

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

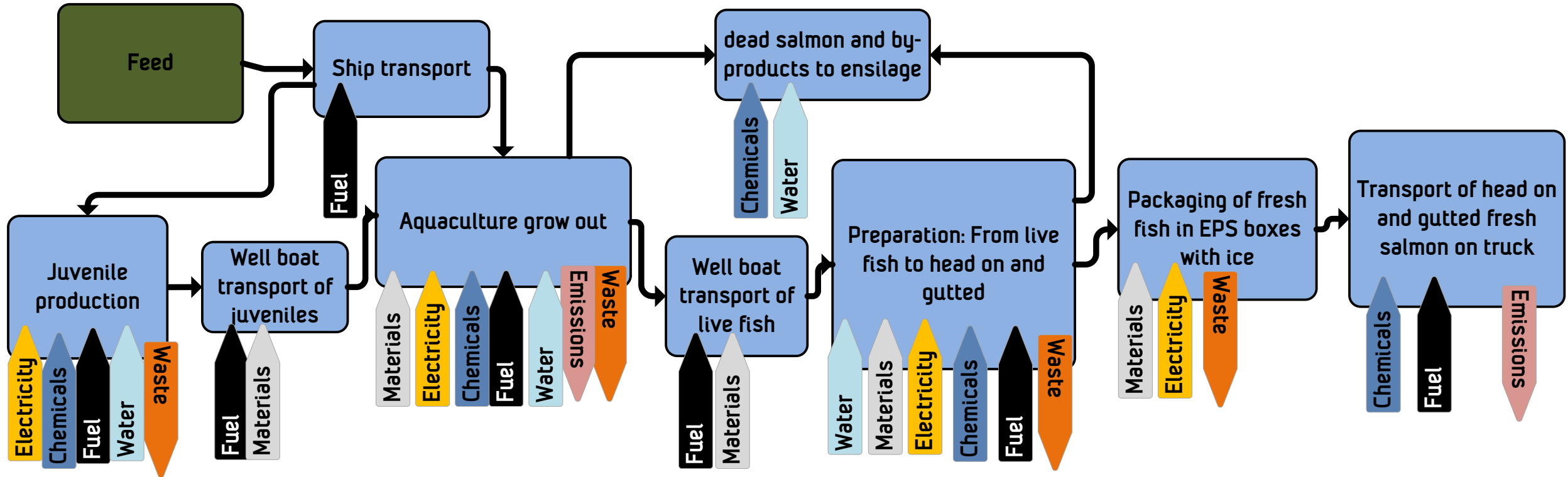
Challenges: Impact assessment

- 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

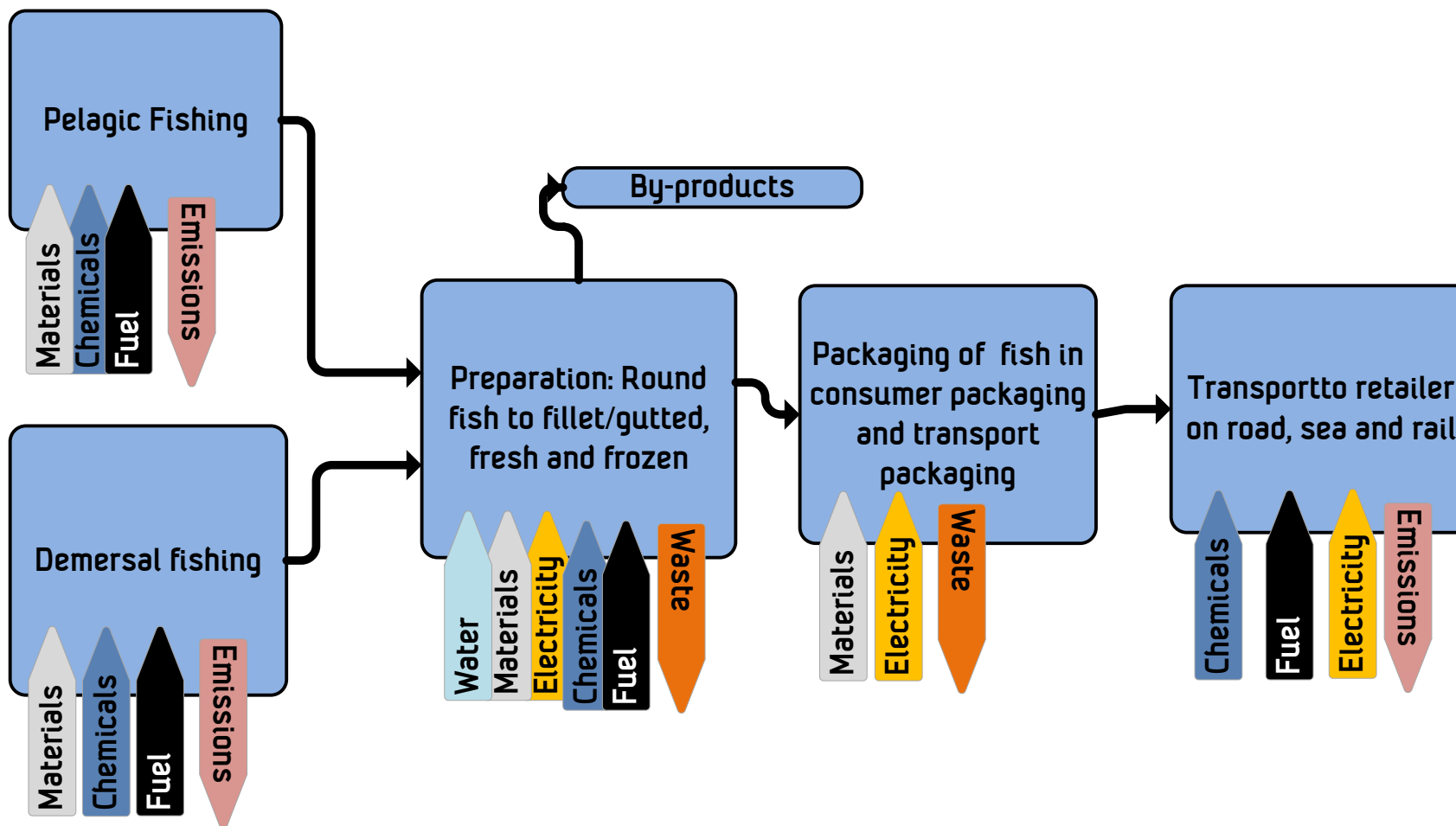
Challenges: The process

- 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: Resarchers, feed producers and industry organizations
- Scope: Fishing, aquaculture, preparation, processing, refrigeration, packaging, transport... the whole life cycle up to retailer and feed factory.



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

