casting alloys for elevated temperature applications in automobile engines
Hydro Aluminium (Petter Åsholt)
Montupet (Bruno Barlas)
Duration: 3 years 1.7.2006 – 30.6.2009 (Σ! 3698)
- Evaluation of Ready To Use crucibles for the crystallization of multi crystallised silicon ingot
NTNU, Material Science (Lars Arneberg)
Vesuvius France (Christian Martin)
Duration: 1 year 2008/09
- Isotope separation of silicon for use in the photovoltaic industry
Isocilicon AS (Dag Øistein Eriksen)
Novasep Process SAS (Pierre Hilaireau)
Duration: 2008 – 2010

OIL AND GAS INDUSTRY, OFFSHORE TECHNOLOGY

- Feasibility Study on Natural Gas Distribution in North Rogaland
Gasmet A/S, Forus, Norway (Rolf Rønningen)
Sofregaz, Paris, France (Saillard)
Duration 1989
- Deep Diver External Monitoring
SINTEF, Trondheim, Norway (Arvid Påsche)
COMEX SA, Marseille, France (Imbert)
Duration 1989 - 1990
- Drilling and production operation for offshore field on Norwegian waters with the Jack-up TPG 500
Wiltech Production System (WPS), Oslo, Norway (Robert Reed)
Technip Geoproduction, Paris, France (Pierre-Armand Thomas)
Duration 1989 - 1990
- Vertical resonant motions of tension leg platforms
Norwegian Institute of Technology, Trondheim, Norway (Geir Moe)
IFP, Rueil Malmaison, France (B. Molin)
Duration 1989 - 1990
- Diver survival equipment
SINTEF, Trondheim (Arvid Påsche) and Statoil/Norsk Hydro/OD, Norway
COMEX S.A., Marseille, France (Jean Pierre Imbert)
Duration 1989 - 1990
- Concrete semi-submersible production platform with rigid well risers
Oddfjell Drilling and Consulting Co. A/S, Kokstad, Norway (A.K. Nilsen)
Doris Engineering, Paris, France (J. Martin)
Duration 1991 - 1992
- Offshore loading system for LNG and LPG
Seanor Engineering a.s., Norway (Oddvar Bøyeseen)
FMC EUROPE S.A, France. (Chris Pashalis)
Duration 1992 - 1994
- Gas leak detection (GLD) system for pipelines
Simrad Marine, Norway (Kjell Dalland)
Metravib, France (Pierre Schindler)
Duration 1993 - 1994
- Development of methods for inspection of steel layers in flexible pipes
Robit, Norway (Morten Eriksen)
Coflexip, France (Barthelemy Laurant)
Duration 1993 - 1994

- New Multilevel downhole seismic acquisition system
READ Well Services AS, Norway (Karl A. Berteussen)
IFP, Rueil Malmaison, France (Jean Laurent)
Duration 1994 - 1996
- A new generation of zeolite catalyst for hydrocracking
Statoil Research Centre, Norway (Bente Bøe)
Institut Français du Pétrole, France (Eric Benazzi)
Duration 1997 - 2000
- Travel support in connection with the establishment of possible co-operation between NTNU and IFP
Professor Gudmundsson, NTNU, Trondheim, Norway
Duration 1998
- Fatigue behaviour of offshore loading hoses
Advanced Production and Loading (APL) AS, Norway (Jan V. Aarsnes)
Trelleborg Kleber Industries, France (Jacques Cognard)
Duration 1999 – 2000
- Increased Field Profitability by Improved Uncertainty Management
Det Norske Veritas (DNV), Norway (Øivind Johnsen)
Institut Français du Pétrole (IFP), France (Daniel Averbuch)
Duration 2002 - 2003
- Application of a new encapsulation process in petrochemistry
KeraNor/SINTEF Materials Technology, Norway (Christian Simon)
Institut Français du Pétrole/Université de Franche-Comté, France (Alain Fossy)
Duration: 2002 – 2004 (Extended to a EU project (NANOCAPS) in March 2004)
- Stabilisation of the top of the gas lines corrosion rate
Institutt for energiteknikk (IFE) / Total Norge / Norske Conoco Phillips, Norway (Arne Dugstad)
Total S.A / ENSEE Grenoble, France (Yves Gunaltun)
Duration: 3 years 2006 – 2008
- New Solution for Deck Installation and Decommissioning: Dect Structure Installation Vessel (Eurogia EOG-0604)
Det Norske Veritas (Henning Carlsen)
Technip (Marc Cahay)
Duration: 2009 - 2011

SPACE TECHNOLOGY

- Aerospace Vehicle Numerical Flow Simulation and Wind Tunnel Test
CFD, Trondheim, Norway (Helge Nørstrud)
Aerospatiale, Toulouse, France (Corinne Rey)
Duration 1990 - 1992

