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SOLUTIONS



RESPONSIBLE AQUACULTURE IN CIOCĂNEȘTI

Romania

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Responsible aquaculture in Ciocănești

Biodiversity is a public good, but necessities related to biodiversity are often overlooked or underestimated to the advantage of narrow economic arguments, until basic environmental conditions are undermined; thus, the vital role of biodiversity in delivering specific benefits to us all, also known as “ecosystem services”, is being compromised.

WWF chose a pilot area located in Calarasi County, in the south of Romania and set out to demonstrate how public funds can be used efficiently to stimulate sustainable economic development by supporting the integration of conservation activities that improve the quality of the environment into private operations; a win-win situation for biodiversity and business alike, with positive effects on the local community too. This is known as a Payment for Ecosystem Services (PES) scheme.



More than
20.000
migratory birds during
spring and autumn

More than
31
bird species protected
at the European level
come to the area

Characteristics of the area

Located on the Lower Danube floodplain, this pilot area occupies a total surface of 233 ha, corresponding to a fish farm with 30 water basins. Harvesting of small fish, complemented by fish production for market consumption are the main aquaculture activities.




The typical wetland environment maintained by semi-extensive aquaculture practices attracts more than 20.000 migratory birds during spring and autumn; overall, more than 31 bird species protected at European level come to the area for feeding, resting and nesting.

The natural values found in this area have been officially recognised through its inclusion in the Natura 2000 site “Ciocanesti Danube” (ROSPA0021), a Special Protection Area of 904 ha.

IDENTIFIED THREATS TO NATURAL VALUES

70%
losses from production

The threats to natural values which prompted action are as follows:

-  semi-intensive aquaculture practices, with potential pollution with nutrients from fish feeding
-  implementation of high-impact protection measures against birds, if the loss suffered by fishpond owners from cormorants and other fish eating birds becomes hard to cover
-  land use change due to the financial crisis, which has reduced availability of cash in the supply chain

Although fish farm owners in Ciocănești suffer about 70% losses from production, they are still choosing environmentally friendly methods in order to coexist with birds (e.g. audible bird scarers, only 20 ha of fish basins covered with safety nets).

The status of being a Natura 2000 site is already a powerful instrument to pursue nature conservation. However, eco-friendly voluntary actions should be encouraged and rewarded in order to ensure an enduring balance between economic and biodiversity needs¹.

Ecosystem services in the Ciocănești pilot area

Annual value of key ecosystem services individuals, communities and businesses in Ciocănești depend on²:



Type of ES	Group of ES	Description	Euro
Provisioning	Nutrition	Fish production	592,000 (3,202 €/ha)
Regulation and maintenance	Maintenance of physical, chemical, biological conditions	Carbon sequestration (reed, soil vegetation and trees)	5,856
		Carbon storage (trees)	3,550
Biodiversity maintenance		Hunting penalties	19,500 (77 €/ha)

¹ The Romanian Operational Program for Fisheries 2007-2013, funded by the European Fishery Fund, has included so-called aqua-environmental payments. However, the measure aimed at improving the quality of the environment, which could also be accessed by many fish farms similar to Ciocănești, has lacked a clear practical guide for the integration of responsible aquaculture practices into the management of fish farms.

² Based on CICES – Common International Classification on Ecosystem Services and TEEB – The Economics of Ecosystems and Biodiversity.

FROM FREE BENEFITS TO VALUED ECOSYSTEM SERVICES: AN INNOVATIVE FINANCING MECHANISM FOR NATURE CONSERVATION

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The Payments for Ecosystem Services scheme has been developed by WWF in Ciocănești with the specific goal to secure financial resources for the management of vegetation and water in the fish farm basins that lead to an improvement in the quality of the environment that is so important for birds.

Generally, within the framework of public funds, fishpond managers implement measures contributing to biodiversity conservation and measures with positive impact on water quality on a voluntary basis; they receive compensations for doing so, on the basis of a measurement of progress against baseline indicators.

