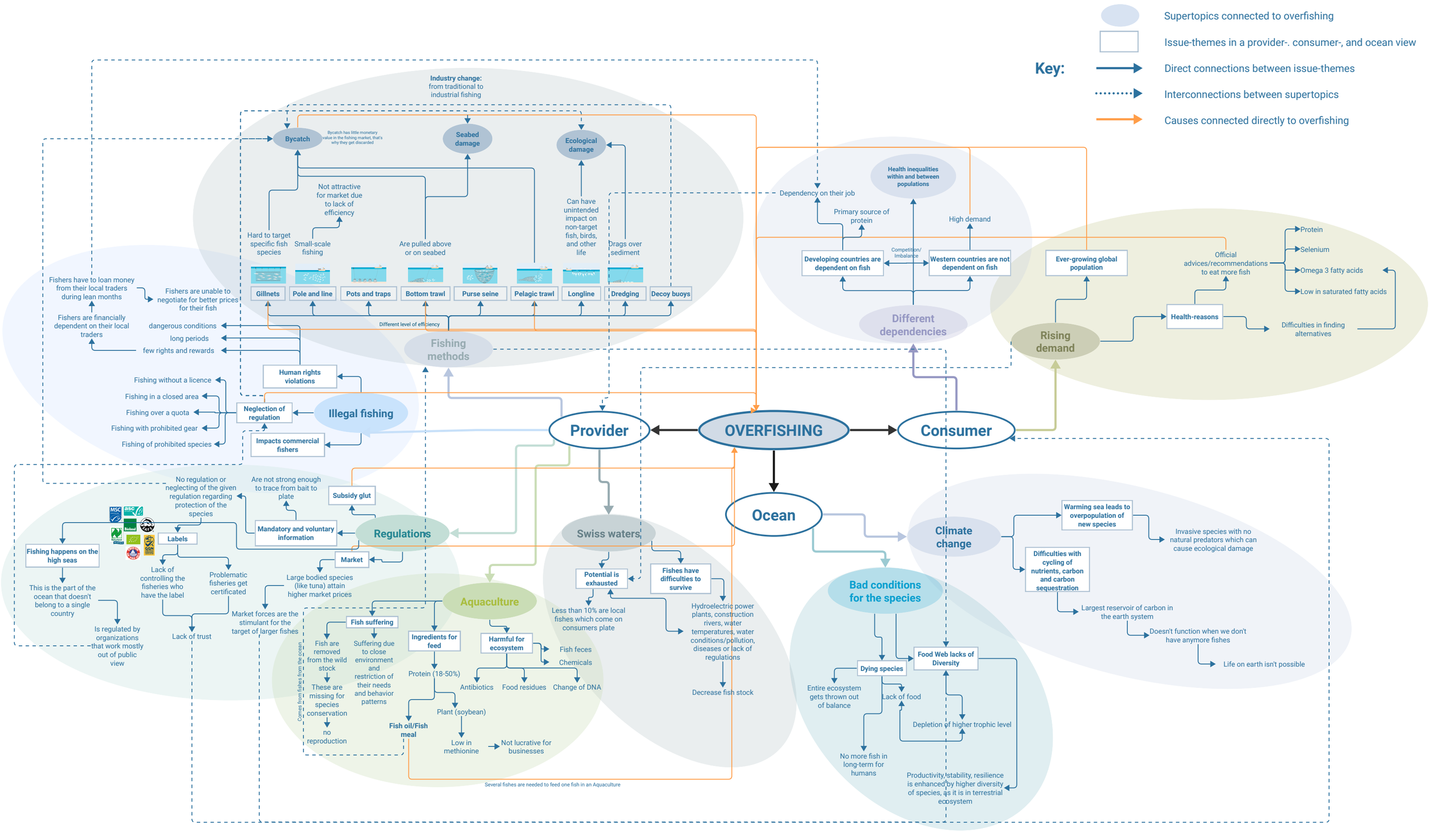
Key:
Supertopics connected to overfishing
Issue-themes in a provider-. consumer-, and ocean view
Direct connections between issue-themes
Interconnections between supertopics
Causes connected directly to overfishing
OVERFISHING
Provider
Consumer
Ocean
Industry change: from traditional to industrial fishing
Bycatch
Bycatch has little monetary value in the fishing market, that's why they get discarded
Seabed damage
Ecological damage
Not attractive for market due to lack of efficiency
Hard to target specific fish species
Small-scale fishing
Are pulled above or on seabed
Can have unintended impact on non-target fish, birds, and other life
Drags over sediment
Gillnets
Pole and line
Pots and traps
Bottom trawl
Purse seine
Pelagic trawl
Longline
Dredging
Decoy buoys
Different level of efficiency
Fishing methods
Fishers have to loan money from their local traders during lean months
Fishers are unable to negotiate for better prices for their fish
Fishers are financially dependent on their local traders
dangerous conditions
long periods
few rights and rewards
Human rights violations
Illegal fishing
Fishing without a licence
Fishing in a closed area
Fishing over a quota
Fishing with prohibited gear
Fishing of prohibited species
Neglection of regulation
Impacts commercial fishers
Health inequalities within and between populations
Dependency on their job
Primary source of protein
High demand
Developing countries are dependent on fish
Competition/ Imbalance
Western countries are not dependent on fish
Different dependencies
Ever-growing global population
Official advices/recommendations to eat more fish
Protein
Selenium
Omega 3 fatty acids
Low in saturated fatty acids
Health-reasons
Difficulties in finding alternatives
Rising demand
No regulation or neglecting of the given regulation regarding protection of the species
Are not strong enough to trace from bait to plate
Subsidy glut
Mandatory and voluntary information
Regulations
Labels
Fishing happens on the high seas
This is the part of the ocean that doesn't belong to a single country
Is regulated by organizations that work mostly out of public view
Lack of controlling the fisheries who have the label
Problematic fisheries get certificated
Lack of trust
Market
Large bodied species (like tuna) attain higher market prices
Market forces are the stimulant for the target of larger fishes
Aquaculture
Fish suffering
Fish are removed from the wild stock
These are missing for species conservation
no reproduction
Suffering due to close environment and restriction of their needs and behavior patterns
Comes from fishes from the ocean
Ingredients for feed
Protein (18-50%)
Fish oil/Fish meal
Plant (soybean)
Low in methionine
Not lucrative for businesses
Harmful for ecosystem
Fish feces
Chemicals
Antibiotics
Food residues
Change of DNA
Several fishes are needed to feed one fish in an Aquaculture
Swiss waters
Potential is exhausted
Less than 10% are local fishes which come on consumers plate
Fishes have difficulties to survive
Hydroelectric power plants, construction rivers, water temperatures, water conditions/pollution, diseases or lack of regulations
Decrease fish stock
Climate change
Warming sea leads to overpopulation of new species
Invasive species with no natural predators which can cause ecological damage
Difficulties with cycling of nutrients, carbon and carbon sequestration
Largest reservoir of carbon in the earth system
Doesn't function when we don't have anymore fishes
Life on earth isn't possible
Bad conditions for the species
Dying species
Entire ecosystem gets thrown out of balance
Lack of food
No more fish in long-term for humans
Food Web lacks of Diversity
Depletion of higher trophic level
Productivity, stability, resilience is enhanced by higher diversity of species, as it is in terrestrial ecosystem