- Technology Program – Thermal Protection Materials for Propulsion Systems
Raufoss, Norway (Haugen)
SNPE Paris, France (Faure)
Duration 1992 – 1993
- Zeolite Synthesis under Microgravity
SINTEF (SI), Norway (Stöcker)
Université de Paris VI+VII, France (Robert)
Duration 1991 - 1992
- Save filter bank for flexible multi beam payload
Ame Space, Norway (Øivind Andreassen)
Alcatel Espace, France (Herve Snorre)
Duration 1993 - 1995
- French / Norwegian study of increased space technology industrial co-operation
Europavia Norge A/S, Norway (J.C. Width)
CNES, France (Yves Rebillard)
Duration 1993
- Development of adaptive mesh for space propulsion systems
CDF Norway AS, Norway (Helge Nørstrud)
SNECMA, France
Duration 1994 - 1996
- Development of a bi-propellant flow control valve for satellite propulsion
Raufoss Technology AS, Raufoss, Norway (Per Eger)
Aerospatiale Espace Défense, Les Mureaux, France (J. Astier)
Duration 1996 – 1998
- Introduction to the French Aerospace Industry
Einar Sørensen, Norway
Duration 1999

MISCELLANEOUS

- Olympic winter games – Albertville 1992 / Lillehammer 1994
Potential fields of industrial co-operation
NIA, Norway(Per Axel Prydz)
COJO/LOOC. France
Duration 1991 – 1992
- Creative project – 1st step marketing study
Statoil, Norway (EUREKA support)
CETIM, France (FNS support)
Duration 1993
- Development of a new generation self-contained closed circuit breathing apparatus
Thelma AS, Norway (Arvid Påsche)
Fenzy S.A, France (Robert Michel)
Duration: 2001 – 2002

- Developing an Intangible Asset Valuation Tool
InSpire Invest AS (Jan-Olaf Willums)
Integral Development Asset Management (Antoine Dehen)
Duration: 2005/06
- Consumer conceptions of local food
SIFO (Virgenie Amilien)
INRA and UMR MOISA (Fatiha Fort)
Duration: 2005 - 2007

WORKSHOPS AND SEMINARS: 1984 - 2011

The Foundation support bilateral seminars. The main objectives are:

- Bring together French and Norwegian key actors in priority fields,
- Stimulate private-public and research-industry collaborations,
- Initiate cooperation projects in the R&D sectors, including demonstration projects

To date, the following seminars have been organized or supported by the Foundation (as of December 31,2011):

Oslo, 1984:	Materials
Brest, 1984:	Aquaculture
Paris, 1985:	Offshore technologies
Paris, 1986:	Artificial intelligence
Trondheim, 1987:	Studies and research for marine technologies
Oslo, 1989:	Materials
La Rochelle, 1989:	Aquaculture
Caen, 1989:	Smart cards
Rueil-Malmaison, 1991:	Major risks
Paris, 1991:	Space technologies
Oslo, 1992:	Robotics and subsea operations
Paris, 1992:	Polar research at Svalbard
Paris, 1993:	INSROP presentation
Oslo, 1994:	Prevention and treatment of nuclear and chemical pollution
Tromsø, 1995:	Telemedicine
Rueil-Malmaison, 1998:	Water treatment in oil and gas production
Nantes, 2000:	Agriculture business and Information technology
Ås, 2001:	Management of water quality
Stjørdal, 2004:	Knowledge Management in integrated Drilling Operations
Brest, 2004:	Technologies for Search Assistance and Rescue
Paris, 2005:	Workshop for planning collaboration between INRA and Aquaforsk within aquaculture research
Bergen, 2005:	Workshop on operational oceanography
Montpellier / Palavas 2005:	Workshop on Recirculation water technology
Oslo, 2005:	Seminar on Hydrogen and transport
Brest, 2006:	Workshop on Technologies for Search and Rescue and other Emergency Marine Operations
Grenoble, March 2007	Micro and nano optics (MINAO), CEA, FFI
Oslo, November 2007	Carbon Capture and Storage, French Embassy, Alsthom Norway
Brest, 2008	Third international workshop on technologies for search and rescue and other emergency marine operations IFREMER
Paris, November 2008	Networking seminar for cancer and brain sciences clusters, Norwegian Embassy

