Aquaculture in FARNET work

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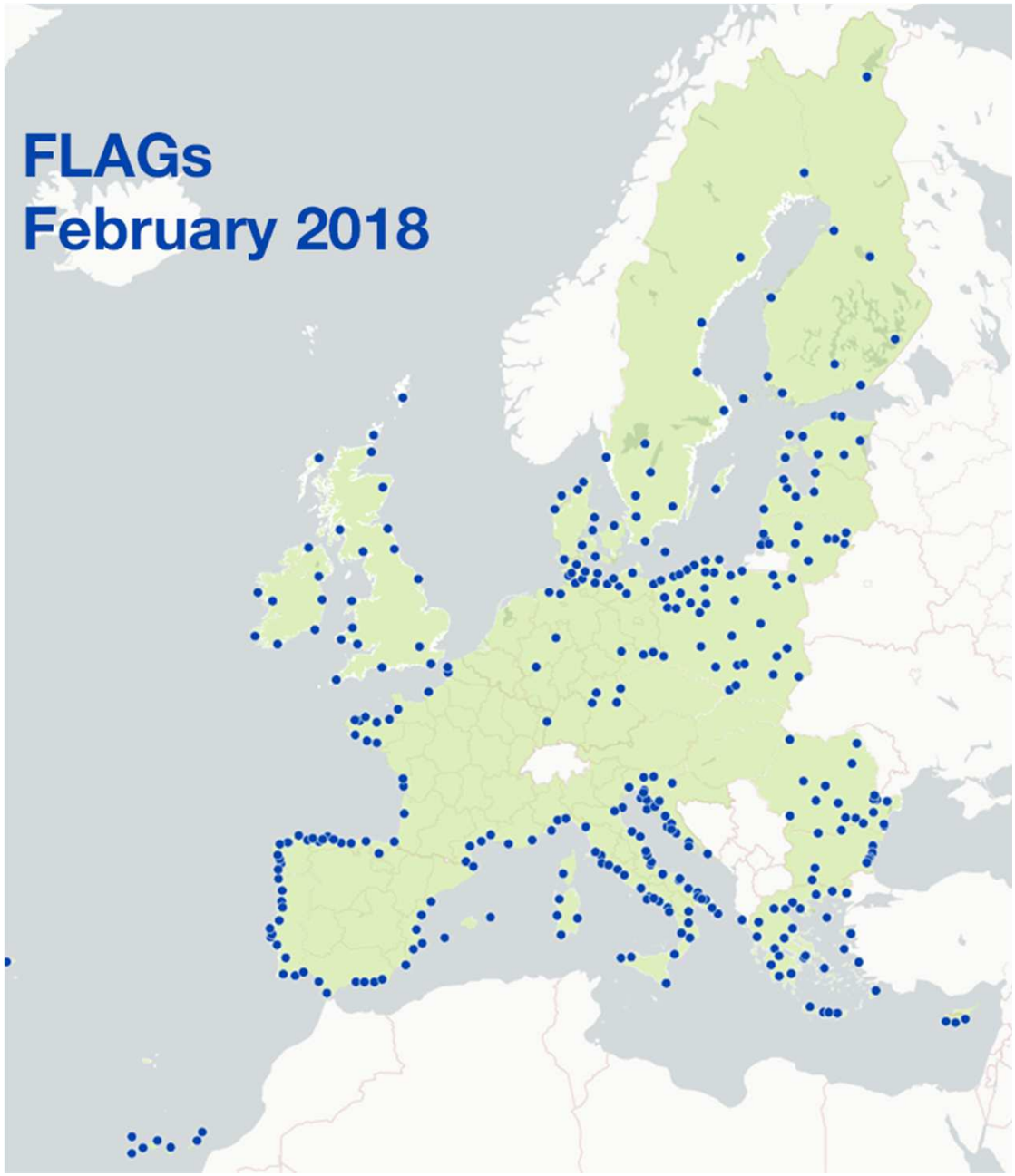
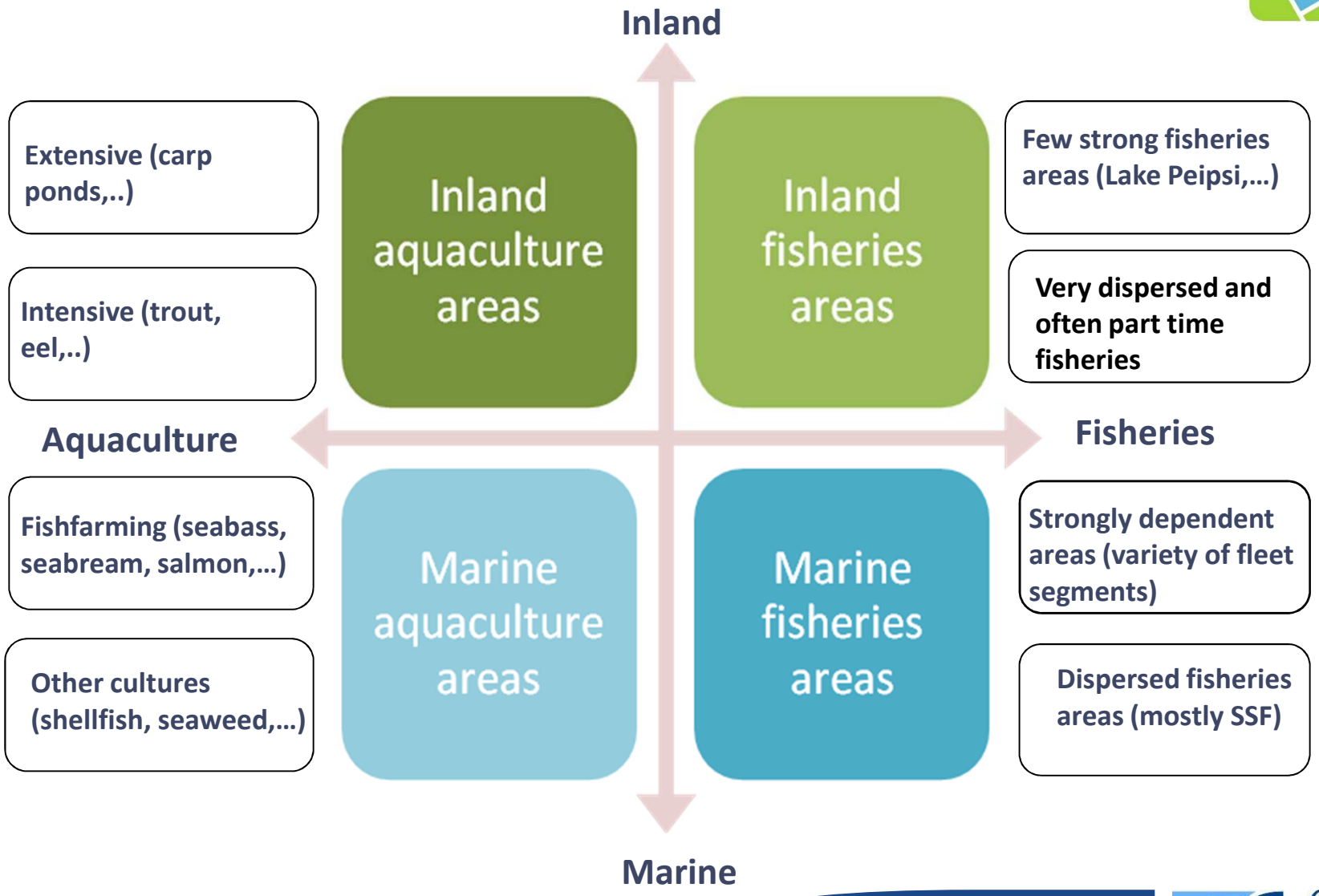
CLLD overview

