Developing a national aquaculture strategy in line with the WFD and river basin management plans

Tamás Bordócz
Ministry of Rural development

Thank you for your attention!

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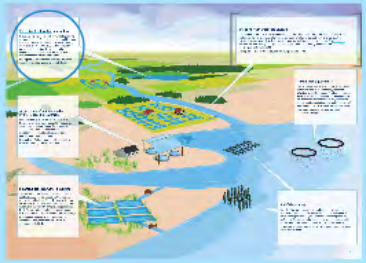
Brussels

- Reform of the CFP
- Aquaculture development
- European Maritime and Fisheries Fund (EMFF)
- Water Framework Directive



NORWEGIAN SEA

NORTH SEA

ATLANTIC OCEAN

UNITED KINGDOM

IRELAND

Dublin

CELTIC SEA

ENGLISH CHANNEL

NETHERLANDS

DENMARK

Copenhagen

Brussels

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BAY OF BISCAY

GULF OF LION

PORTUGAL

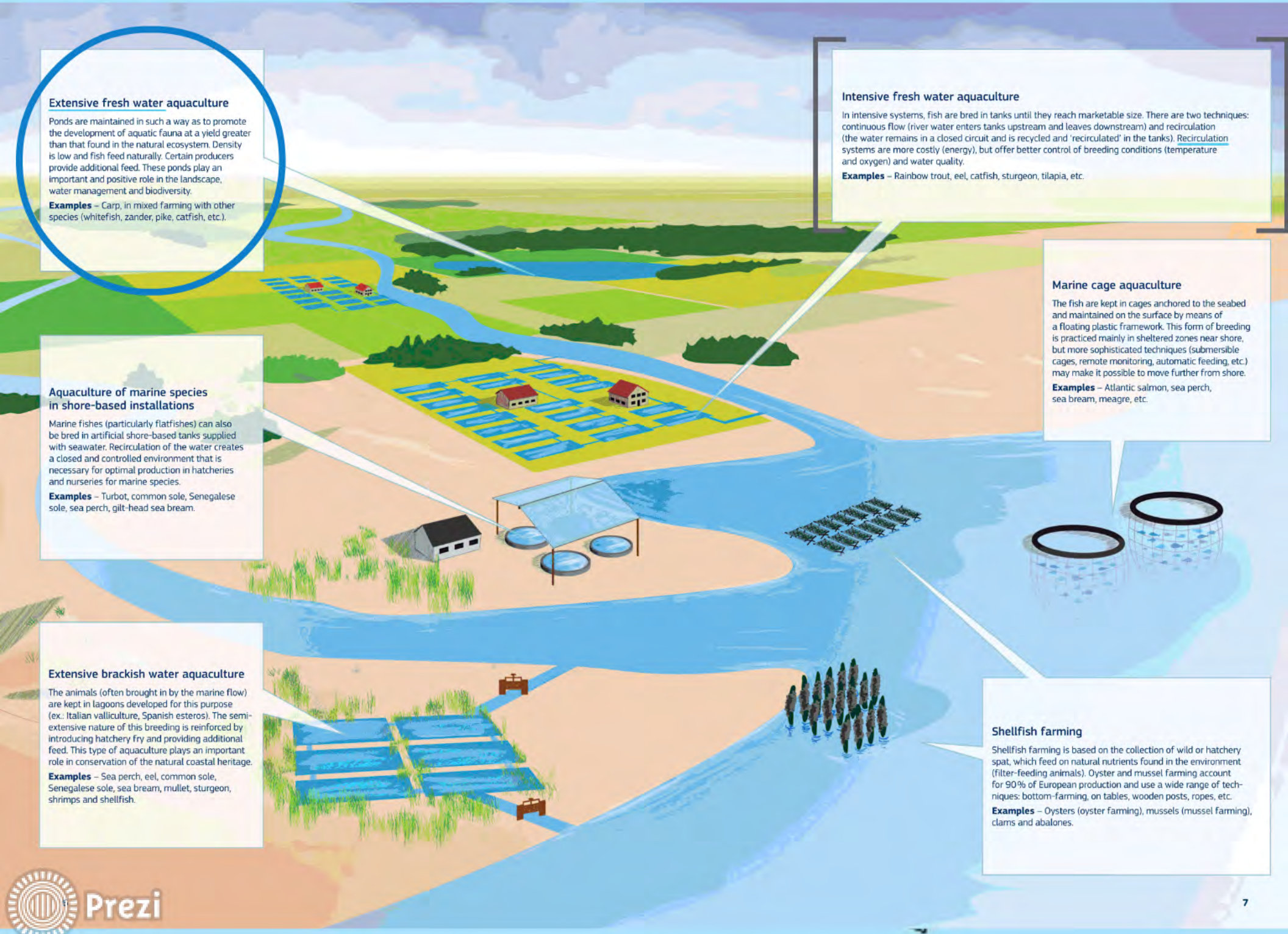
Lisbon

Madrid

SPAIN

ITALY

Rome



Extensive fresh water aquaculture

Ponds are maintained in such a way as to promote the development of aquatic fauna at a yield greater than that found in the natural ecosystem. Density is low and fish feed naturally. Certain producers provide additional feed. These ponds play an important and positive role in the landscape, water management and biodiversity.

Examples – Carp, in mixed farming with other species (whitefish, zander, pike, catfish, etc.).

Intensive fresh water aquaculture

In intensive systems, fish are bred in tanks until they reach marketable size. There are two techniques: continuous flow (river water enters tanks upstream and leaves downstream) and recirculation (the water remains in a closed circuit and is recycled and 'recirculated' in the tanks). Recirculation systems are more costly (energy), but offer better control of breeding conditions (temperature and oxygen) and water quality.

Examples – Rainbow trout, eel, catfish, sturgeon, tilapia, etc.

Marine cage aquaculture

The fish are kept in cages anchored to the seabed and maintained on the surface by means of a floating plastic framework. This form of breeding is practiced mainly in sheltered zones near shore, but more sophisticated techniques (submersible cages, remote monitoring, automatic feeding, etc.) may make it possible to move further from shore.