Rennes and Trondheim, 2009	Request for network building in technology for automatic quality control and processing in fish-food SINTEF Fisheries and INRA
Bergen, August 2009	Nano and micro frontiers in biology and medicine University of Bergen
Trondheim, October 2009	Request for networking in marine biological resources SINTEF, Pôle Mer Bretagne
Toulouse, September 2009	European Cancer Cluster Partnering (1 st edition) Oslo Cancer Cluster, Toulouse Cancer-BioSanté, Canceropole
Le Havre, December 2009	Student Seminar on Capture, transport and storage of CO ₂ Norwegian University of Science and Technology (NTNU), Capture, Transport and Storage Industrial Chair of MINES ParisTech
Oslo, June 2010	Seminar on Marine Renewable Energy Research Council of Norway, Norcowe, Nowitech, Det Norske Veritas (DNV), NVE, SINTEF, Ademe, Pôle Mer Bretagne, Ifremer, Saipem, Technip, Secrétariat Général de la Mer, Ambassade de France en Norvège, FFN/FNS
Trondheim, June 2010	Seminar on Materials and Chemistry SINTEF
Oslo, September 2010	European Cancer Cluster Partnering (2 nd edition) Oslo Cancer Cluster, Cancer-Bio-Santé, Toulouse
Trondheim, December 2010	Student Seminar on Carbon Capture and Sequestration (CCS), Norwegian University of Science and Technology (NTNU) Capture, Transport and Storage Industrial Chair of MINES ParisTech

SEMINAR ACTIVITIES IN 2011

- **Workshop "Sustainable Culture of Marine Micro-Algae"**

Meze (Montpellier), *February 2011*

Organizers

(F) Greensea

(N) Sintef Fisheries and Aquaculture

Thematics

Elaboration of a research project on sustainable culture of marine micro-algae to design new aquaculture products, particularly for the cosmetic industry.

- **Taste-Nutrition and Health: Networking Dijon**

Dijon, *March 2011*

Organizers

(F) French cluster Vitagora

(N) Nofima Mat

with Norwegian food companies, Norwegian research institutes, members of Vitagora, members of Enterprise Europe Network.

Thematics for the networking

Processed foods with lower content of sugar, salt and fat.

Molecular gastronomy (creativity/sensory analysis/chemistry).

- **Seminar on Water Resource Management**

Trondheim, April 2011

Organizers

(N) Sintef Energy Research

(F) Cemagref Lyon

Thematics

Improvement of the optimization of water resources management with a special focus on management of natural risks and social decisions.

- **Fourth International Workshop – Technologies for Search and Rescue (SAR) and other Emergency Marine Operations**

Brest, May 2011(at the 2011 Saferseas Conference)

Organizers

(F) Ifremer

(N) The Norwegian Meteorological Institute

(US) The US Coast Guards

Thematics

- Operational ocean modelling and its use in SAR modelling,
- State of the Art Technology for SAR assistance,
- SAR problems in the cases of aircraft crashes at sea,
- SAR problems on new maritime routes and polar areas,
- Drifting objects,
- Standardization of the exchange and communication between different SAR services.

- **Seminar on Nanotechnologies**

Paris, June 2011

Organizers

FFN/FNS

(F) Ministry of Higher Education and Research, French Embassy in Norway

(N) Research Council of Norway

Thematics

Enhance French-Norwegian cooperation in "Nanotechnologies and nanosciences, knowledge-based multifunctional Materials and new production Processes and devices" programme (NMP Programme, 7th and 8th European Framework Programmes).

- **The Norwegian Chemistry Society: Marie Curie Day, November 7, 2011.**

Several events have taken place in Norway within the international Year of Chemistry. One of them has been devoted to the life and science of Marie Skłodowska-Curie, and her cooperation with Ellen Gleditsch. The FFN-FNS has decided to support this event because it can contribute to make its promotion , even if such events are not in the main scope of the Foundation.

**EXCHANGE PROGRAMME
NATIONAL ACADEMIES OF SCIENCE 1990 - 2003
ÅSGARD PROGRAMME from 2006**

1990

Prof. Paul Malliavin (mathématiques)
10, rue Saint Louis en l'Isle, 75004 Paris

Prof. Johannes Dale (chimie)
Universitetet i Oslo, Kjemisk institutt, Pb 1033, 0315 Oslo
(Coopération avec M. Julia)

1991

Nicole Le Douarin (biologie anim. et vég.)
Institut d'Embryologie Cellulaire et Moléculaire du CNRS et du Collège de France
49 bis, avenue de la Belle Gabrielle, 94736 Nogent-sur-Marne Cedex

Prof. Tom Andersen (géologi)
Universitetet i Oslo, Mineralogisk-Geologisk Museum, Sarsgate 2, 0562 Oslo

Prof. Per Enger (zoologi)
Universitetet i Oslo, Biologisk institutt, Genetisk fysiologi, Pb 1051 Blindern, 0316 Oslo

Prof. Olav A. Laudal (mathématiques)
Universitetet i Oslo, Matematisk institutt, Pb 1053 Blindern, 0316 Oslo

1992

Prof. Marc Julia (chimie)
Ecole Normale Supérieure, Laboratoire de Chimie
57, rue Geoffroy-Sant-Hilaire, 75005 Paris
(Coopération avec M. Dale)

Prof. Jaques Dixmier (mathématiques)
(Coopération avec M.O.A. Laudal)

Prof. Pierre Buser (médecine)
Université Pierre et Marie Curie, Institut des Neurosciences
9, Quai Sant-Bernard, 75005 Paris