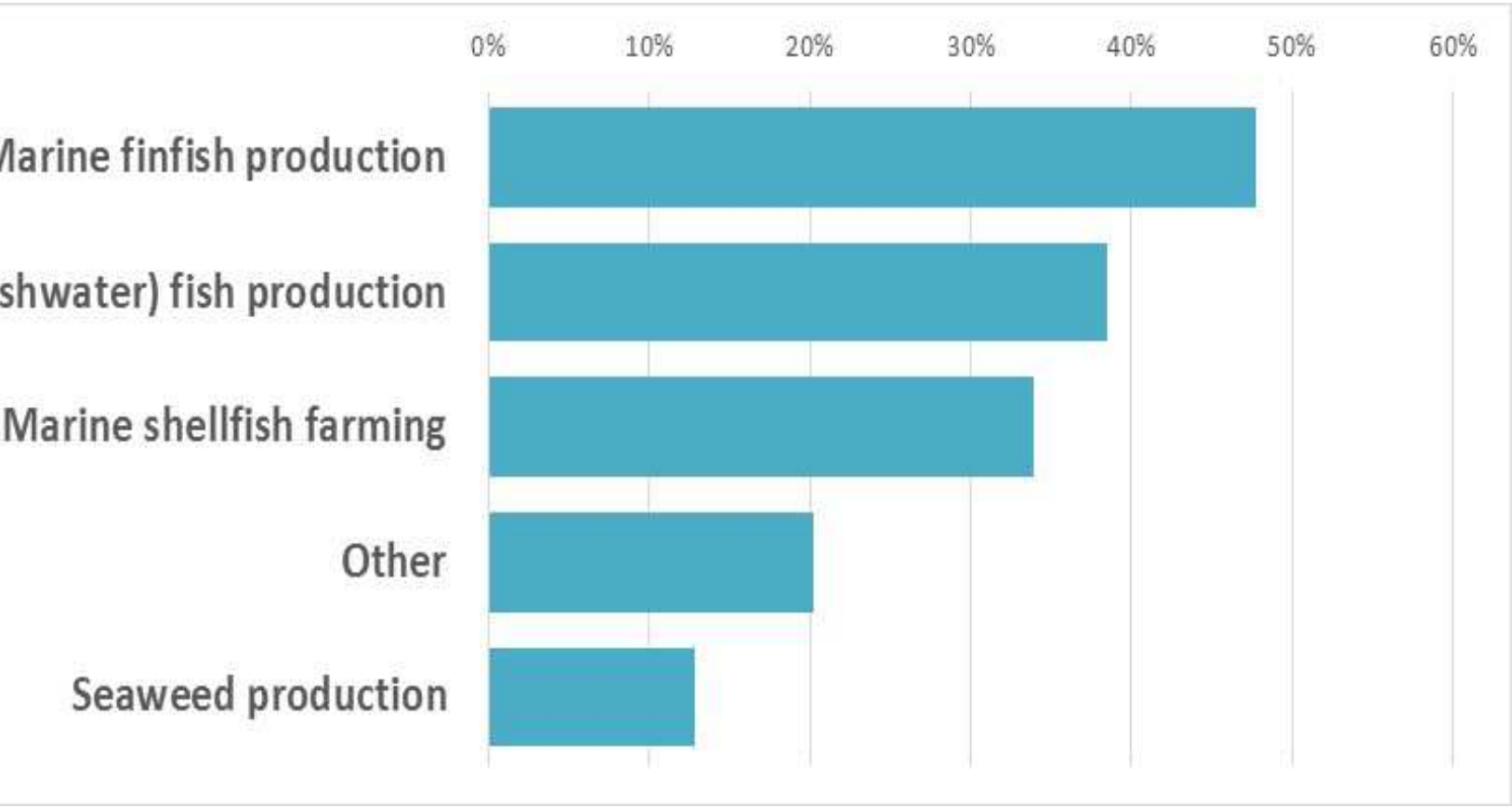
- **20 MS**
- **ca. 12% of EMFF**
- **368 FLAGs**
- **€2M per FLAG**
  (range: €240k-€10M)
- **ca. 11.000 projects in 2007-2013**
- **Coastal and inland, but only in some MS**



