

PEFCR MARINE FISH

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The Marine Fish Pilot



- Started 2014
 - Initiated by Norwegian Seafood Federation (FHL) and financed by FHF
 - SINTEF as LCA practitioner
- Norwegian Seafood Federation (FHL)
 - Federation of European Aquaculture Producers (FEAP)
 - European Mollusc Producers' Association (EMPA)
 - European Feed Manufacturers' Federation (FEFAC)
 - [SINTEF Fisheries and aquaculture \(LCA practitioner\)](#)
 - Marine Harvest ASA
 - Norway Pelagic AS (Pelagia AS from 1st January 2015)
 - Norway Seafoods AS
 - Lucas Perches
 - Leroy Fishcut

The goal

- Produce a PEFCR for all seafood on the EU market
- Fair, comparable, applicable, efficient, trusted, robust, scientific, transparent, accepted...



The Result

- Deliverables
 - Two screenings:
 - 1) For an open net pen aquaculture product – using Norwegian farmed salmon as proxy
 - 2) Fished product – using Norwegian and international data from pelagic and demersal fisheries
 - Recommendations for the content of a PEFCR for marine fish products
- Not achieved: Supporting studies, communication studies, benchmarking and thus no "approved" PEFCR

The Challenges: Representability

- Difficult to engage the industry actors, industry organizations and relevant governmental bodies (within the time frame of the pilot).
- Why? Some reasons:
 - The concept of PEF and LCA is still unfamiliar with big parts of the seafood sector.
 - Other environmental challenges takes focus (biotic impacts).
 - Conflict of interests

The Challenges: Data

- No existing LCA databases for fisheries and aquaculture products that covering all possible technologies, species and regions supplying the EU market
- The data that is available, Norwegian data together with international published data, was not enough to meet the requirements of the PEFCR Guideline
- Data that are not specific for seafood sector was also missing

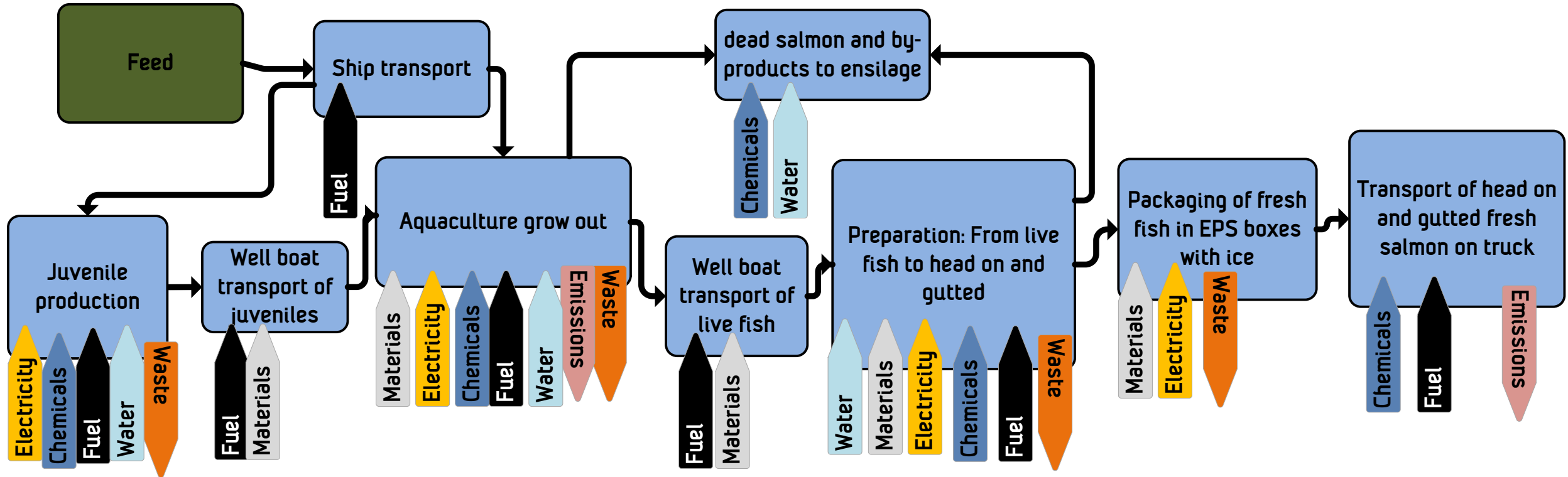
Challenges: Impact assessment

- PEF and LCA (as of today) does not address biotic impacts. Thus a PEF of seafood would not cover many of the most important environmental challenges of fishery and aquaculture products
- The pilot suggested a method to address biotic/stock impacts from fisheries

