

# A future for cod and fishermen: The way to Economical Fisheries in the Baltic

(„CCB position in the Demersal WG of the  
Baltic Sea Regional Advisory Council(?)“)

Ralf Döring  
University of Greifswald

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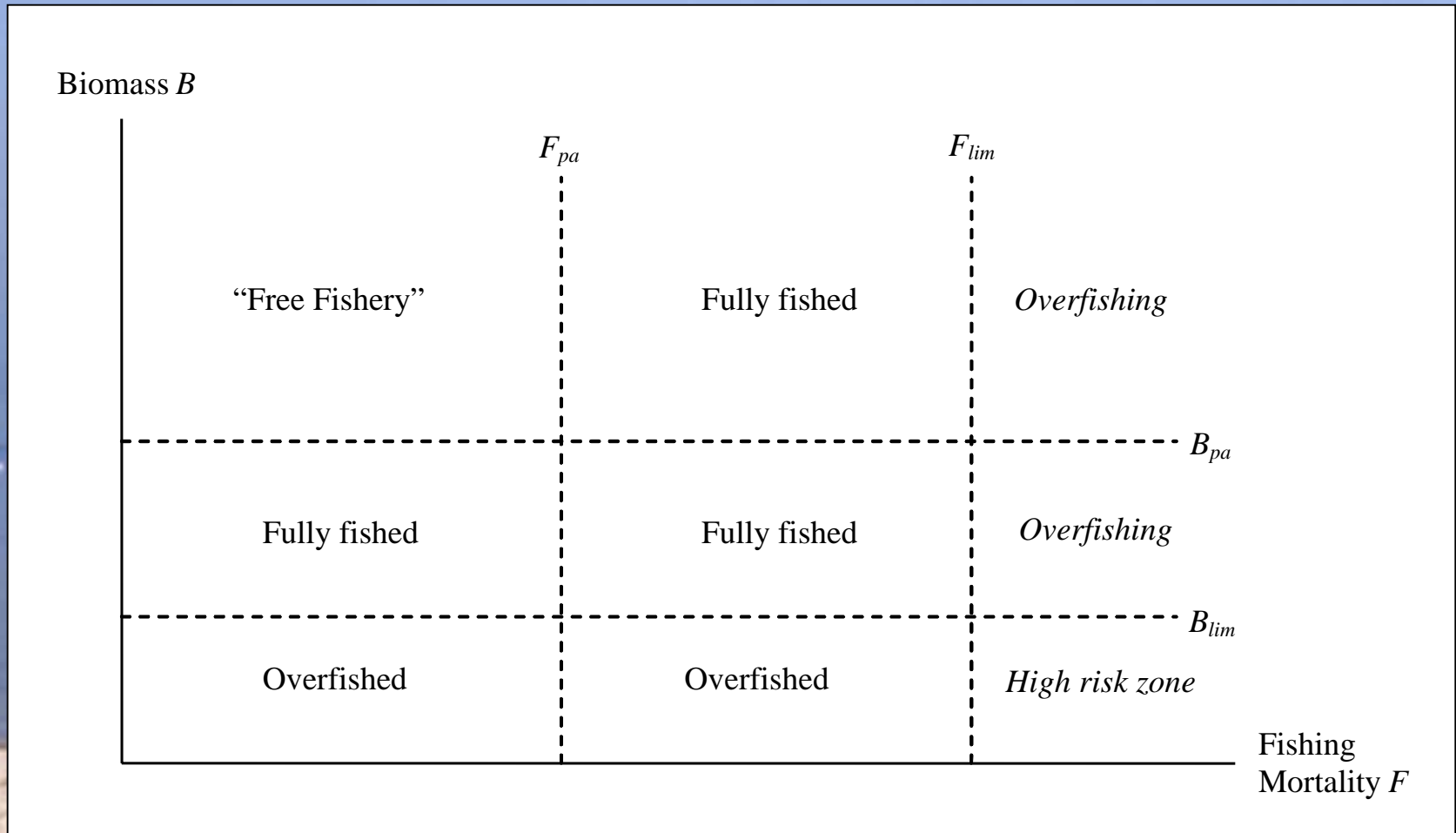