Various types of areas

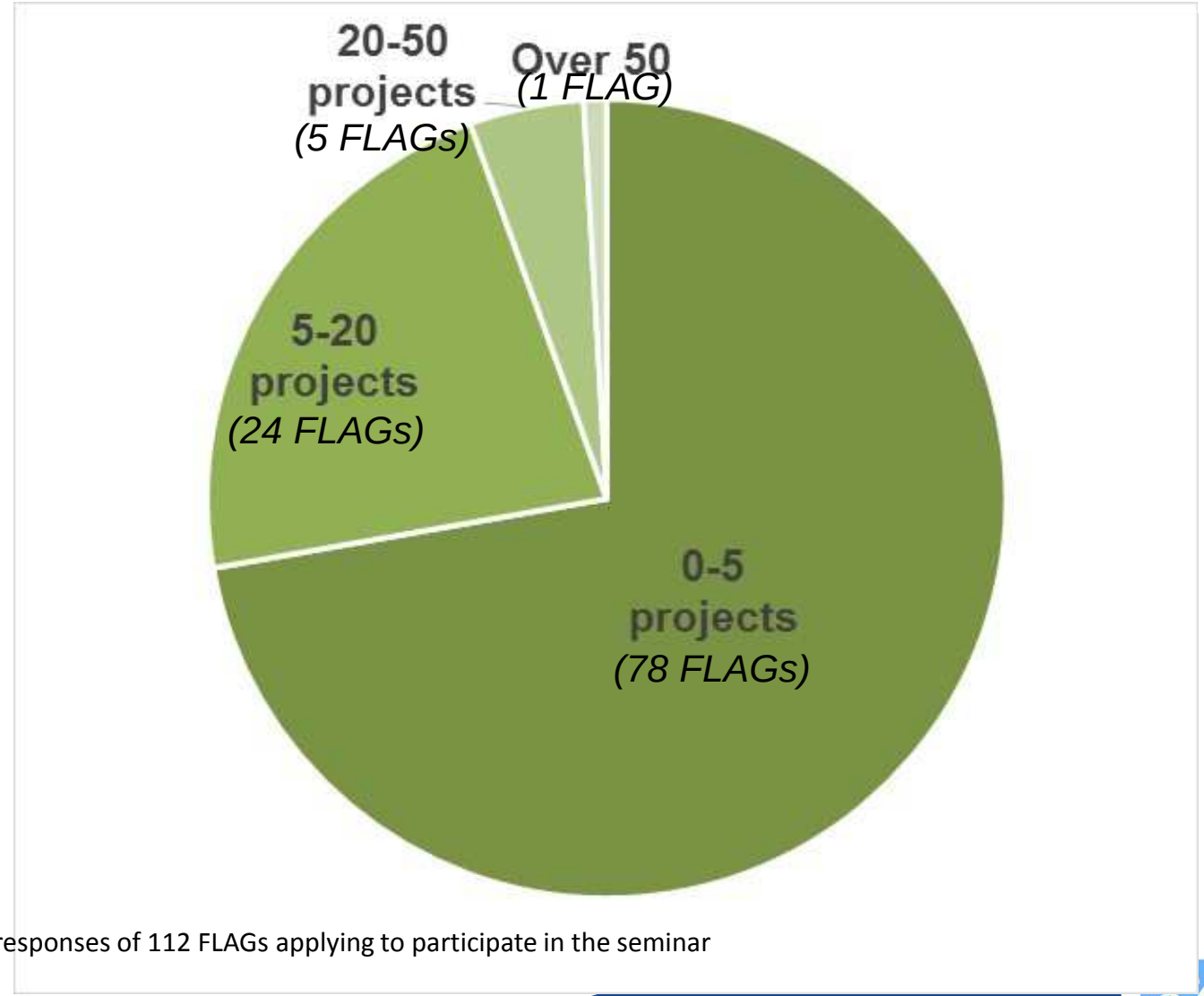


Great diversity of aquaculture in FLAG areas



Based on the responses of 112 FLAGs applying to participate in the aquaculture seminar
In many areas aquaculture coexists with fisheries

