



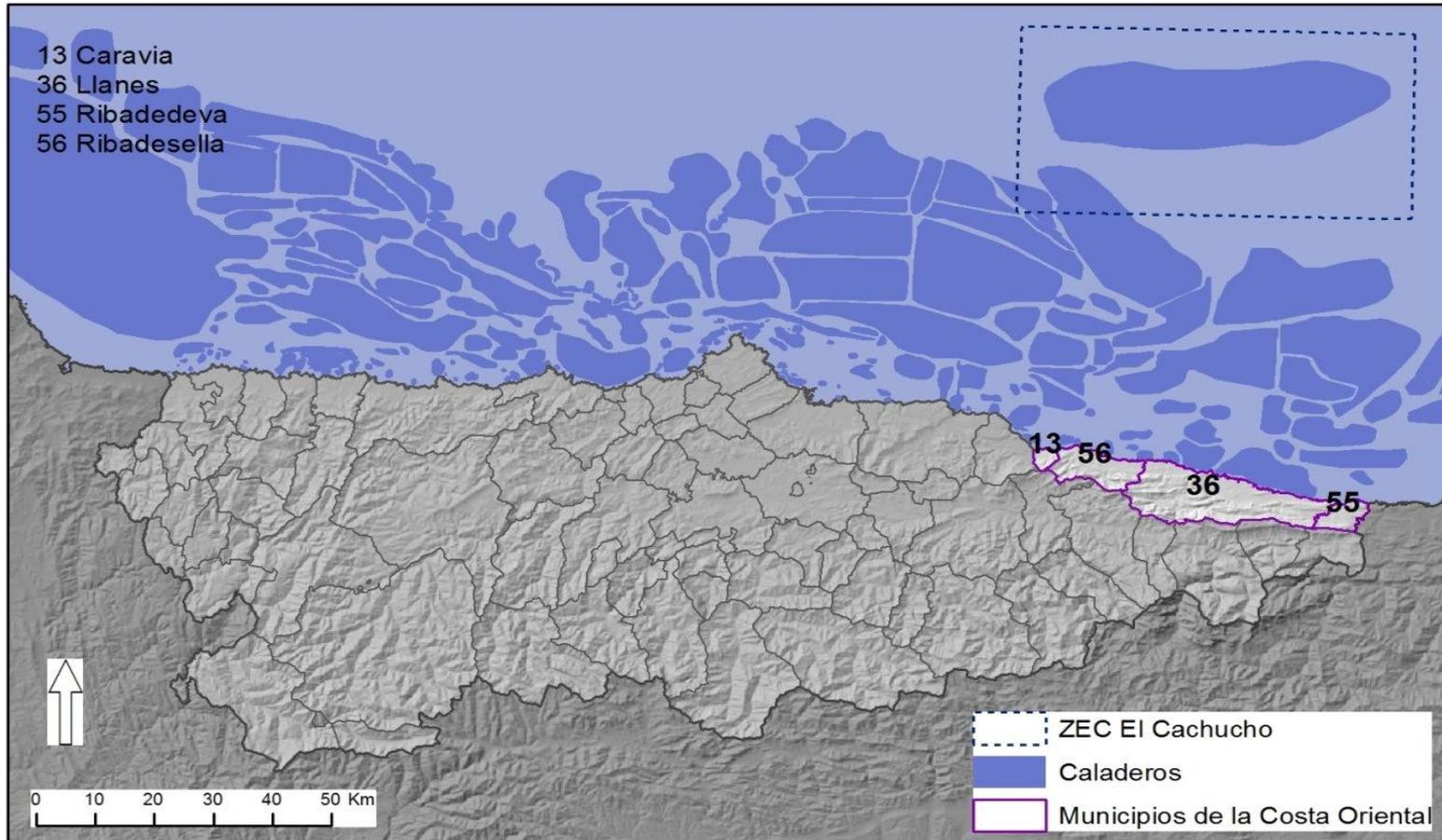
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# “Moving towards renewables”

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# The Asturian atlantic coast, in the Cantabrian Sea



# Eastern Asturias FLAG, Spain



# Environmental context of the “Eastern coast of Asturias”

**Eastern Asturias FLAG** is an area, known as the “Picos de Europa coast”, formed by four municipalities of about 22,000 inhabitants, that includes **three local fishing communities**.

It covers an area of 396.98 Km<sup>2</sup>, stretching 108 km along a very well preserved coastline, of which **93.3% are protected sites**.

This **important natural heritage** includes several protected sites, that are part of the Nature 2000 Network, as well as of the Regional Network of Protected Natural sites.