# Common Fisheries Policy

- Very centralized decision making process so far
- Many different regulations and measures
- Introduction of Regional Advisory Council in 2003
- Long-term management plans important new instrument

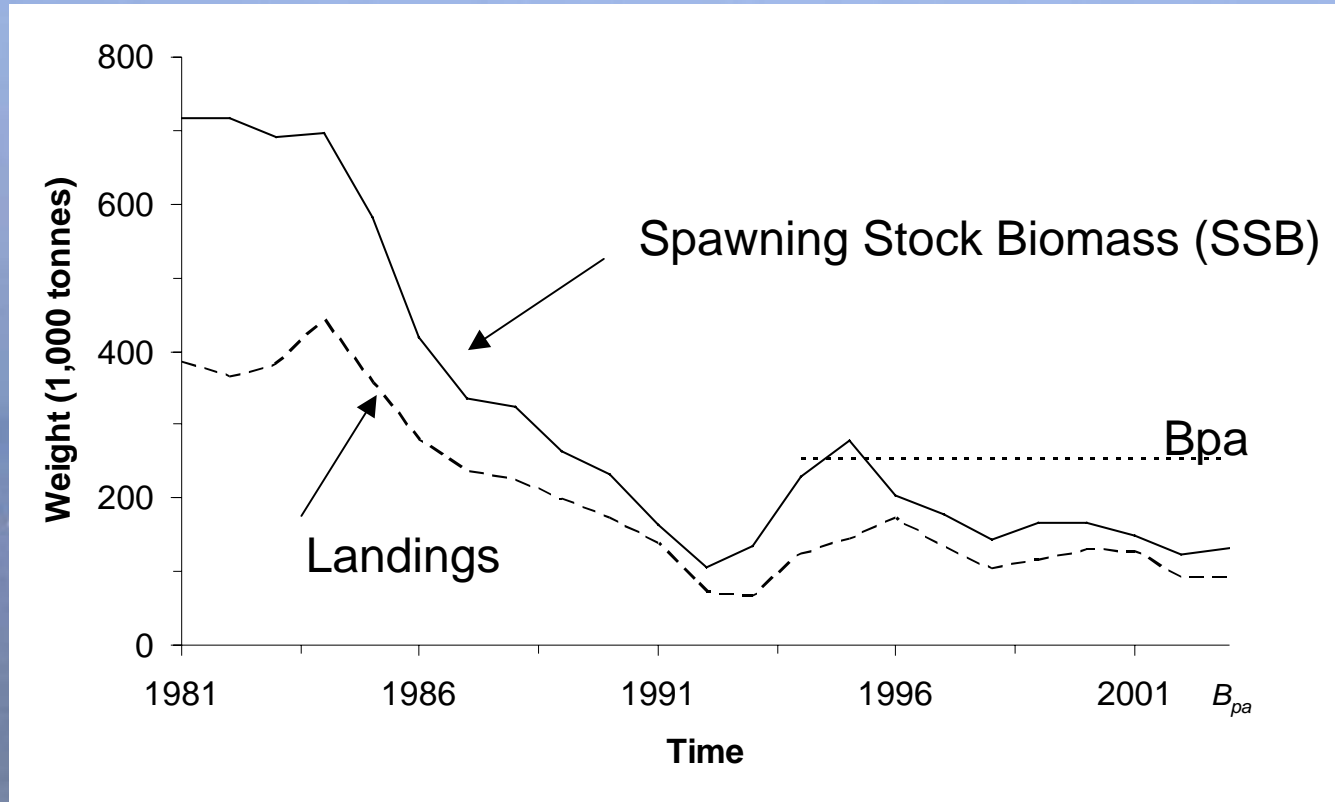


# Precautionary Approach in fisheries management



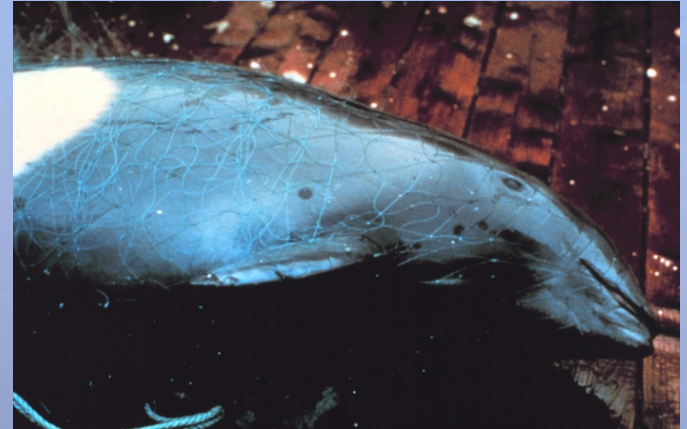