No. of FLAG-supported projects dedicated to aquaculture

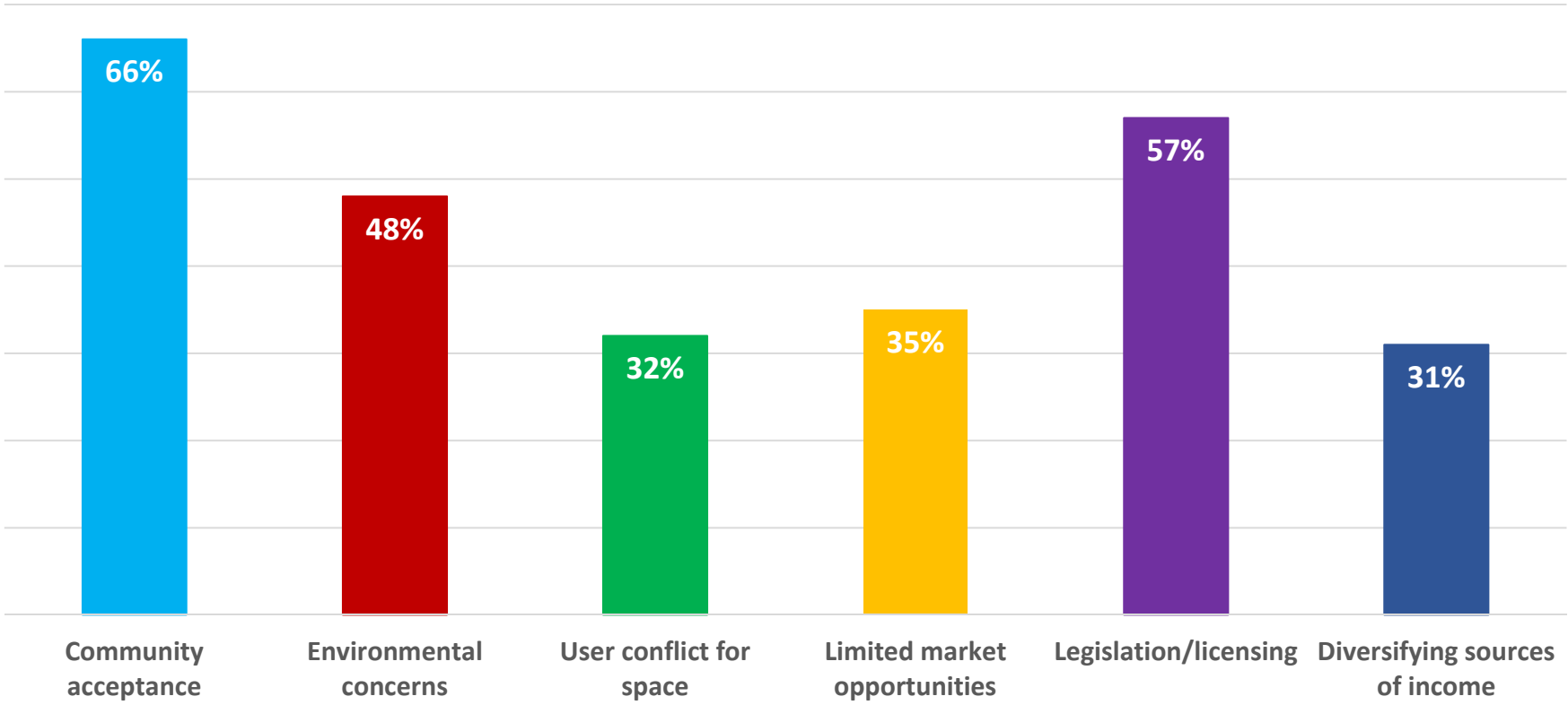


Based on the responses of 112 FLAGs applying to participate in the seminar

Key challenges faced by aquaculture producers in FLAG areas

(from discussions at the FARNET seminar, November 2017):

No. of responses: **94**



other challenges identified in the discussion: protected predators (mainly cormorants), lack of adapted funding mechanisms

farnet fisheries areas network

What can FLAGs do to help?

- Promoting consumption of products coming from local (sustainable) aquaculture
- Facilitating linkages with other actors in the community (e.g. gastronomy & tourism) and with research
- Capacity building for producers to improve product quality and environmental impact
- Raising awareness about aquaculture products, starting with children and youth
- Help producers to influence decision-making (local & national levels)

Some examples of CLLD projects supporting Aquaculture

Building the area's identity around aquaculture

The Tirschenreuth FLAG, Germany

The Land of a 1000 Ponds

LAND DER 1000 TEICHE

FISCHWIRTSCHAFTSGEBIET TIRSCHENREUTH

population:	73.241
area:	1.084 km²
population density:	72 p/km²
number of ponds:	4,700
average size:	0,6 ha
total area:	2,700 ha
fish yield/ha:	ca. 400 kg
number of farms:	over 900

