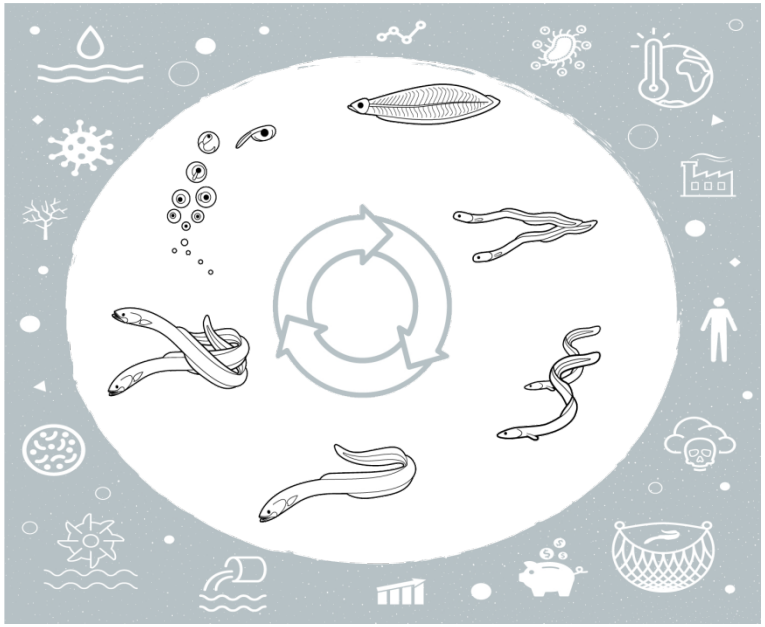
Economic analysis of eel fisheries and management – first assessments and challenges



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Introduction and Background

- Environmental, social and economic impact assessment (IA) is a standard instrument to inform decision makers for every new of revised regulation
- There was no impact assessment for eel regulation(s) so far
- In this report we have collected available data for four countries and analyse impacts of management measures as far as possible

Introduction and Background

- Two main problems for IAs regarding eel fisheries and management:
  - ➢ No information on feedback between management measures and stock development => gains of restricted fishing/reduced mortality in installations not known
  - ➢ Very limited and heterogenous economic data for small scale coastal fisheries and freshwater fisheries
- Todays presentation includes results of the limited first assessment and challenges for IAs

Assessments of economic impacts − some general remarks

- Problem: Due to the unknown feedback between measures and stock development we could not assess mid- to long-term gains or losses
- For the report we have identified available data and what data would be needed − especially cost data is lacking
- In the report available data was used to partly assess impacts of measures for installations and the loss of revenues in fisheries
- Analysis of adaptation strategies requires substantial effort for interviews/focus groups

⇒ Comprehensive IA would help to assess cost-effective way to achieve objective(s)

Assessments of economic impacts − fisheries scenarios

Remark: Scenarios not based on biological information and in a way extreme cases to detect consequences of measures

- **Scenario 1:** Total closure of yellow and silver eel fisheries, while a limited glass eel fishery remains open to supply aquaculture and processing facilities.
- **Scenario 2:** Total closure of the glass eel fishery and (as a consequence) also cessation of restocking activities.
- **Scenario 3:** Total closure of eel fisheries for 5 years and compensation of fishers.
- **Scenario 4:** Closure of recreational fisheries

Assessments of economic impacts – installations scenarios

- **Scenario 5:** Part-time closure during migration period
- **Scenario 6:** Installation of fish ladders and bypasses
- **Scenario 7:** Trap and Truck