Prof. Jacqueline Tjøtta (mathématique)
Universitetet i Bergen, Matmatisk institutt, 5007 Bergen
(Coopération avec Mme Lévy)

1993

Prof. Thérèse Lévy (physique)
Université de Paris VI, Modélisation en Mécanique URA 229
(Coopération avec Mme Tjøtta)

Prof. Paul Ozenda (biologie)
 Université Joseph Fourier, Laboratoire de biologie alpine
 Saint-Martin d'Hères
(Coopération avec M. Holten)

1994

Prof. Øyvind Andersen (chimie)
 Norsk institutt for Naturforskning (NINA)
 Tungasletta 2, 7005 Trondheim
(Coopération avec M. Ozenda)

Prof. Michel Rohmer (chimie)
 Université de Haute Alsace, Ecole Nationale Supérieure de chimie de Mulhouse
(Coopération avec M. Skattebøl, Univ. i Oslo, Kjemisk institutt)

1995

Prof. Øyvind Andersen (chimie)
 Universitetet i Bergen, Kjemisk institutt, 5007 Bergen

Prof. Robert Naquet (médecine)
 Institut Alfred Fessard, Avenue de la Terrasse, 91198 Gif-sur-Yvette Cedex
(Coopération avec Mr. O. Ottersen)

1996

Prof. Andrée Marquet (chimie bio-organique)
 Université Pierre et Marie Curie, Lab de chimie organique biologique
 URA CNRS 493, 4, Place Jussieu, 75252 Paris Cedex 05

Prof. Ole Petter Ottersen
 Universitetet i Oslo, Institutt for medisinske basalfag, Anatomisk Institutt
 Pb 1105 Blindern, 0317 Oslo

1997

Prof. Yvonne Choquet-Bruhat
 Université Pierre et Marie Curie
 4, Place Jussieu, 75252 Paris Cedex 05
(Cooperation avec Mr. A. Lauvdal)

1998

Prof. Olav Arnfinn Laudal
 Universitetet i Oslo, Matematisk institutt
 Pb 1053 Blindern, 0316 Oslo
(Cooperation avec Ms. Y. Choquet-Bruhat)

2001

Prof. Ragni Piene
 Universitetet i Oslo, Matematisk institutt
 Pb 1053 Blindern, 0316 Oslo
(Cooperation avec Prof. Marie-Lise Chanin)

2003

Prof. Pacal Estraillier

Université de la Rochelle, Laboratoire Informatique/Image/Interaction

(Norwegian Mapping Authority, the Norwegian Space Center and SINTEF - geographic data processing)

2006 - Åsgard Programme

The following eight scientists were awarded a Åsgard fellowship in order to visit Norwegian research institutions in 2006:

Céline Nauges (Economics for Development)

INRA Toulouse – Oslo and Ås

Laurent Douce (Inorganic chemistry, liquid crystals)

IPCMS, Ecole de chimie de Strasbourg – Oslo and Bergen

Emmanuel Hadji (Materials, nanotechnologies)

CEA Grenoble – Oslo and Trondheim

Mohammed El Ganaoui (Physics, numerical modelling)

Université de Limoges – Oslo, Trondheim and Ås

Claude Touzet (Medicine, neurobiology, memory)

Université de Marseille – Oslo and Trondheim

Pierre Villeneuve (Biology, lipids)

CIRAD, Montpellier – Oslo and Ålesund

Claude Estournès (Chemistry, hydrogen)

CNRS, Université de Toulouse

Visit within the framework of the follow-up actions of the French-Norwegian Seminar on Hydrogen organised in Oslo in December 2005

Fabrice Mauvy (Condensed matter)

Université de Bordeaux

Visit within the framework of the follow-up actions of the French-Norwegian Seminar on Hydrogen organised in Oslo in December 2005

2007 - Åsgard Programme

The following nine scientists were awarded a Åsgard fellowship in order to visit Norwegian research institutions in 2007:

Denis Gauthier (Research for development)

CIRAD, Montpellier/Mali

Visit within the framework of the follow-up actions of the French-Norwegian Seminar on Development organised in May 2006

Anne-Marie Caminade (Chemistry)

Université de Toulouse – Trondheim, Oslo

Benoît Dugué (Sport sciences)
Université de Poitiers – Oslo

Emmanuel Picavet (Political philosophy)
Université Panthéon-Sorbonne (Paris I) – Oslo

Eric Brangier (Cognition and interaction studies, psychology)
Université de Metz – Trondheim, Oslo

Attar Al-Nawar (Cardiac surgery, cell therapy)
Hôpital Bichat – Oslo

Agnès Michelot (Environmental law)
Université de La Rochelle – Bergen, Oslo

Catherine Picart (Biophysics)
Université Montpellier II – Bergen, Oslo, Trondheim

Jocelyn Chanussot (Signal and image processing)
Institute of technology Grenoble – Trondheim, Bergen, Oslo