Valorising the 800 years heritage of carp ponds

- Fisheries museum
- Educational aquarium
- Viewing platform

Support to fish farmers to gain extra income

- Tourism training and promotion support for fish farmers

- Direct marketing

- Training for chefs

Promotion

- Encouraging carp consumption
- Improving the image
- Professional advertising
- Events

Mobilising partners

Sparkasse
Oberpfalz Nord

Kondrauer
MINERAL- UND HEILBRUNNEN

OBERPFÄLZER
KARPFEN

FRIEDENFELS
Friedenfelser
Friedenfels - felsenfest in Qualität

OberpfälzerWald
in Bayern

farnet
fisheries areas network

Starting early…

Fish farm activities for the whole community

Our Krajna and Paluki FLAG, Poland

FLAG profile:

Population: 147,000

Area: 2000 km^2

Aquaculture jobs: 49

- The biggest fish farm in the region (area 510,7 ha, 300 tonnes of carp per year)
- Over 100 lakes
- Nature 2000 Area

OBJECTIVES

- Environmental education (birds, fish, plants)
- To increase social responsibility
- To increase social interaction
- Recreation and outdoor activities
- Diversification of incomes

PARTNERS

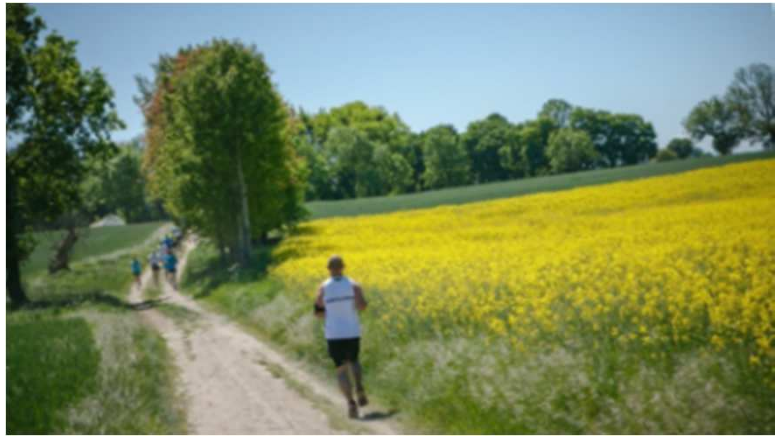
- **FLAG „Our Krajna and Pałuki”**
- **Fish Farm CGFP „Ryby” sp. z o. o.**
- **Agricultural Extension Centre in Minikowo**
- **LEADER LAG „Krajna and Pałuki Partnership”**

Birdwatching camps

Public fish catches on the fish farm, demonstration of fish filleting and cooking

Education

15 km cross-country run



Nordic walking guide

GEOCACHING.COM

Geocaching

RESULTS

- Sustainability of events (continued without funding)
- Increased interest of local inhabitants
- New ideas and good practices for direct sales
  (*fish food truck, local fish products*)

Aquaponics to produce fish and tomatoes

Höga Kusten LAG, Sweden

Challenges

- Standard fish production techniques damanging to the environment

- Lack of tested technologies for circular solutions

Process

- Trials of different types of fish and plant species (as a hobby), biofuel from algae…
- Cooperation with students and support of the local LAG

- Good results, high quality products (less fish diseases)

Commercial testing

- 4 km^2 greenhouses
- Production of rainbow trout (20 t per year) and tomatoes (200 t per year)
- Renewable energy heating
- No antibiotics or chemicals

Success

- Commercial results positive, investors involved
- 8 jobs created
- Franchise under way

- Strong motivated project leader from the start
- Products with good market potential
- Logistics and distribution planned early on

Addressing water quality

Bytów Lake District FLAG, Poland

- Supported an entrepreneur who developed his own method of water quality testing and purification
- Purchase of mobile laboratory for on-site measurements
- Aquamar: a biological method of purification, more environmentally friendly and 5-6 times cheaper than chemical methods, patented in 2011

Going organic: a new image for carp

FLAG: Oberlausitz

Saxony, Germany

Project overview

By focusing on organic aquaculture and improving the image of carp, the German region of Upper Lusatia is changing consumption habits and improving awareness of carp products among younger generations.

Total project cost: €165 628

>> EFF Axis 4: €124 221

>> National/regional co-financing: €41 407

Challenges

- Decrease of carp consumption in Upper Lusatia (younger generation unaware of its qualities)

- Producer go organic to improve environmental conditions of carp production and promote a fresh image

New initiatives

- Production methods were overhauled and a range of new fresh and smoked products were developed….
- Creation of a common identity for their organic carp products…
- Marketing of the products is carried out jointly, and a small group of local fish farmers oversee the quality of the fish…
- Design and production of consumer brochures and equipment to participate in relevant trade fairs to help producers promote their products…
- This has led to organic self-service food shops being supplied with organic carp products for the first time in Germany…

Key lessons

- **Relevance to FARNET themes:** Adding value, improving the image of fisheries products.
- **>> Results:** Carp producers moved from conventional to organic carp production
- Development of four new products (e.g. fresh boneless carp fillets; smoked carp fillets with herbs or sesame; frozen boneless carp fillets…)
- Developed solid networking and communication among producers and retailers.
- They win the trust and support of the local community and consumers.
- Creation of one full-time job, to coordinate production activities and marketing of the area's organic carp products.