Assessments of economic impacts − Example fisheries scenario

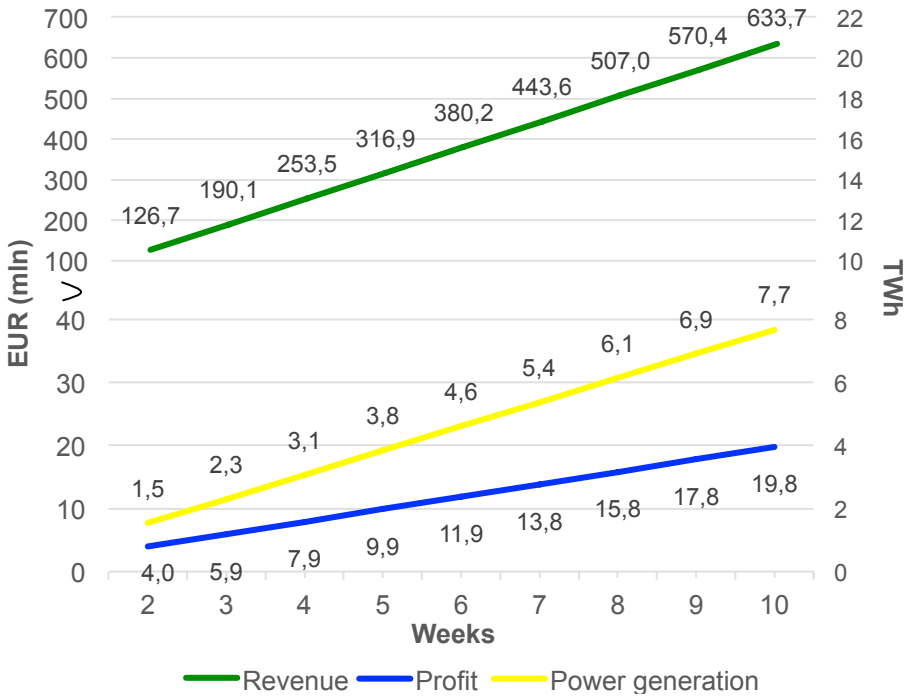
- Economic data requirements for IA for total closures:

	Necessary data for assessment	Availability for Germany	Availability for Spain
Marine and Freshwater Fisheries	Catches/official landings EU/specific countries	ICES WGEEL report	ICES WGEEL report
	Earnings data	Available with average prices for eel landings	Available with own estimation of average prices and in general terms, not by individual fisher.
	Cost data	Not available or only in very few cases	Only data that were obtained in a survey done in this project. Only for one region. No public statistics.
	Employment	Limited availability (estimations from number of licenses possible)	Can be estimated from the licenses. It is not a FTE.
Glass eel fishery	Catches/official and unofficial landings	n.a.	ICES WGEEL report official landings. Unofficial landings are not available.
	Earnings data	n.a.	Available if average prices are calculated.
	Cost data	n.a.	No official data. There are some data from the survey done in this project.
	Employment	n.a.	Can be estimated from the licenses. Not data of FTE.

- Loss of revenues for eel fisheries in Europe about 50 mln. € assuming an average price of 10 €/kg (ICES landings data)

Assessments of economic impacts − Example part-time closure of installations

- More data available for installations − example for France:



Closure of turbines during migration (yearly)