As an innovative conservation mechanism, the scheme goes beyond the compensation principle for losses of income, to monitor effective maintenance of biodiversity related values.

PES
=
going beyond
the compensation
principle










MEASURES FUNDED UNDER THE PES SCHEME

Improving the QUALITY OF ENVIRONMENT and business practices

WWF's mission is to build a future where humans live in harmony with nature. To achieve that, the **continuous balance between conservation efforts and the socio-economic needs of people** in the targeted areas has to be taken into consideration.

Particularly in the case of Ciocănești, the payments for ecosystem services scheme is more than a conservation initiative: public funds are mobilised to support and stimulate the undertaking of management practices that improve the quality of the environment and to prevent its further degradation from non-responsible aquaculture practices³, while ensuring business sustainability in the long term.

The conservation activities eligible for funding under the scheme are as follows:

-  reduction of fish feed (fodder – grain) to ensure better water quality and healthier fish
-  creation of a non-fragmented area covered by reed to ensure better quality of water and to improve the environment for birds nesting
-  maintenance of reed after the birds breeding season (with non-fragmented areas and/or waterholes in reed) to improve the environment for birds nesting and to reduce GHG emissions
-  flooding of unused basins and stocking with non-commercial fish species to ensure food for birds and decrease the pressure of ichthyophagous bird species on commercial fish basins
-  retaining water and fish in commercial basins between January-April to ensure food for birds during the winter

³ E.g. burning of reed, shooting of birds.

The logic

Practices / Scenario	Good practices are not in place	Basic legal requirements are met	Beyond basic good aquaculture practices
Business as usual	<i>No payment is granted</i>		
Natura 2000 requirements		<i>Compensation for losses are granted according to legislative provisions</i>	
Responsible aquaculture			<i>Incentive payments or PES are granted</i>

The numbers

Practices / Scenario	Good practices are not in place	Basic legal requirements are met	Beyond basic good aquaculture practices
Business as usual	<i>0</i>		
Natura 2000 requirements		<i>190 Euro/ha/year (up to 35% loss of income)</i>	
		<i>237 Euro/ha/year (up to 50% loss of income)</i>	
Responsible aquaculture			<i>Between 60 and 6939 Euro/ha/year, depending on how measures are combined.</i>

THE ADDED-VALUE OF THE PES SCHEME

Creating a model of SUSTAINABLE BUSINESS

The payments for ecosystem services scheme pertains to a wider vision for fish farm areas along the Lower Danube, under which Ciocănești is officially recognised as a positive case study and a model of sustainable business development. The value of the scheme comes not only from the wide range of benefits it generates, but also from its **potential to be replicated in similar areas with important natural capital** that can be lost without a long term view translated into integrated policies and supported by proper investment, tailored to preserve it.

The integration of additional funding streams should enhance the impact of the scheme, both in terms of the complexity of specific conservation measures and a diversification of farm activities. This means that opportunities for a private scheme are also explored, such as the **development of ecotourism activities** (e.g. birdwatching).

HOW CAN YOU GET INVOLVED?

There are several ways in which individuals, companies, and public authorities can get involved and contribute to the scheme, helping to achieve the vision described above, and they do not only encompass financial aid.

For detailed information and personalised contribution solutions, you are invited to contact the project team (contact details are provided on the back cover).

LOCATION OF THE CIOCĂNEȘTI PILOT AREA



This case study was prepared as part of the project “Promoting payments for ecosystem services and related sustainable financing schemes in the Danube basin”. This project promotes and supports land managers who help us sustain the benefits that we all get from nature. The project is implemented by the WWF Danube-Carpathian Programme with the financial support of the GEF through UNEP and the European Commission. Implementation period: 2009-2014.

WWF in numbers

100%
RECYCLED



1961

WWF was founded
in 1961

+100

WWF is in over
100 countries,
on 6 continents



+5M

WWF has over 5 million
supporters

+5,000

WWF has over
5,000 staff
worldwide



Why we are here

To stop the degradation of the planet's natural environment and
to build a future in which humans live in harmony and nature.

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