# Baltic Sea Cod fishery

- Overfishing and poor recruitment since mid 1980ies



- Problem: Average age of cod in the catches between 3-4 years!

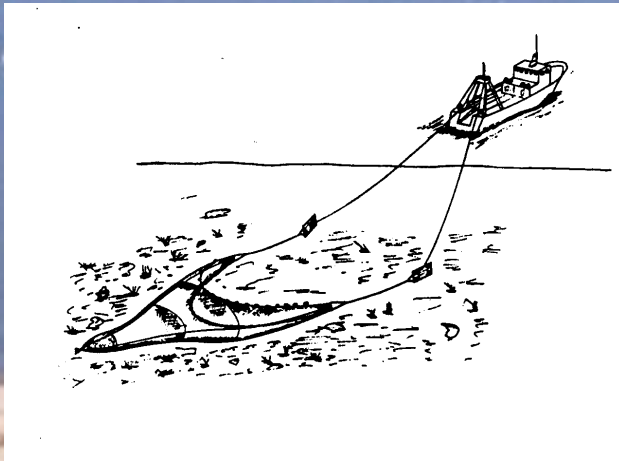
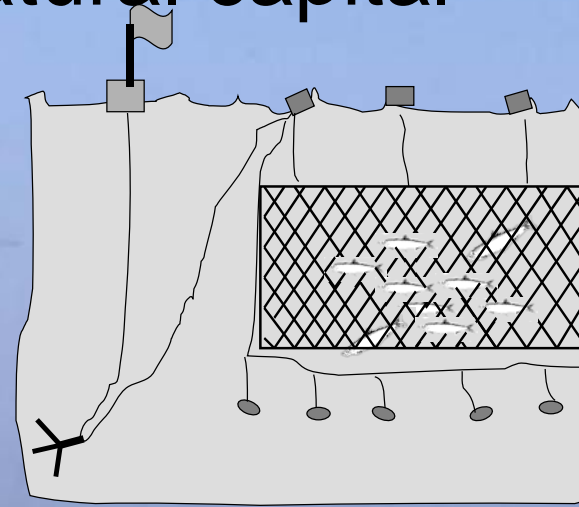
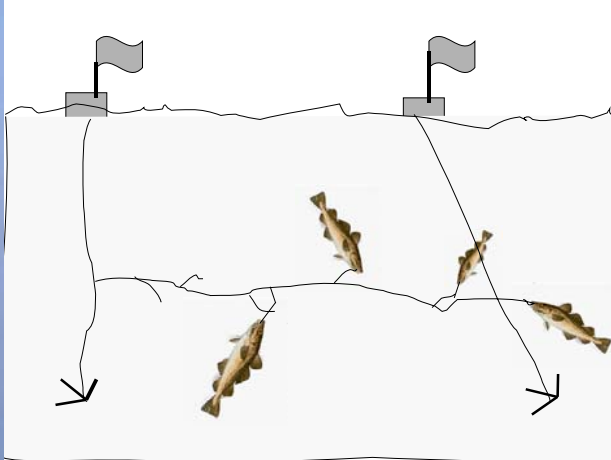
# Negative impacts of fisheries (External Effects)



