



report 2013







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PROXECTO COFINANCIADO



XUNTA DE GALICIA
CONSELLERÍA DE
ECONOMÍA E INDUSTRIA



FONDO EUROPEO DE
DESENVOLVEMENTO
REGIONAL
"Unha maneira de facer Europa"

UNIÓN EUROPEA

Introduction by the President

Competitiveness, market differentiation, the commitment to quality and continuous improvement are complicated challenges to face, especially in difficult times such as these we are facing. Due to this, we are proud, even further, presenting the results of the past year as the figures reflected are, on the one hand a true expression of the strong and growing commitment of the processing industry of the fishery and aquaculture products to improve quality and R&D+i as a key tool to achieve greater competitiveness, and moreover endorse the ANFACO-CECOPESCA position as the technological center of reference for the sector.

Data as an overall growth of 18%, an increase of private contracting for technology services and R&D+i of 22%, the diversification of the

center's activities to other food sectors and the growing number of international clients indicate that both the industrial sector and the Technology Center are on the right path, that of commitment to innovation and internationalization as a guarantor of future. This further indicates that ANFACO-CECOPESCA has an optimal orientation towards the needs of the sector; However, despite positive data as flatly as this past 2013, our philosophy is to grow, improve and anticipate the needs of businesses. Thus, far from relaxing, will we continue working with even more boldness and enthusiasm.

D. Jesús M. Alonso Escurís
President of ANFACO-CECOPESCA

Presentation of the Secretary General

The industrial sector needs to invest in process improvement, product differentiation based on innovation as a lever for change, and internationalization and consolidation into new markets. The main mission of ANFACO-CECOPESCA Technology Center is to provide tools that can add value to the products and / or processes of the companies of the fish and aquaculture transformation sector. For this, ANFACO-CECOPESCA have a human team composed of 75% of doctors, engineers, and graduates, who are in high job stability (83% of permanent contracts); Also, over the past year have been invested € 1.6M in acquiring new technological scientific equipment to bring the best means at the disposal of companies.

To assess the optimum orientation of the technology offered by the center, we must look at the demand of our services from the industrial sector fabric. The development of 56 R&D projects, resulting in 90 direct contracting with businesses, the significant growth in the three major technologi-

cal areas, analytical services, technical assistance and consulting and especially in the field of R&D, and the sustained growth in the number of customers in the recent years at national and international level, with a presence in 18 countries, are data that clearly indicate we are on the right way.

All these achievements are accomplished through close fellowship with the industrial sector, since for these challenges has been received 74% of private income and without not competitive public funding, which demonstrates even further the quality and demand of the activities carried out by ANFACO-CECOPESCA in the marine, food processing.

D. Juan Manuel Vieites Baptista de Sousa
Secretary General of ANFACO-CECOPESCA

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| SECRETARY GENERAL | ► D. JUAN MANUEL VIEITES BAPTISTA DE SOUSA ANFACO-CECOPESCA |

The background of the entire page is a photograph of a fish, likely a cod, swimming underwater. The fish is shown in profile, facing left, with its head and upper body visible. The water is a clear, vibrant blue. The fish has a brownish-grey head with a prominent eye and a small, pinkish tongue. Its body is covered in a pattern of dark spots and streaks. The lighting is bright, creating a sense of depth and clarity.

CENTRE

EXCELLENCE

Marine-Industry **Complex**

ACTIVITY 2013

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► 01 INVESTMENTS

1.6 M € of investment in 2013
in new scientific-technological
equipment.



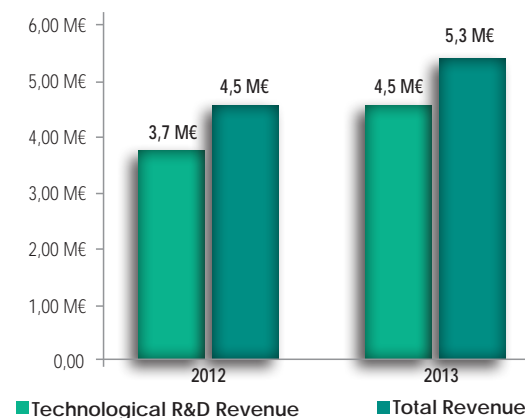
Located at the University Campus of Vigo, **ANFACO-CECOPESCA** has a plot of 6,000 m² in which are two buildings, one administrative and other scientific and technical, and a pilot plant, where activities of preindustrial simulation, modeling, design, optimization and control of processes, development of prototypes of industrial machinery and new products are carried out as well as education and training tasks.

► 02 ECONOMIC DATA



The close collaboration of ANFACO-CECOPESCA with companies and the perfect alignment of their lines of work with the needs of the associated marine and food processing industrial sector is reflected in the **continuous growth** experienced by the **technology services and R&D&i** revenue in recent years.