Key lessons… cont‘d

- **>> Transferability:** The efficiency of coordinating efforts proved -> developed a single corporate design for a group of local producers who have adhered to harmonised production standards.

- **>> Final Comment:** Axis 4 can be used to build a network among individual carp pond fishers -> exchange of knowledge and methods and overcome of cultural and environmental challenges.

Coordinating the role of fishermen in designing a Marine Protected Area

FLAG: Marennes Oléron

St Pierre d'Oléron, France

Project overview

This project supports the recruitment of a designated fisheries sector coordinator to ensure that fishermen are fully integrated into the process of developing a Marine Natural Park (MNP), both in terms of communication and decision-making.

Total cost and EFF contribution

Total Project cost: €37 664 (one year of full time equivalent)

Axis 4: €16 956 (65% of the eligible cost of €26 100.49 – calculated pro rata on the number of boats licensed in the FLAG territory as it did not cover the whole MNP area)

Challenges

- The design process of the MNP of the Gironde Estuary and Charentais Straits follows the area's definition as Natura 2000 Site of Community Importance.
- Thirty working groups involving 150 people representing the various activities, industries and associations active gathered to define stakeholder positions
- Definition of a management strategy for a 6500km² marine park to become the largest marine protected area in metropolitan France.
- The area is home to some of the most active fisheries ports in France as well as significant recreational and industrial activities.
- Both environmental and socio-economic constraints must be met, preserving the environmental capital while supporting a series of human activities.

New initiatives

- Participatory planning - The fisheries stakeholders, represented by the three Regional Maritime Fisheries and Aquaculture Committees (“CRPMEM”), were highly involved in the consultation -> ensured enclusion of their views and continuity of their professional activity.
- Fisheries voices were not only heard but *understood* by non-fisheries stakeholders (scientists, NGOs, society representatives)….
- The coordinator, recruited for a one year renewable contract, with both scientific knowledge and field experience in the fisheries sector, represented the local fisheries interests in all Advisory Committee meetings, ensuring representation of fisheries interests when binding decisions were taken.

Key lessons

- **Relevance to FARNET themes:** Environment, Culture and Society, Governance
- **>> Effectiveness/efficiency:** Efficiency of the coordinator -> several achievements such as the inclusion of a technical glossary of key fisheries and environmental concepts in the final consultation report of the Advisory Committee.
- Revised MPA preparatory study following identification of missing data or misinterpretations.
- Additionally, increased cooperation and comprehension among the different fisheries actors has been observed as a result of this project.

Key lessons… cont‘d

- **>> Transferability:** The involvement of fishermen in the design and management of Marine Protected Areas can be applied in many European fisheries areas.
- This example shows how Axis 4 can provide solutions which facilitate communication both within the fisheries sector and with other sectors.
- As result -> possible Axis 4 cooperation project with fishermen of other geographic areas involved in the design or management of MPAs (Arcachon & Britanny) is foreseen.
- **>> Final Comment:** One of the first examples of linkages between Axis 4 and the management of Marine Protected Areas, increasing the involvement of fisheries communities in local governance mechanisms.

Protecting the fish resources of Ventspils

North Kurzeme FLAG

Latvia

Country:
• Latvia

A volunteer association of professional and recreational fishermen obtains support to combat illegal fishing and better monitor local fish stocks.

Timeframe of implementation
From Jan 2012 to Jan 2013

Total project cost	**€22 000**
FLAG grant	€19 800
Beneficiary contribution	€2 200

Challenges

- Northern Kurzeme is an important professional and leisure fishing area
- Lack of monitoring activities -> little knowledge of the impact of each activity on local fish resources.
- The first step -> provision of technical support for more active raids in inland and coastal waters -> reduction of illegal fishing activities and safeguarding aquatic biodiversity.
- Next ->Promotion of further development of the region to preserve its unique environment and to enhance the quality of life of local inhabitants.

New initiatives

- Organisation of training courses for fishermen (e.g. on environmental issues and national fisheries legislation),
- Purchase of specific equipment, as folows:

  - *Boat equipment and a boat transfer trailer to ensure safe and efficient raids on rivers as well as on coastal waters.*
  - *Nature cameras placed in strategic spots, such as trout spawning areas in some rivers, to monitor human activities during the night especially in areas where illegal fishing activities often occur.*
  - *A device for night vision, so the camera could be used in full darkness as well as video recording in such conditions.*

Results

- Six fisheries inspectors have been trained and 165 inspection trips made. These have helped to remove:
  - *119 inland water nets (6 565 metres worth);*
  - *300 metres of old fishing nets when cleaning the sea;*
  - *nine fish traps;*
  - *six illegal free-floating fishing devices;*
  - *and numerous beaver dams on the spawning streams.*

Results… cont‘d

- Various events have also been organised, including:
  - *Seminars on «Healthcare of trout rivers» for anglers, fishermen and other locals*
  - *Lectures in local schools on the local water resources and fair fishing activity.*
  - *Annual local angling competition. The number of participants is rising each year.*

Key lessons

- **Relevance to FARNET themes:** Environment, Fisheries resources, Small-scale and coastal fisheries, Education and training
- **Transferability:**
- This kind of project could be relevant in other FLAG areas where tensions exist between professional and recreational fishers and where targeted fish stocks suffer.