The following two scientists were awarded a Åsgard fellowship in order to visit French research institutions in 2007:

Tor A. Benjaminsen (Agriculture, environment and life science)
Norwegian University of Life Sciences, Ås – CIRAD, IRD and EGREF Montpellier

Reiner Anwander (Chemistry)
University of Bergen – Toulouse and Lyon

2008 - Åsgard Programme

The following 10 scientists were awarded a Åsgard fellowship in order to visit Norwegian research institutions in 2008:

Ludovic Escoubas (Photovoltaics, Optoelectronics)
Université Paul Cézanne, Aix-Marseille III – Trondheim, Oslo

Pierre Millet (Hydrogen)
Université Paris XI, Institut de Chimie Moléculaire et des Matériaux d'Orsay – Trondheim, Oslo

Alessandro Tonello (Optics, Photonics, Telecommunication)
Institut XLIM, Université de Limoges – Trondheim, Oslo

Yann Bugeaud (Mathematics)
Université Louis Pasteur Strasbourg – Bergen, Trondheim, Oslo

Stéphane Olié (Neuroscience)
Centre de Recherche INSERM U862, Université Bordeaux – Trondheim, Oslo

Stéphane Bellemin (Chemistry, Catalysis)
Université Louis Pasteur Strasbourg – Oslo, Bergen

Desdemona Fricker (Neuroscience)
Université Paris XIII, CHU Pitié-Salpêtrière – Oslo, Trondheim

Lydie du Bousquet (Software engineering)
Laboratoire d'Informatique de Grenoble, Université J. Fourier Grenoble I – Trondheim, Oslo

Luc Massou (STIC)
Université Paul Verlaine, Metz – Oslo, Kristiansand

Sylvie Neyertz (Chemistry)
Université de Savoie, Chambéry – Trondheim, Oslo, Bergen

2009 - Åsgard Programme

Jean Sciare
CEA-LSCE – Tromsø, Oslo

Yvette Veyret
Université Paris X – Nanterre – Oslo, Stavanger

Brian Rudkin
ENS Lyon – Oslo, Bergen

Pierre-Xavier Thivel
Université de Grenoble – Bergen, Oslo Trondheim

Alain Ponton
Université Paris Diderot – Trondheim, Oslo, Ås

Christine Contino-Pepin
Université d'Avignon – Bergen, Oslo

Laurent Billonnet
Université de Limoges – Stavanger, Oslo Trondheim

Farid Chemat
Université d'Avignon – Oslo, Tromsø, Ås

2010 - Åsgard Programme

Fabrice Balanche, Human Sciences – development in Middle East,
Université Lyon II visiting Oslo, Bergen

Sophia Belghiti-Mahut, Social Sciences – Gender equality,
Université de Montpellier visiting Oslo

François Renard, Geophysics – CCS,

Université Joseph Fourier de Grenoble, visiting Oslo, Trondheim

Pascal Dufour, Automatism,

Université Claude Bernard Lyon I , visiting Trondheim, Oslo, Porsgrunn

Olivier Cuvillier, Biochemistry cancer,

Université de Toulouse visiting Oslo

Claude Descorme, Environment Energy – Catalysis,

Institut de Recherche sur la Catalyse et l'Environnement Lyon, visiting Oslo, Trondheim

Marc Le Borgne, Pharmacology,

Université Claude Bernard Lyon I, visiting Bergen, Oslo

Armelle Decaulne, Physical geography – Polar geomorphology,

Université Blaise Pascal Clermont Ferrand II, visiting Oslo, Trondheim



2011 Åsgard laureats

Between the 15th of September and the 15th of December 2010, 23 French scientists have applied for the 2011 Åsgard programme. 7 of them have finally been selected to spend one week in Norway in order to visit private and public research institutions:

1. **Christophe ROSENBERGER**, Computing sciences - Biometrics, University of Caen - GREYC
2. **Alexandre DE BREVERN**, Bioinformatics and computational biology, University of Paris 7 Diderot - DSIMB
3. **Christel VAN BESIEN**, Neurosciences and neurodegenerative disorders, University of Lille 1 – Early stages of Parkinson's disease
4. **Catherine GAUTHIER**, Polymers and heterogeneous materials, INSA Lyon - GEMPPM
5. **Jean-Louis BOBET**, Renewable energies: hydrogen storage and fuel cells, University of Bordeaux 1 - ICMB
6. **Pascale JOLINAT**, Optoelectronics, University of Paul Sabatier Toulouse - LAPLACE
7. **Valérie MICARD**, Biochemistry - Health and nutrition, Montpellier SupAgro - IATE

This report presents the 7 visits done in 2011, giving details on:

- French scientists selected
- Visited Norwegian institutions and Norwegian contacts
- Feedbacks of the French scientist (future projects of collaborations, exchanges of students...)