- **5,3 M€** total revenue and **4,5 M€** revenue from Technological and R&D&i services.
- Annual increase of **18%** of total revenues and **22%** of revenues technological services and R&D&i.
- **85%** of revenue from Technological and R&D&i services.
- **74%** of revenue from private funding.
- **0%** of non-competitive public funding.



► 03 HUMAN RESOURCES

80

► MULTIDISCIPLINARY TEAM:

chemists, biologists, veterinarians, engineers, marine sciences, pharmaceutical ...

► HIGH QUALIFIED:

75% university graduates.

► RESEARCH EXCELLENCE:

Researchers and technicians 70%, with 25% Ph-D.

► EMPLOYMENT CREATION:

annual increase of 4% in researchers and technologists.

PROFESIONALS

► **EMPLOYMENT STABILITY:** 83% professionals with permanent contract.

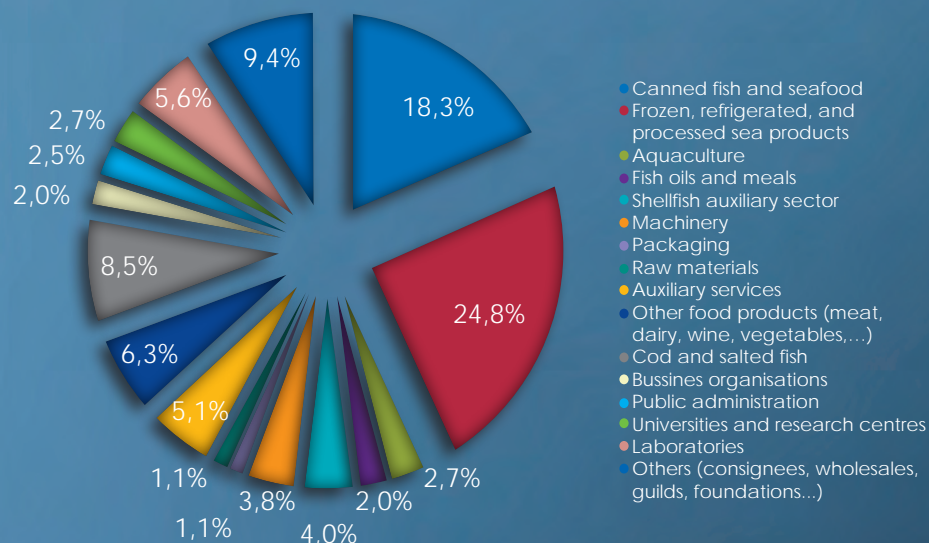
► **TRAINING:** training and professional practices to 45 fellows and interns.



► 04 REPRESENTATIVENESS

212

NATIONAL AND INTERNATIONAL
ASSOCIATED COMPANIES
whose global turnover amounted
to 6.000M€ and generate more
than 25.000 jobs.



447

CLIENTS technology and R&D&i services
belonging to different sectors of marine and food
industry.

413 national clients.

34 international clients from 18 countries.

5% growth compared to 2012.

► 05 R&D AREA: RESEARCH LINES

► FOOD AND HEALTH

Health, nutrition and well-being.

Research aimed at demonstrating the health potential of fish products and the development of claim.

► PRESERVATION TECHNOLOGIES

Adaptation to today's consumer demands.

New products easier to prepare, minimally processed, healthier and at competitive prices.

► PROCESS ENGINEERING AND ENERGY EFFICIENCY

Optimization of production processes, cost reduction and development of new specific machinery.

Efficiency as a means of more environmentally and economically sustainable production.



► FOOD SAFETY

Advanced and next generation technologies applied to the analysis of emerging risks.

Ability to respond quickly and autonomously, at the service of the company.

► ENVIRONMENT AND VALORISATION OF SEAFOOD

Support to the company with environmentally responsible production.

Search for new business solutions to benefit the sustainability of the sector.

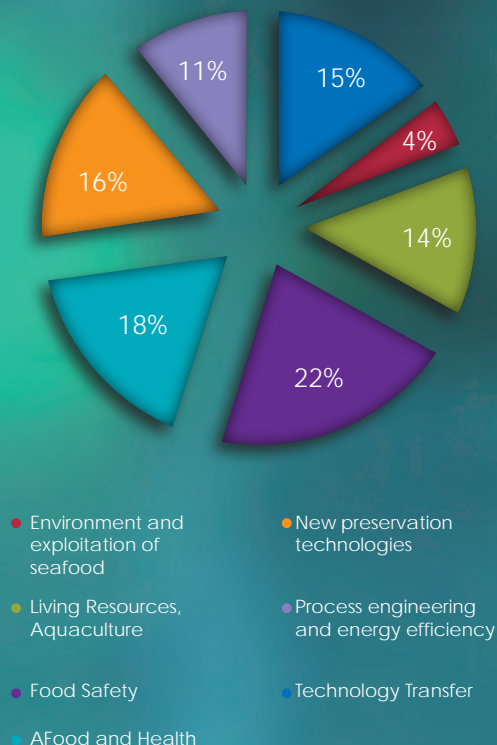
► LIVING RESOURCES, AQUACULTURE, AND MANAGEMENT OF THEIR TRACEABILITY

Improvement of aquaculture production by developing methodologies for diagnosis and control of diseases.