- However, it is dependent on a real willingness to protect local resources and in this case has been reliant on volunteering work of local fishermen (professional and recreational).

Key lessons… cont‘d

- Willingness of local people to get involved and dedicate their free time to protecting local resources has been fundamental to the project’s success.

- The fact that the area can now count on seven, instead of one, fisheries inspectors has made a clear difference to the area’s monitoring capacity.

Duckweed for fish feed

Kainuu Koillismaa FLAG
Finland

CONTEXT

- River water beneath a fish farm contains dissolved nutrients. Is there any means to trap them?
- Is it possible to grow feed ingredients in a fish farm?
- How could we get local protein ingredients instead of soybean?
- How could we make fish farming more cost-effective?

OBJECTIVES OF THE PROJECT

To promote

- The use of domestic feed ingredients in fish feed
- Environmental friendly fish farming
- Cost-effective fish farming

To test

- *Lemna minor* growing and harvesting techniques

Lemna minor…is… a floating freshwater aquatic plant, with one, two, three or four leaves each having a single root hanging in the water.

- It is present wherever freshwater ponds and slow-moving streams occur…
- *L. minor* has been shown to remove heavy metals like Pb, Cu, Zn and As very efficiently from waters with non-lethal concentrations
- Experimental investigations have shown, that *L. minor* is able to completely replace the add-on of soy bean in the diet of ducks.
- Therefore, using common duckweed as a food supplement in broiler diets is very profitable also from an economic point of view.
- An investigation showed, that the expensive sesame oil cakes in chicken diets could partially be replaced by cheap *L. minor* with increased growth performance of broiler.

PARTNERS

Fish farming Vääräniemi Ltd, Taivalkoski, Finland (premises, labour)

- Raisioagro Ltd (preparation of feed)
- FLAG Kainuu and Koillismaa (funding, expertise)
- Oulujärvi Leader LAG (funding)

Field experiment in open ponds
River Oudonjoki, Taivalkoski, FINLAND
May 2017 - October 2018

METHODOLOGY

- Dissolved nutrients from fish farm water were trapped in *Lemna minor*
- Artificial bonds were constructed next to the fish farm for growing *Lemna minor*
- Wild, local *Lemna minor* populations were isolated an planted in bonds
- Lemnas were harvested manually by skimming with metallic net
- Biomass was air dried or frozen for analysis
- Small scale growing experiments were conducted in laboratory