Examples – Atlantic salmon, sea perch, sea bream, meagre, etc.

Aquaculture of marine species in shore-based installations

Marine fishes (particularly flatfishes) can also be bred in artificial shore-based tanks supplied with seawater. Recirculation of the water creates a closed and controlled environment that is necessary for optimal production in hatcheries and nurseries for marine species.

Examples – Turbot, common sole, Senegalese sole, sea perch, gilt-head sea bream.

Extensive brackish water aquaculture

The animals (often brought in by the marine flow) are kept in lagoons developed for this purpose (ex.: Italian valliculture, Spanish esteros). The semi-extensive nature of this breeding is reinforced by introducing hatchery fry and providing additional feed. This type of aquaculture plays an important role in conservation of the natural coastal heritage.

Examples – Sea perch, eel, common sole, Senegalese sole, sea bream, mullet, sturgeon, shrimps and shellfish.

Shellfish farming

Shellfish farming is based on the collection of wild or hatchery spat, which feed on natural nutrients found in the environment (filter-feeding animals). Oyster and mussel farming account for 90% of European production and use a wide range of techniques: bottom-farming, on tables, wooden posts, ropes, etc.

Examples – Oysters (oyster farming), mussels (mussel farming), clams and abalones.

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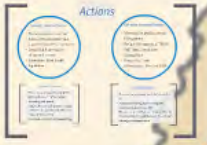
HUNGARY

WFD and RBMP

National Aquaculture Strategy and EMFF

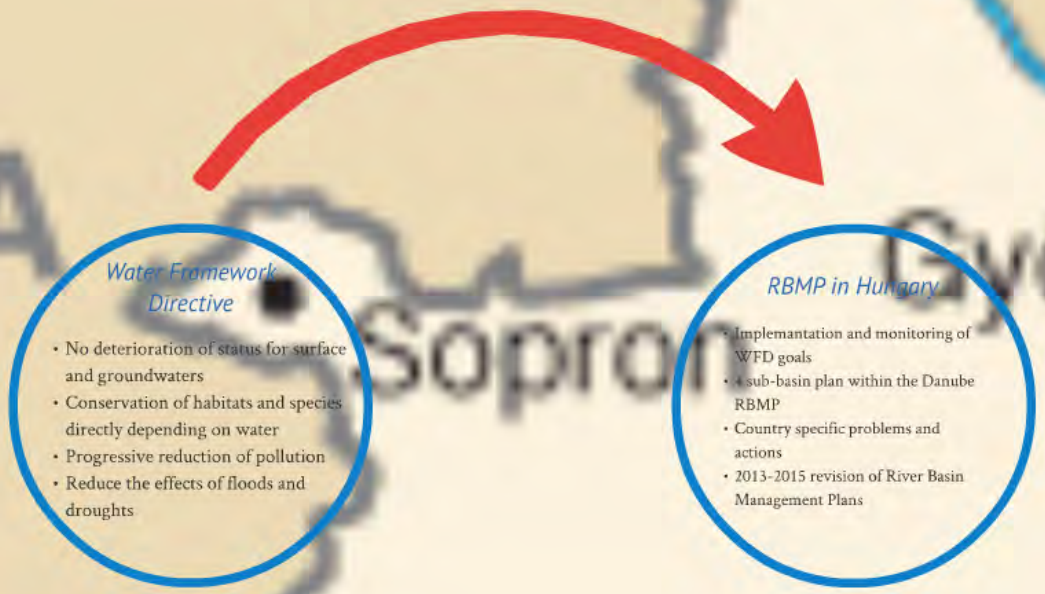
- How to unlock national potential for aquaculture development
- EU suggestion guideline for the content
- Exchange of best practices amongst member states
- EMFF is the main financial tool to implement the srategy