Authenticity and transparency in the market.

► 05 R&D AREA: **ACTIVITY 2013**

ACTION LINES OF DEVELOPED PROJECTS



Development of **56** R&D&i projects, 66% of them are under contract with companies.

90 contracts with companies.

12 international projects.

9 ININTERCONECTA projects:

- **47** companies INVOLVED
- **20,3 M€** budget.
- **2,2 M€** technological services provided by ANFACO-CECOPESCA.

► 05 R&D AREA: TECHNOLOGY TRANSFER ACTIVITY



16 scientific publications
in relevant international
journals.

Participation in **12** national
and international scientific
congresses.

Holder of **10** patents, **2** of
them submitted in 2013 on
new processing technologies.

2 doctoral thesis directed
and realization of **9**
technical conferences.

► 05 R&D AREA: KEY PROJECTS



Object:

Management of marine biotoxins in bivalve molluscs through the development of systems for the detection of toxic episodes and the development of technological processes for industrial detoxification.

Business partners:

Conservas Cerqueira S.A., Pescados Marcelinos S.L., Laboratorios CIFGA S.A., Mariscos Veiro S.L., Mariscos Malliño S.L..

Research Centres:

ANFACO-CECOPESCA, USC.



Object:

Improvement of productive process of clam and cockle through the introduction of innovations throughout the value chain (farming, pre-fat-tening, purification, processing and commercialization).

Business partners:

ADQE Systems S.L., Recursos Marinos Grovenses S.A., Aquanor S.L., Europrecis Galicia S.L., Costas y Miñán S.L., Ariema Enerxía S.L.

Research Centres:

ANFACO-CECOPESCA.



Object:

Development of new technologies to optimize the extraction, processing and tuna product development as well as the recovery of by-products.

Business partners:

Luis Calvo Sanz S.A.; Calvo Conservas S.L., Calvopesca S.A. Kinarka S.A.U., Hermanos Rodríguez Gómez S.A., J. Bouzada Ingenieros S.L.N.E., Tecingal Noroeste S.L.

Research Centres:

ANFACO-CECOPESCA.

Projects funded by



► 05 R&D AREA: KEY PROJECTS



Object:

Management of marine biotoxins in bivalve molluscs through the development of systems for the detection of toxic episodes and the development of technological processes for industrial detoxification.

Business partners:

Industrias Frigoríficas del Louro S.A.,
NanolInmunotech S.L.,
Automatismos teinco S.I.

Research Centres:

CTAG, CTAG, ANFACO-CECOPESCA,
UVIGO.



Object:

Development of a solar energy system that achieves temperatures and flow rates higher than current values, so that the system can be implemented in sectors, including the food industry.

Business partners:

Instalaciones Eléctricas de
Sanxenxo S.L., Andeona Solucións
S.L., Noventia Ingenieros S.L.,
Ayco Internet S.L., Errecé
Aplicaciones, Industriales del Láser
S.L., Conservas de Cambados S.A.

Research Centres:

AIMEN, ANFACO-CECOPESCA.



Object:

Technological development for the enhancement of sea cucumber by Galician fishing and processing industry, as a strategy for finding new business solutions that revert to the sustainability of the sector.

Business partners:

Cooperativa de Armadores de Pesca
del Puerto de Vigo S.C.G., Galician
Marine Aquaculture S.L., Euroespes
Biotecnología S.A., Portomuiños
S.L., Talleres Josmar S.L.

Research Centres:

ANFACO-CECOPESCA, IEO.

Projects funded by



► 05 R&D AREA: KEY PROJECTS



Object:

Developing a system of accelerated purification which allows to eliminate okadaic acid toxins by physical adsorption mechanisms, high pressure technology and nanotechnology.

Business partners:

Depuradora de Moluscos La Sirena S.L., Caolines de Vimianzo S.A.U., Cientysol S.L., Peloides Termaleas S.L.

Research Centres:

ANFACO-CECOPESCA, USC.



eficiencia en congelado

Object:

Optimizing distribution and transportation of fishery products through improved temperature and time monitoring and through the use of an hydrogen fuel cell combined with controlled atmosphere.

Business partners:

Ariema Energía S.L., Pescados Rubén S.L., Imatia Innovation S.L.