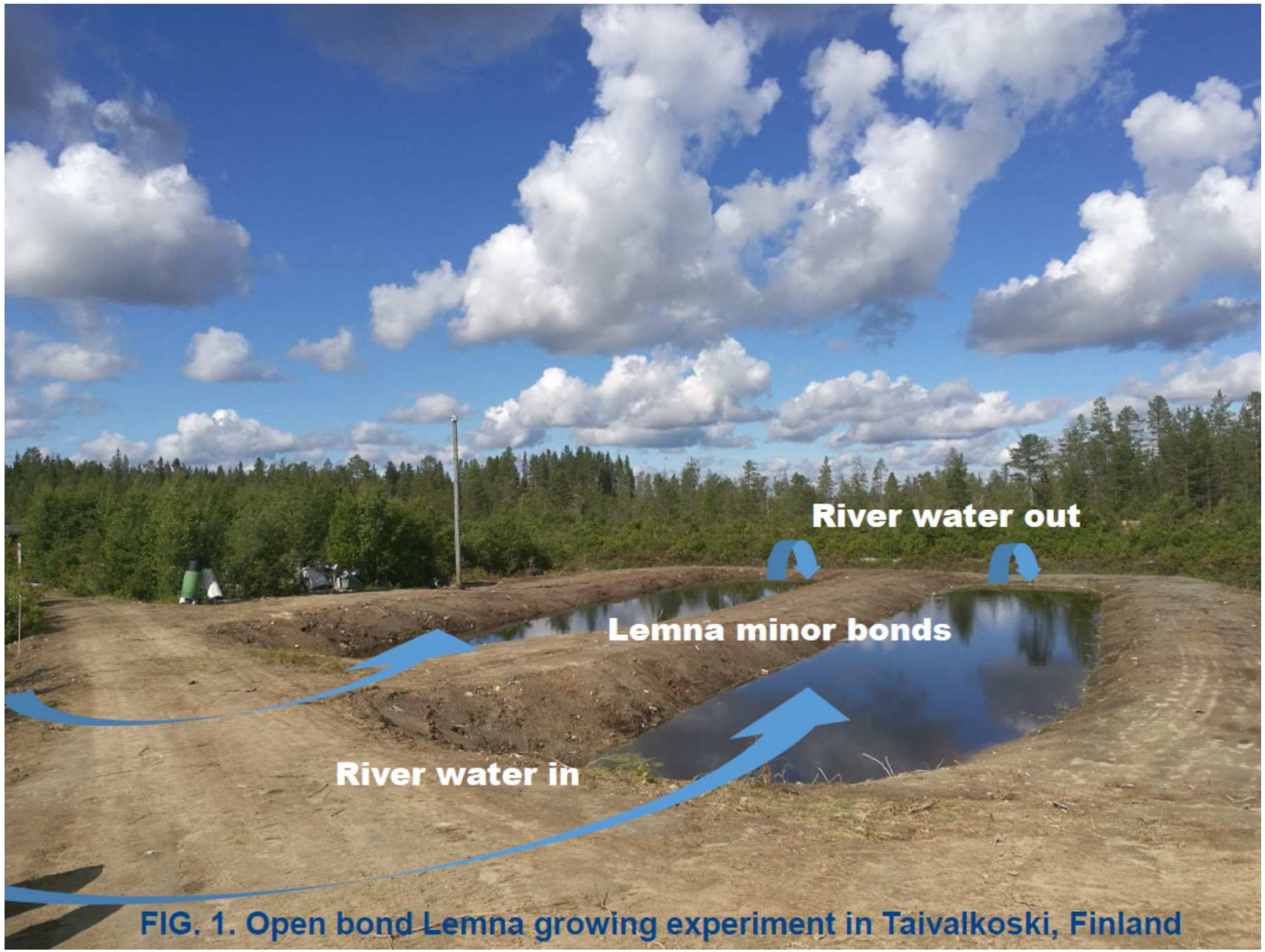


FIG. 1. Open bond Lemna growing experiment in Taivalkoski, Finland

RESULTS

Expected outputs of the on-going project:

- Are northern climate conditions sufficient for large scale *Lemna* growing?
- Wild clones are isolated and characterized (Taivalkoski and Vuokatti clones)
- Experience in *Lemna* harvesting and drying techniques are gained
- Growing mediums are tested in laboratory
- Chemical analyses will next winter
- *Lemna* feed recipes will be tested next summer

Combining functionality with recreational activities

BRAILA FLAG

Romania

- CONTEXT:
- The island of Braila is a secluded & quiete place, where the infrastructure is scarcely developed
- The area is perfect place for relaxing, has a great touristic potential, but lacks accommodation, restaurants and other facilities.
- Braila is a paradise for amateur fishermen, who come here for a mini holidays – for relaxation, tranquillity and stretching.
- Braila can be the perfect place to taste some of the Delta charm without going too far from home and spending too much money.

OBJECTIVES OF THE PROJECT

- Creating new jobs
- Developing tourism
- Developing infrastructure and services
- Promoting local traditions
- Increasing the visibility of Braila County

PARTNERS

- The Applicant is SC Gropeneanu Com SRL, who started this project in the 2007-2013 period
- For the 2014-2020 period, the same beneficiary plans to create accommodation in the same area to increase the touristic potential of the Big Island of Braila
- They also have a project submitted nationally (through EMFF), modernization of piscicultural arrangement at Blasova with a total approx. value of 890000 EUR

METHODOLOGY

During the 2007-2013 period, the applicant, who is also a fish farmer, developed a public catering activity by rehabilitating a Fisherman's restaurant with terrace (ground floor, 375 sq m building) and equipping the restaurant with all the necessary equipment for a proper functioning (kitchen, bar, utensils, furniture, etc.).

METHODOLOGY

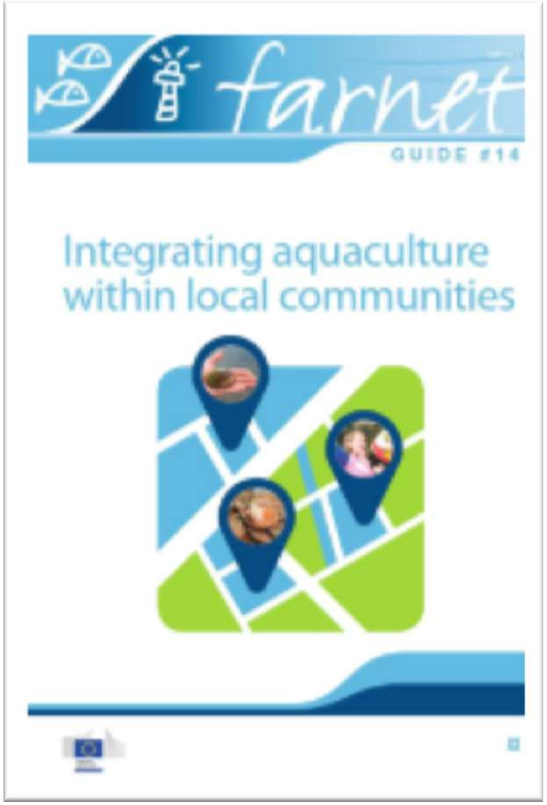
He also placed a 108 sqm pontoon built of 18 floating polypropylene modules with anchoring system and access bridge on the lake, at a 20m distance from the shore, thus uniting the functionality of the fisherman's restaurant with specific fishing and recreational activity on Lake Blasova, including amateur fishing (the public is allowed to fish on the pond that is part of the fish farm).

RESULTS

- As an impact indicator, this project is increasing the popularity of the Braila County fishing area, through the visibility that it offers and by promoting the area's specific cuisine (with fresh fish dishes from Blasova Lake).
- A number of 8 jobs have been created after the implementation of this project.

More info about …

- What can the FLAGs do for aquaculture producers?
- What can aquaculture contribute to the development of the FLAG areas?



Thank you!
Any questions?

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