1. Christophe ROSENBERGER

Full Professor

Computing sciences - Biometrics

University of Caen - GREYC (Groupe de Recherche en Informatique, Image, Automatique et Instrumentation de Caen)

Åsgard: 21st to 25th of February 2011

List of the visited Norwegian institutions:

- Gjøvik:

- **Høgskolen i Gjøvik - NISLab** (Norwegian Information Security Lab)

- Contact: Patrick Bours

- ERASMUS agreement signed in 2010. 5 students (Master degree) from ENSICAEN spent 3 months in NISLab in 2011. Possibility of a bilateral Master degree between Gjøvik and Caen.*

- Oslo:

- **SINTEF**

- Contact: Mats Carlin

- **UiO - IFI** (IT Department)

- Contact: Audun Jøsang

- ENSICAEN sent an ERASMUS agreement. A student came at UiO for an internship with the ENCAP company.*

- **Institut français**

- Conference « Mercredis de la Science » in French: « Êtes-vous prêt à utiliser la biométrie dans votre quotidien ? »

- Trondheim:

- **SINTEF - [Software Engineering, Safety and Security](#)**

- Contact: Maria Line

- **NTNU - Q2S**

- Contacts: Danilo Gligoroski and Svein Knapskog

- ERASMUS agreement: ENSICAEN agrees but the international advisor would like to extent it to chemical engineering. Normally signed in 2011.*

2. Alexandre DE BREVERN

Researcher

Bioinformatics and computational biology

University of Paris 7 Diderot - DSIMB (Dynamique des Structures et Interactions des Macromolécules Biologiques)

Åsgard: 6th to 10th of March 2011

List of the visited Norwegian institutions:

- Tromsø:

- **CTCC**

Contact: Bjørn-Olav Brandsdal

Meeting canceled.

- **NORSTRUCT**

Contacts: Nils Peder Willamssen and Peik Haugen

- Bergen:

- **Computational Biology Unit**

Contacts: Nathalie Reuter, Øyvind Halskau and Lars Skjærven

Possibility of invitation of Øyvind Halskau in Paris with the Åsgard program.

- Oslo:

- **Oslo University Hospital**

Contact: Per Morten Sandset

- **Institute of Immunology**

Contact: Fridtjof Lund-Andersen

- **Institut français**

Conference « Mercredis de la Science » in French: « Les structures tridimensionnelles des protéines : comprendre le vivant à l'échelle de l'atome et proposer de nouveaux médicaments par une approche informatique. »

- **UiO** (Institute for Cancer Research)

Contact: Eivind Hovig

3. Christel VAN BESIEN

Associate Professor

Neurosciences and neurodegenerative disorders

University of Lille 1 - Early stages of Parkinson's disease

Åsgard: 4th to 8th of April 2011

List of the visited Norwegian institutions:

- Trondheim:
 - **NTNU** (Department of Neurosciences)
Contact: Linda White
“PARK De Novo” study currently initiated in France (PHRC funding).
 - **Trondheim Hospital** (Department of Neurology)
Contact: Jan Åsly
- Oslo:
 - **CMBN** (Centre for Molecular Biology and Neuroscience)
Contacts: Arne Klungland, Reidun Torp, Tone Tønjum and Mahmood Amiry-Moghaddam
Application for the Aurora program with Dr. Torp and Dr. Amiry-Moghaddam, then EU FP7 program.
 - **Nansen Neuroscience Network**
Contact: Stein Lorentzen-Lund
 - **Pattern Solutions AS**
Contact: Terje Kristensen
 - **Diagenic AS**
Contact: Hilde Marie Andersen
 - **Institut français**
Conference « Mercredis de la Science » in French: « La maladie de Parkinson : actualités et perspectives. »
 - **UiO** (Neuro and Gliotransmitter Group)
Contact: Vidar Gundersen
 - **UiO** (Biotek)
Contact: Hilde Nilsen

4. Catherine GAUTHIER

Professor

Polymers and heterogeneous materials

INSA Lyon - GEMPPM (Groupe d'Etudes de Métallurgie Physique et Physique des Matériaux)

Åsgard: 6th to 10th of June 2011

List of the visited Norwegian institutions:

- Trondheim:

- **NOBIPOL** (Norwegian Biopolymer Laboratory)

- Contacts: Bjørn Christensen and Gudmund Skjåk-Bræk

- **SIMLab**

- Contacts: Magnus Langseth and Arild Holme Clausen

- Oslo:

- **SINTEF** (Materials and Chemistry)

- Contact: Einar Hinrichsen

- **UiO** (Polymer and Material Group)

- Contacts: Finn Knut Hansen, Bo Nyström and Eddy Hansen

5. Jean-Louis BOBET

Professor

Renewable energies: hydrogen storage and fuel cells

University of Bordeaux 1 - ICMB

Åsgard: 27th of September to 1st of October 2011

List of the visited Norwegian institutions:

- Oslo:

- **RCN** (Research Council of Norway)

- Contacts: Trygve Riis and Randi Aarekol Basmadjian (FFN)

- **UiO** (Department of Chemistry)

- Contacts: Truls Norby and Heller Fjellvåg

- **Institut français**

- Conference « Mercredis de la Science » in French: « L'hydrogène, nouveau vecteur énergétique : réalité économique ou virtualité écologique ? »

- **SINTEF** (Materials and Chemistry)

- Contacts: Marit Strange and Marie-Laure Fontaine

- **IFE** (Physics Department)

- Contacts: Bjørn Hauback and Volodymyr Yartis

6. Pascale JOLINAT

Associate Professor

Optoelectronics

University of Paul Sabatier Toulouse - LAPLACE (Laboratoire Plasma et Conversion d'Energie)

Åsgard: 14th to 18th of November 2011

List of the visited Norwegian institutions:

- Horten:
 - **HiVE** (Department of Micro and Nano Systems Technology)
Contacts: Nils Høivik and Henrik Jacobsen
- Oslo:
 - **IFE** (Solar Cell Laboratory)
Contacts: Erik Stensrud Marstein and Arve Holt
 - **RCN** (Research Council of Norway)
Contacts: Åse Marie Hundere, Vidar Skagestad and Randi Aarekol Basmadjian (FFN)
 - **Institut français**
Conference « Mercredis de la Science » in French: « Les semi-conducteurs organiques : vers une nouvelle électronique. »
 - **SINTEF** (Microsystems and Nanotechnology - MiNaLab)
Contact: Fabrice Lapique
 - **UiO** (MiNaLab)
Contact: Bengt Gunnar Svensson and Edouard Monakhov

7. Valérie MICARD

Professor

Biochemistry - Health and nutrition

Montpellier SupAgro - IATE (Ingénierie des Agropolymères et Technologies Emergentes)

Åsgard: 5th to 9th of December 2011

List of the visited Norwegian institutions:

- Stavanger:

- **Institut français de Stavanger**

- Contact: Marc Ordaz

- **Måltidets Hus / NCE Culinology**

- Contact: Helge Bergslien

- Oslo:

- **Institut français**

- Conference « Mercredis de la Science » in French: « Construire l'aliment de demain : quand les Sciences Alimentaires rencontrent la Nutrition Humaine. »

- **RCN** (Research Council of Norway)

- Contacts: Kirsti Anker-Nilsen and Randi Aarekol Basmadjian (FFN)

- **Tine R&D**

- Contact: Stein-Erik Birkeland

- Ås:

- **Nofima Mat**

- Contacts: Pernille Bårdseth, Einar Risvik, Kristine Naterstad, Stefan Sahlström and Simon Ballance

THE FOUNDATION IN A NUTSHELL



FRANSK-NORSK STIFTELSE FOR
VITENSKAPELIG OG TEKNISK FORSKNING OG INDUSTRIELL UTVIKLING (FNS)

FONDATION FRANCO-NORVEGIENNE
POUR LA RECHERCHE SCIENTIFIQUE ET TECHNIQUE ET LE DEVELOPPEMENT INDUSTRIEL (FFN)

ABOUT THE FOUNDATION

1983: Agreement between the French and Norwegian government to promote French-Norwegian cooperation within scientific and technical research and industrial development. To organize this cooperation on a practical level, the **French-Norwegian Foundation for Scientific and Technical Research and Industrial Development (FNS)** was created.

1986: Signature of the Troll Agreement: supply of important quantities of natural gas from Norway to France for decades. The **Foundation** becomes an instrument to promote industrial and scientific relations between the two countries, and a yearly budget is allocated.

Since 1986, The Foundation promotes long-lasting French-Norwegian cooperation through the financing of joint R&D projects in which both industry and research institutes and universities are involved with the aim of creating cooperation lasting beyond the project-period. SMEs are prioritized.

The Foundation organizes or supports workshops and seminars with the purpose of creating new projects in prioritised areas in cooperation with interested parties.

GOAL AND ROLE OF THE FOUNDATION

- Promote long-lasting French-Norwegian co-operation through joint R&D projects

Main objectives

- Support joint R & D projects where French and Norwegian industrial firms are main partners
- R & D projects have to lead to processes and products with industrial applications
- Connect French and Norwegian industry partners
- Organize and support workshops and seminars
- Promote cooperation between French and Norwegian researchers and industrialists

Research priorities

- aquaculture and food industry
- biotechnology and biomedical industry
- informatics and information technology
- environmental technologies and energy
- marine science and technology
- material science and technology
- oil and gas exploration and production



FRANSK-NORSK STIFTELSE FOR
VITENSKAPELIG OG TEKNISK FORSKNING OG INDUSTRIELL UTVIKLING (FNS)

FONDATION FRANCO-NORVEGIENNE
POUR LA RECHERCHE SCIENTIFIQUE ET TECHNIQUE ET LE DEVELOPPEMENT INDUSTRIEL (FFN)

One common project – funding from two countries

Requirements for proposal and project funding are described on the web-pages of the Foundation. Applications should be submitted before April 1 and October 1 to the Secretariats in both countries. The Board has two meetings a year (May and November).