Aquaculture development



Prezi

WFD and RBMP



National Aquaculture

Water Framework Directive

- No deterioration of status for surface and groundwaters
- Conservation of habitats and species directly depending on water
- Progressive reduction of pollution
- Reduce the effects of floods and droughts

RBMP in Hungary

- Implemantation and monitoring of WFD goals
- 4 sub-basin plan within the Danube RBMP
- Country specific problems and actions
- 2013-2015 revision of River Basin Management Plans

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Aquaculture development

Recent state of aquacultre in Hungary

- 26.000 ha of fish ponds produce 20.000 t fish
- frmom this, 16.000 t is carp
- RAS and flow-through production: 2.000 t, mainly african catfish

Aquaculture and WFD

- water inlet
- nutrient flow management
- water retention
- maintaining habitats
- escapees

Strategic goal: aquaculture just borrow the water and not use

Actions

Simplify administration

- Encourage water retention
- Clear environmental rules: aqua-environmental measures
- Simplified licensing for integrated systems
- Overview of fish health legislation

Enhance competitiveness

- More fish in public schools: Pilot project
- Reduce the amount of "black fish" from rivers: new national law
- Research of new technologies: Horizon 2020

Spatial planning

- Map of unused geothermal wells
- GIS database of natural waters including fish ponds
- Aquaculture as sub-project of large environmental geothermal effluents: reuse of wasted heat
- Use results from WFD monitoring

Long-term goal

- Promote carp as a sustainable fish from the EU
- Adapt national legislation and good practices of agriculture PDO
- Encourage to develop co-operation systems and labelling through National Food Chain Strategy implementation

Fish farm

- More fish
- Increased environmental values
- Increased market
- Diverse activities

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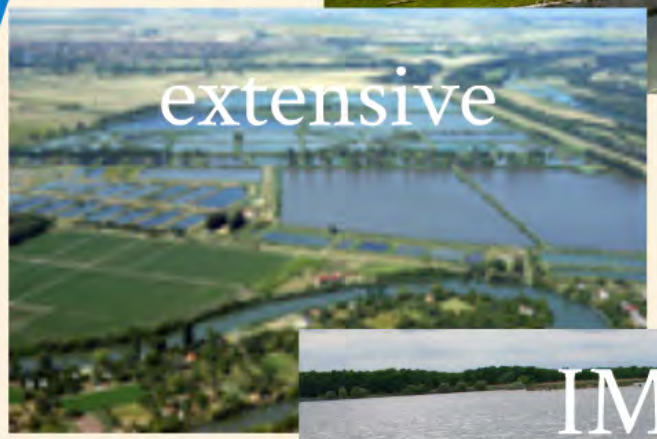

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Closed intensive system, RAS
Wetland ecosystem
Pond recirculation
Production and
treatment pond
Image © 2013 DigitalGlobe
Google earth
83 m
2005
Képek dátuma: 4/11/2011 46°43'34.70" É 19°10'50.95" K magasság 91 m szemmagasság: 467 m

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Level playing field

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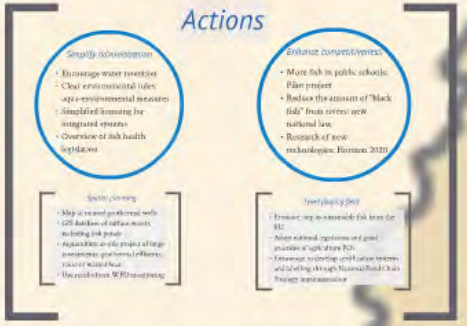