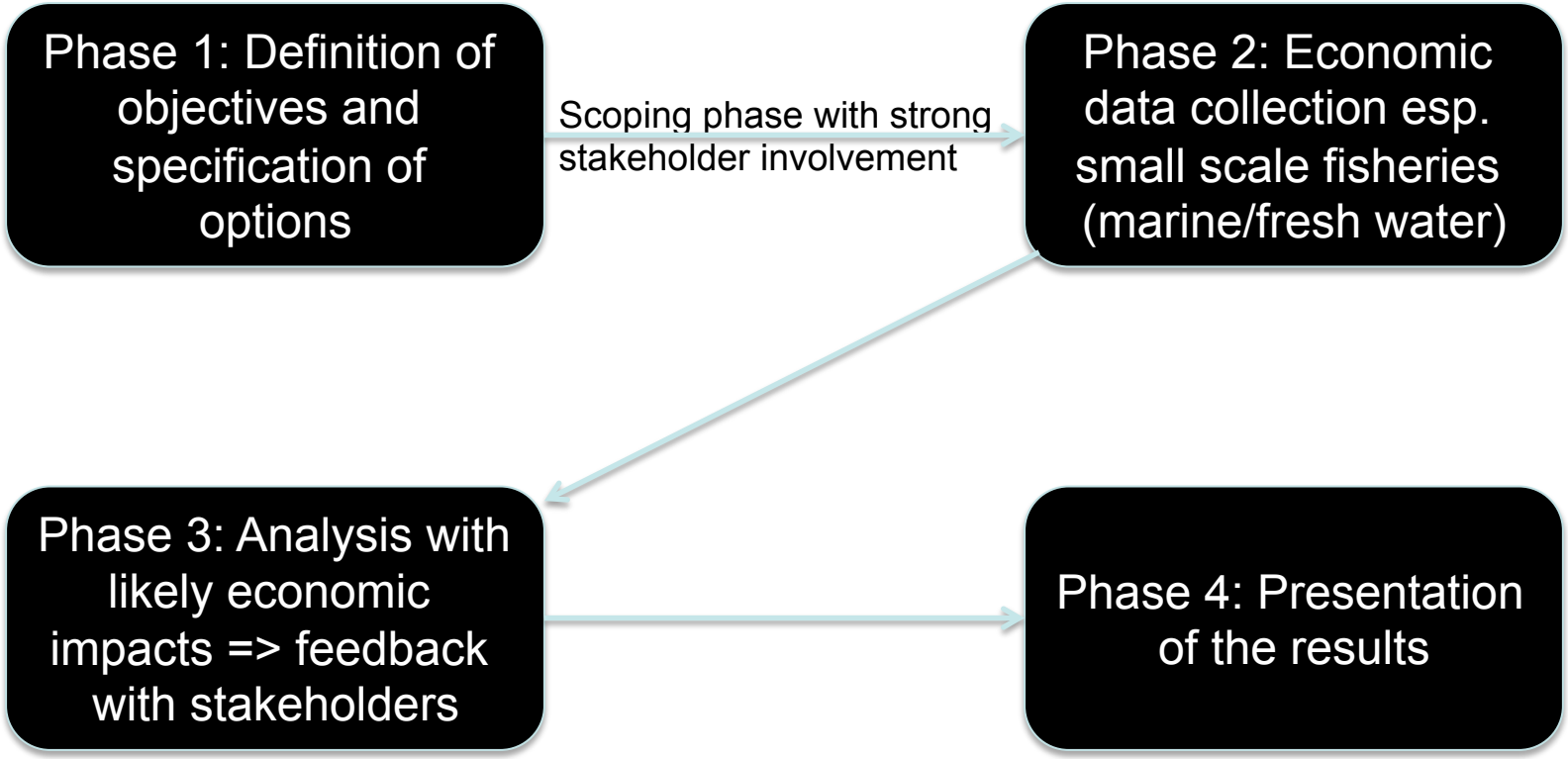
Estimated range of costs for bypasses up- and downstream

1,052 to 3,110 million €

Assessments of economic impacts − Example for indirect effects of total closure of eel fishery

- Aquaculture
  - ➢ Eel aquaculture totally dependent on glass eel fishery
  - ➢ Closure of glass eel fishery would basically shut down all specialised farms or at least increase costs substantially
  - ➢ Revenues in 2017 were 37 mln. € in the EU

Challenges for economic impact assessments of eel management measures



Time needed: Approximately 18 Months

Conclusions and Outlook

- In this study we have identified what data is available and would be needed for an impact assessment
- With available data limited assessment of the scenario of total closure of fishery and installations scenarios
- Report discusses IA methodology and lists data collection requirements especially for fisheries
- In France, for example, installing upstream and downstream migration equipment could be cost-effective after two to five years

Conclusions and Outlook

- Regional assessment would allow to identify the most impacting dams for equipment with bypasses
- Strong stakeholder involvement necessary for e.g. discussion of measures and assessment of impacts

=> Comprehensive IA may help to identify cost-effective way to achieve objective(s) (measures for fisheries and installations)