FUNDING IN NORWAY

The Norwegian part of the Foundation receives an annual budget from the Ministry of Trade and Industry.

A Norwegian company participating in a project **receives grants directly** from the Foundation. Grants to Norwegian companies can be up to 50.000 €/per year, or 150.000 € in total for two/three years.

The Foundation also supports bilateral seminars and exchange of specialists between France and Norway (Åsgard-program).

More information:

<http://www.forskningsradet.no/fns>

Contact:

Randi **AAREKOL BASMADJIAN**
French-Norwegian Foundation
Norwegian Research Council
Stensberggata 26, 0131 OSLO
Phone (+47) 98 22 35 63
rab@rcn.no

FUNDING IN FRANCE

No funding can be obtained directly from the Foundation so the French applicant involved in a proposal has to apply for public funding to relevant agencies, such as Agence Nationale pour la Recherche (ANR), OSEO, ADEME, or specific public funding organisms. The French secretariat will assist the public or/and private research laboratories and the French companies involved in an application to obtain such funding. Grants to French Partners are in general of about the same size as the Norwegian grants from the Foundation.

More information: <http://www.ffn-fns.fr/>

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roxana.madec@ifpen.fr

ACCOUNT REPORT 2011

FNS / FFN (France and Norway)
Income and expenditure account (NOK)
1.1. - 31.12.2011

	2011			2010		
	France	Norway	Total	France	Norway	Total
Income:						
Governmental funding Secretariat	160 000	250 000	410 000	168 000	250 000	418 000
Gouvernemental funding Projects* 1)	3 348 808	2 885 556	6 234 364	4 446 312	3 061 442	7 507 754
Governmental project funding (through FFN)	200 000	0	200 000	160 000	0	160 000
Eureka / The Research Council of Norway**		195 000	195 000	0	300 000	300 000
Seminars	80 000		80 000	0	0	0
Member fees	140 800	80 400	221 200	140 800	90 200	231 000
Total Income	3 929 608	3 410 956	7 340 564	4 915 112	3 701 642	8 616 754
Expenditures:						
Administration and.Board meetings	121 704	139 070	260 774	208 512	285 937	494 449
Governmental project funding *	3 348 808	2 994 072	6 342 880	4 446 312	3 982 124	8 428 436
Governmental project funding (through FFN)	284 000	0	284 000	124 000	0	124 000
Seminars	70 672	556 568	627 240	189 307	281 047	470 354
Total Expenditures	3 825 184	3 689 710	7 514 894	4 968 131	4 549 108	9 517 239
Finance:						
Plus values SICAV BNP - Paris	10 128	0	10 128	3 864	0	3 864
Bank interest	0	150 186	150 186	0	165 625	165 625
Bank interest paid to France***	0	0	0	0		
Bank costs	-1 920	0	-1 920	-1 752		-1 752
Total	8 208	150 186	158 394	2 112	165 625	167 737
Result	112 632	-128 568	-15 936	-50 907	-681 841	-732 748

Exchange rate: 1€ = 8 NOK

*In France Governmental funding is, more often than not, paid directly to project partners

** Eureka-approved projects approved before 2009 get 30% funded from the Research Council as an additional income

***Accumulated interest on capital reserve paid to France

1) In addition some other contributions and reimbursements from projects

FNS / FFN (France and Norway)
Balance sheet as per 31.12.2011 (NOK)

	2011			2010		
	France	Norway	Total	France	Norway	Total
Assets:						
Bank deposit BNP Paris (Secretariat)	616 112	0	616 112	569 194	0	569 194
SICAV (BNP - Paris Secretariat)	1 159 903	0	1 159 903	1 145 905	0	1 145 905
Accounts receivable	0	0	0	0	0	0
Bank deposit Norway	0	4 519 188	4 519 188	0	3 836 154	3 836 154
Total Assets	1 776 015	4 519 188	6 295 203	1 715 099	3 836 154	5 551 253
Liabilities						
Secretariat reserve	1 663 383	*	1 663 383	1 505 168	*	1 505 168
Fixed Capital (France and Norway)	0	1 000 000	1 000 000	0	1 000 000	1 000 000
Retained Equity	0	2 108 879	2 108 879	0	2 790 720	2 790 720
Result	112 632	-128 568	-15 936	209 931	-681 841	-471 910
Short term liability	0	1 538 878	1 538 878	0	727 275	727 275
Total Liabilities	1 776 015	4 519 189	6 295 204	1 715 099	3 836 154	5 551 253

* included in Retained Equity

Exchange rate: 1€ = 8 NOK