**Every fishing method with different effects on target, non-target species and ecosystems!**



# Minimizing external effects as preservation of/investment in natural capital



# Fisheries vs. Nature Conservation in the Baltic RAC

- Baltic RAC with fishing sector (2/3) and 'other interest groups' (1/3)
- CCB part of ExCom and WGs
- Idea: Advice to the commission from stakeholders
- Problem: Two opposite directions at least for green NGOs and the fishing sector

# Fisheries vs. Nature Conservation in the Baltic RAC

Different views?

*Coalition Clean Baltic*



**1/3 Group Interests: Long term sustainable use of resources, intact ecosystems, low negative impacts of fisheries**  
⇒ **Prefer long term against short term gains?**

**Fishing Sector Interests:**  
Long term sustainable use of resources, but short term economic problems  
Management system creates incentives for short term gains  
⇒ **Prefer short term against long term gains?**



# Baltic Cod – Long-term management

- Non-Paper by the EU-Commission in 2005 for a long-term management plan
  - Goal:  $F$  of 0.6 (west) and 0.3 (east) in the age groups 3-5. Yearly decrease of max. 10% if fishing mortality is to be above 1.11 times the target fishing mortality rate.
  - The TACs are only allowed to in/decrease by 15% per year.
  - Closure of the Spawning Grounds during the whole year.
  - Closed seasons over two months in the western and three months in the eastern Baltic Sea. Additionally for 30 days during the other months.
  - Technical measures to reduce bycatch of small specimen
- Insufficient for stock recovery
- Problem: Is a (better) recovery program economically feasible?



# Baltic Cod - Calculation of a stock recovery program

- Four Scenarios
  - Status quo – Catch of 50,000 tonnes per year continues, using trawl nets with current mesh sizes.
  - Recovery program I – Reduction to 25,000 t/a during the first 5 years by using trawl nets with greater mesh sizes and escape windows, 50,000 tonnes in year 6, 5,000 t/a increase for the next 20 years, and 150,000 tonnes per year thereafter. In year 10, switch to long lines.
  - Recovery program II – Same program only slower increase of catches after first five years
  - A hypothesized continuously sustainable catch of 150,000 tonnes per year by using long lines only.



# Baltic Cod - Recovery Programs

Discount Rate (%)	Net Present Value (Million Euros)			
	Scenario 1	Scenario 2	Scenario 3	Scenario 4
0.0	750	2,768	3,077	3,750
2.0	469	1,503	1,737	2,347
4.0	318	857	1,036	1,589
13.4	105	105	155	679



# Baltic Cod – Alternative model

- Recovery is economically feasible – therefore a different model
- Increase age of cod in the first year from 2.7 to 3.4 years
- Move effort to autumn and catch TAC with fewer specimen
- Same in year two – in the long run minimum age of 5-6 years
- Advantages: spawning stock biomass increase and insurance against stock collapse
- No other regulations necessary than guaranteing the minimum age
- Switch to longlines after app. 10 years to avoid external effects



# Baltic Cod – Results

- All recovery programs outperform status quo scenario
- Only with very high discount rates the result is different
- Long-term security is essential for fishermen
- A sharp recovery phase at the beginning is necessary
- In the long run switch to environmental friendly fishing gear – longlines instead of trawls – seems possible



A photograph of a beach scene. In the foreground, a sandy beach is visible with a metal signpost. The middle ground features a rocky breakwater extending into the water. The background shows a clear blue sky and the ocean. The text "Thank you very much!" is overlaid in the center.

**Thank you very much!**