# A fishermen's Guild in a Natura 2000 site



# Tinamayor River Estuary

Site of Community Importance (SCI),  
Special Protection Areas for Birds (SPA)

<http://jenaroarturosuarezprendes.webs.tl>



# Nature 2000 Network (EU Birds and Habitats Directives)

Nature 2000 is an European network of **Sites of Community Importance (SCI)** declared **Special Areas of Conservation (SAC)** and **Special Protection Areas for Birds (SPA)**, that covers 18% of the EU's land mass and 6% of its marine territory.

The purpose of this network is to ensure the natural values of these places in the long term and **to guarantee the sustainability of the activities that take place in them.**

**EU Birds Directives** defines the guidelines for the protection and management of bird species living in the wild, focusing first and foremost on the impact of human activities (hunting, disturbance, etc.)

**EU Habitats Directives** requires Member States to maintain or re-establish protected habitats and species at a “favorable conservation status”.

In order to strengthen application of these biodiversity conservation measures Member States **have to implement a program of measures**, as a vehicle for community action for the marine environment in “European waters”.

# The role of Eastern Asturias FLAG in environmental protection

FLAGS can help communicate Nature 2000 directives to local stakeholders and demonstrate the advantages and benefits to the community.

A way to protect ecosystems is to educate people about our environmental resources and the convenience and importance of conservation and protection of our Birds and Habitats for community interest.

Nature 2000 areas can increase the value of local products and services and can improve the use and productivity of sectors associated with the marine environment, like fishing and tourism.

Eastern Asturias FLAG is playing a role in sustainable development, working in local community awareness-raising activities helping to maintain a good environmental status of our protected areas and marine waters.

Our flag works with fishing communities to raise awareness of the advantages and benefits of the use of renewable energies and the preservation of our protected areas.

# Cofradía de Pescadores de Bustio (Fishing activities in a protected area)



# “Cofradía” energy demand

The “Cofradia” is a fishermen non-profit organization formed by the workers of the 9 craft boats that operate from the port of Bustio.

It manages port fishing installations and offers services of auction of the fish landed, cold storage of unsold fish, ice making and supply for the maintenance of the fish, sale and/or storage of bait and maintenance of shellfish (crustaceans) in a closed circuit nursery.

Electrical consumption is not too high and its intensity is similar throughout the year, fluctuating only during the summer because of the shellfish nursery and ice making installation.

The Cofradía always wanted to undertake a solar panel installation but it couldn't do it because it represents an important expense, especially the cost of storage batteries.

# The “Cofradía” environmental commitment to ecosystems protection

Located in a protected area of Nature 2000 Network where applies EU Birds and Habitats directives, the Cofradía is committed with the maintenance of this natural environment.

The Cofradía building houses the **Tinamayor River Estuary Interpretation Centre**, habilitated as a bird watching area (free entrance).

It was also committed on reducing its dependence on fossil fuels and on utilising renewable energy resources instead.

Our FLAG has helped the Cofradía to finance two investment projects to become 100% self-sufficient in renewable energy.

This projects have equipped their buildings with a solar and a wind power installation as well as storage batteries allowing that any energy surplus can be retained and used when needed.

# Tinamayor River Estuary Interpretation Centre



# 1<sup>st</sup> Project 2013 (EFF Axis 4): Solar power Installation

A solar kit of 79.2 m<sup>2</sup> of catchment surface was installed with can supply power up to 10 kW<sub>a</sub>.

Due to regulation restriction, this solar power installation had to be connected to the electrical network and limited to self-consumption of energy production.

Without energy storage capacity, this installation can only supply power to save part of the energy consumption, helping to reduce carbon footprint by 25%.

Total operation budget 36.882,13 € (EMFF: 27.661,59 € and National and Regional Funds: 9.220,54 €)

# Photovoltaic solar power Installation



# 2nd Project 2017 (EMFF): 100% self-sufficient in renewable energy

This second project completes the solar installation, to become totally self-sufficient.

Two wind turbines were installed to increase energy production, in addition to the one generated by solar panels.

Accumulating batteries were installed for the use of all the generated energy and its subsequent consumption.

The installation was completed with a biodiesel generator that would work only in adverse climate situations (no wind...)

- Total Project operation Budget was 76,351.28 € (EMFF: 64,898.59 €; Regional funds 11.452,69 €)

# Wind power installation and Storage capacity



# Bio diesel power generation



# Project results and conclusions

Despite the high cost of this investment, we believe that EU support to this type of projects can be justified for its contribution to the transformation of the fishing sector towards a low-carbon economy.

This project is an environmentally profitable investment that contribute to the sustainable development of the fishing activities in a protected natural site, reducing their carbon footprint.

It is also an economically profitable investment for a non-profit fishermen collective entity, which depends on scarce economic resources, to reduce or eliminate the costs of energy consumption of fishing activity.

This pilot projects, besides their contribution to the maintenance of the natural environment, have served as an example to promote similar investments in other fishing organizations in Asturias.

# Thank you for your attention!

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