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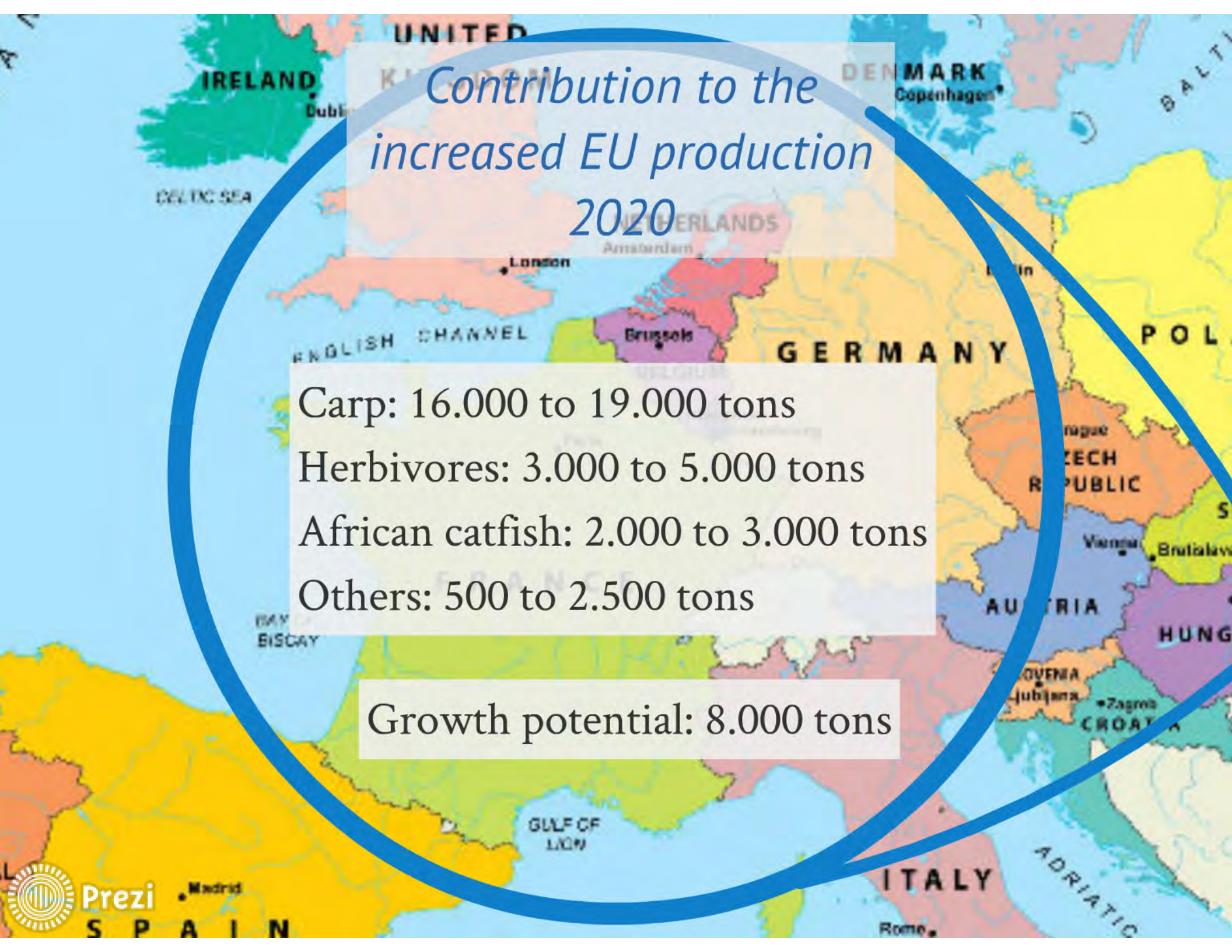
Contribution to the increased EU production 2020
Carp: 16.000 to 19.000 tons
Herbivores: 3.000 to 5.000 tons
African catfish: 2.000 to 3.000 tons
Others: 500 to 2.500 tons
Growth potential: 8.000 tons
IRELAND
DENMARK
Copenhagen
GERMANY
ENGLISH CHANNEL
Brussels
BAY OF BISCAY
GULF OF LION
ITALY
Rome
SPAIN
Madrid
Prezi

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