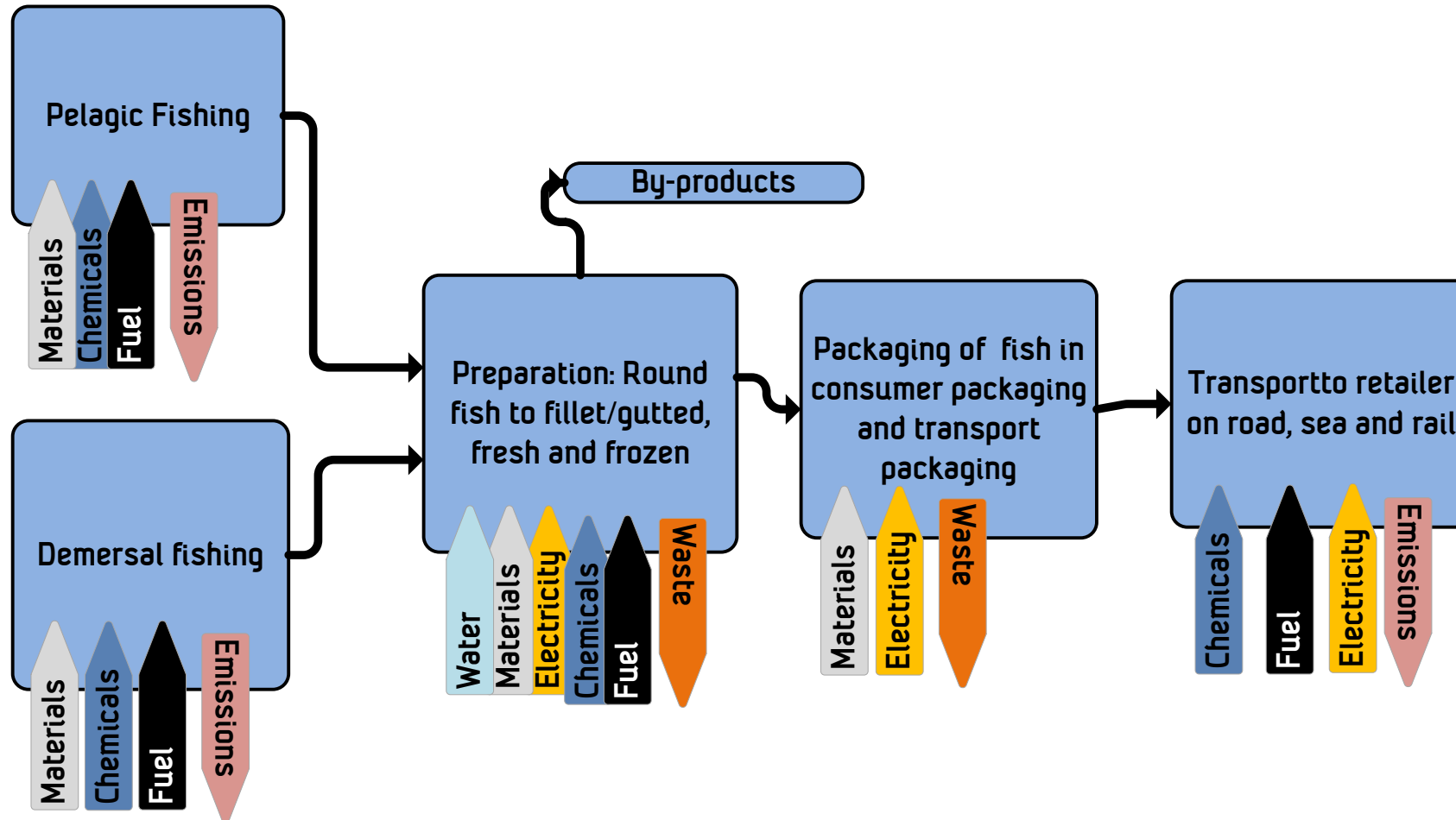
Challenges: The process

- The pilot process was a great experiment
- Helped raise the attention of the industry and politics (the EC did a great job!!!)
- Took back ownership of the environmental work
- Generic challenges that need solutions:
 - Data necessary for all sectors: Energy systems, transport, packaging materials, waste systems and infrastructure
 - Impacts assessment models
 - Harmonization between sectors

Results: Aquaculture case



Results: Fishing case



Results: Recommendations

- Screening confirmed already established knowledge of what is the important parameters in PEFs and LCAs of seafood products
- The screening highlighted that the seafood industry need to dig into industrial ecology/PEF/LCA and that the RnD need to be directed into making the whole PEF method useful also for the marine environment. Both data and impact assessment models.

Results: Recommendations

- All life cycle stages are important (from cradle to retailer gate)
- A PEFCR should be written with a clear business-to-business focus.
No business-to-consumer communication without business-to-business...

The way ahead: LCA Database for marine resources

- Global Feed LCA Institute (GFLI) can accommodate the establishment of the database and secure its continuous development (working on agreement)
- Cooperation: Researchers, feed producers and industry organizations
- Scope: Fishing, aquaculture, preparation, processing, refrigeration, packaging, transport... the whole life cycle up to retailer and feed factory.



Global Feed LCA Institute provides PEF with free database

Together with its sister organisations in the United States (AFIA) and Canada (ANAC) as well as the International Feed Industry Federation (IFIF), FEFAC has launched the Global Feed LCA Institute (GFLI). The GFLI aims to provide a freely accessible, transparent LCA (life cycle assessment) database of feed ingredients. This will allow for globally harmonised assessments and benchmarking of environmental footprint calculations of feed manufacturing. The GFLI has established a formal partnership with the FAO and LEAP (Livestock Environmental Assessment Performance), ensuring it is compliant as regards methodological requirements.

The way ahead: LCA Database for marine resources

- Goals (long term....):
 - Secure the continuous expansion and improvement of the database with a long perspective. Who pays?
 - Make sure the database is transparent with good and complete documentation of the data it contains.
 - Make sure data format is as generic and applicable as possible
 - Make sure database handle and present variation and uncertainty clearly
 - Cover the most important fishing methods and regions/stocks
 - Cover the most important aquaculture methods and species

The way ahead

- How do we make PEF/LCA/Industrial Ecology/GHG reporting a natural part of the everyday life in the seafood sector?
- How much can we simply while maintaining quality and responsibility? Build acceptance for LCA as a profession?



Questions?

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FORSKNINGSFOND



Results: Screening

Carbon footprint fished products



Carbon footprint farmed salmon

