



BE-FAIR - Benign and environmentally friendly fish processing practices to provide added value and innovative solutions for a responsible and sustainable management of fisheries.

LIFE05 ENV/E/000267

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Project description:

Background

The FAO estimates that around of 27 million tonnes of undesired by-catch from fishing fleets are thrown back into the sea annually. This means that more than a third of the fish volume caught every year is wasted and such large amounts of organic waste thrown into the sea have severe adverse effects on the ecological equilibrium of marine communities.

Objectives

The project's main objective focused on developing new approaches for reusing fishing industry waste and by-catch. This was based on piloting innovative integrated waste management and processing practices, both on-board fishing vessels and also on shore in a dedicated test plant. The latter aimed to demonstrate waste processing approaches capable of creating adding value opportunities for food and pharmaceutical industries from fishing by-catches.

Results

The project successfully identified methods suitable for reusing by-catch waste matter within Atlantic fishing fleets. This included developing new Best Practices and management solutions for separation, classification, handling, conservation and pre-treatment of by-product. Different Best Practices were defined for long-liners, trawlers, fish auctions, and the food processing industry. These included five new waste management processes and four different prototypes

covering on-board storage/conservation solutions as well new shore-based recycling and valorisation processing lines.

The new technologies proved both technically and economically viable in terms of converting by-catch matter into commercially valuable products. Key markets were identified for Gelatine from fish skins, Chondroitin sulfate from cartilage, fish oil and Hiarulonic acid.

Such innovative outcomes offer good transferability for other EU fishing fleets and the project's Manual of Good Practices (supported by a DVD) can be used to help adapt fishing practices towards more sustainable production systems. Participation of French and Portuguese partners in the LIFE project has helped to further facilitate wider EU uptake of the project results, which will become increasingly important tools to help fishing sectors contribute to aspects of the Marine Strategy Framework Directive, especially those relating to integrated approaches for the sustainable management and governance of marine resources.

Furthermore, new regulatory frameworks under the Common Fisheries policy are also expected to place added emphasis on reducing or eliminating discards or bi-catches from EU fishing fleets. This LIFE's project's pioneering work can be seen to have made important contributions towards associated policy objectives and a follow-up LIFE + initiative (LIFE08 ENV/E/000119) is building on these achievements by identifying complementary methods for reducing and recycling by-catches. These involve improving knowledge about fish behaviour in order to help the fisheries sector better target their catches and other work on LIFE + project will clarify new valorisation opportunities for different types of marine species that are currently treated as waste.

Further information on the project can be found in the project's layman report and After-LIFE Communication Plan (see "Read more" section).

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Environmental issues addressed:

Themes

Waste - Bio-waste (including food waste)
Industry-Production - Agriculture - Forestry
Waste - Industrial waste

Keywords

fishing industry, industrial waste, organic waste

Target EU Legislation

- Waste
- Directive 75/442/EEC - "Waste framework directive" (15.07.1975)

Natura 2000 sites

Not applicable

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Beneficiaries:

Coordinator	Consejo Superior de Investigaciones Científicas - Instituto de Investigaciones Marinas
Type of organisation	Research institution
Description	The Consejo Superior de Investigaciones Científicas (CSIC) is Spain's largest public research organisation. Its Institute for Marine Research (IIM) undertakes studies in areas such as process engineering, food biochemistry, as well as waste recycling and valorisation.
Partners	CETMAR-Centro Tecnológico del Mar Fundación Cetmar, Spain ESPADEROS DEL ATLÁNTICO, Spain HNOS. RODRÍGUEZ GÓMEZ S.L., Spain PEIXESPORT S.L., Spain AUTORIDAD PORTUARIA DE VIGO, Spain IPIMAR-Instituto de Investigaçã o das Pescas e do Mar, Portugal IFREMER-Institut Français de Recherche pour l'Exploitation de la Mer, France

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Administrative data:

Project reference	LIFE05 ENV/E/000267
Duration	15-NOV-2005 to 15-NOV -2008
Total budget	1,858,552.00 €
EU contribution	909,248.00 €
Project location	Galicia(España) Pays de la Loire(France) Lisboa e vale do Tejo(Portugal)

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Read more:

Leaflet	Title: Prototype for fish wastes compaction and wastewaters treatment on board (1.8 MB) No of pages: 1
Leaflet	Title: Prototype for gelatine production from fish skins (1.7 MB) No of pages: 1
Leaflet	Title: Prototype for chondroitin sulphate (CS) production from fish cartilage (1.5 MB) No of pages: 1
Leaflet	Title: Prototype for obtaining fish oils (1.5 MB) No of pages: 1
Leaflet	Title: Project's leaflet (EN) No of pages: 2
Project web site	Project's website (ES/EN/FR/GA/PT)
Publication: After-LIFE Communication Plan	Title: After-LIFE Communication Plan (EN) Year: 2008 No of pages: 2
Publication: Article-Paper	Title: Towards an Integral and Efficient Management, Processing and Valorisation Strategy for Wastes, Discards and By-Catches from Fisheries: the BE-FAIR Project (Extended abstract) Author: Alonso Antonio A. Editor: IIM-CSIC, CETMAR, ESP, HRG, PXX, APV, IPIMAR, IFRE No of pages: 2
Publication: Guidelines-Manual	Title: Manual de boas práticas para a recuperação, manuseamento e classificação de desperdícios e subprodutos nas frotas de pesca e lotas (361 KB) Year: 2006 Editor: Instituto de Investigaciones Marinas - Consejo Sup No of pages: 42
Publication: Guidelines-Manual	Title: Manuel de bonnes pratiques pour la récupération, la manipulation et la classification des écarts et des sous-produits de la pêche à bord et dans les criées" (341 KB) Year: 2006 Editor: Instituto de Investigaciones Marinas - Consejo Sup No of pages: 39
Publication: Guidelines-Manual	Title: Benign and Environmentally Friendly Fish Processing Practices to Provide Added Value and Innovative Solutions for a Responsible and Sustainable Management of Fisheries Good Practice Manual For Recovery, Handling and Classification of Discards and By-Products on Fishing Fleets and Fish Auctions. Year: 2006 Editor: Instituto de Investigaciones Marinas - Consejo Sup No of pages: 43
Publication: Layman report	Title: Layman report (EN) Year: 2008 No of pages: 26
Video link	"Programa Ciencia Nosa, TVG, 02/03/2008" (8')

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