Research Centres:

ANFACO-CECOPESCA, UVIGO.

NEWGALIMENTOS

Object:

Development of novel foods with differentiated quality to add value to raw materials and add value to the co-products of Galician food industry.

Business partners:

Feiraco Lácteos S.L., Agrupación de Cooperativas Lácteas S.L., Queixerías Bama S.L., Queizúar S.L., Nanoimmunotech S.L., Mejillones Nidal S.L., Cabomar Congelados S.A.

Research Centres:

ANFACO-CECOPESCA, USC, UVIGO, CTC.

Projects funded by



FONDO EUROPEO DE DESARROLLO REGIONAL
"Lucha contra la pobreza"



XUNTA DE GALICIA
CONSELLERÍA DE ECONOMÍA E INDUSTRIA

Project funded by



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CONSELLERÍA DE ECONOMÍA E INDUSTRIA

► 06 TECHNICAL ASSISTANCE AND CONSULTANCY AREA

Product innovation and optimization of processes

Food Safety and audit

Consultancy and specialized services

Environmental sustainability

Training and foreign cooperation activities

SERVICES

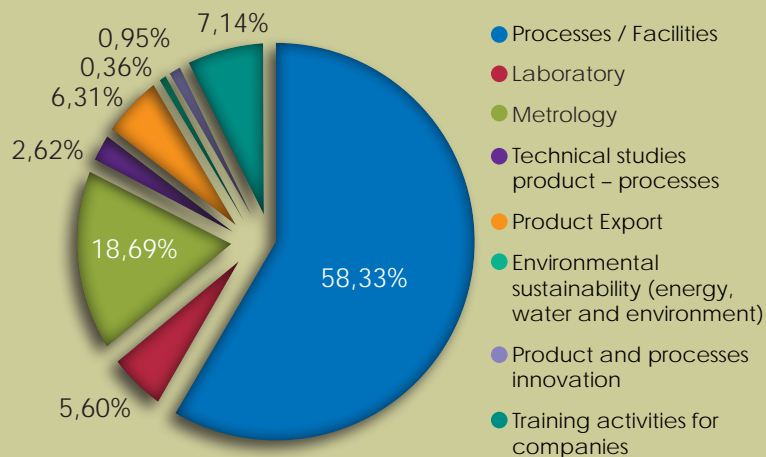
► 06 TECHNICAL ASSISTANCE AND CONSULTANCY AREA

- Coordination of the Master's Degree in Science and preservation technology of fish products.
- **1.238** technical assistance activities managed in 2013.
- Resolution of **2.273** companies enquiries.
- **22** actions of specific training for the industry with 70 participating companies.
- Coordination of **2** National Training Programs:

Multi-Regional Training Programme - MAGRAMA.
Empleaverde Programme - Biodiversidad Foundation (Aquafish Project).



Technical Assistance with companies 2013



► 06 TECHNICAL ASSISTANCE AND CONSULTANCY AREA

FOREIGN COOPERATION ACTIONS

Teaching of 20 courses on board the Fishing Cooperation Vessel "Intermares".

Development of 11 cooperation activities in 17 countries with the Spanish Agency for International Cooperation for Development (AECID).

Implementation of 8 cooperation projects for foreign development with the Regional Government of Galicia.

34 activities for 28 countries within the Plans of Action for the Quality of Fish Products (MAGRAMA).

44 activities providing technical assistance to companies, associations and appropriate authorities in other countries to support fishing development.



Awardees 2 international tenders:

- **BTFS Programme** (DG SANCO).
- Design of **3 laboratories and training in KENYA**.

118

Cooperation actions in **36** countries.

More than 15 years working in Foreign Cooperation activities in order to promote the social, economic, scientific, technological and / or commercial development of the fisheries and aquaculture sector.






► 07 ANALYTICAL TECHNOLOGY AREA



Reference laboratories accredited by **ENAC** according to the **UNE-EN ISO / IEC 17025**.

The analytical activity comprising **physical and chemical**, **microbiological**, **sensory** analysis tests and **molecular biology** in food, feed and water, and physical and chemical testing of **packaging**.



ANFACO-CECOPESCA is the only laboratory accredited by ENAC according to NT-18 by category of assay detection of species and / or taxonomic groups using real time PCR with sequencing confirmation with a List Accreditation Under Test (**LEBA**), got category in 2013 in addition to the essay category identification of species or genera of fish, cephalopods, mussels and meat by DNA sequencing and phylogenetic analysis longer available as a flexible scope (LEBA) since 2011.



► 07 ANALYTICAL TECHNOLOGY AREA

- **18.821** managed samples.
- **287** laboratory customer.
- **22%** annual increase in turnover.
- **626** determinations and **151** ENAC procedures offered.

Number of procedures
ENAC / matrix

