

Appendix A- The food choice chart, simplified version with a description of each item

	Criteria description	Salmon (land farming)	Salmon (sea farming)	Yellowfin tuna	Sardines, mackerel	Shellfish (mussels, oysters)	Algae	Smoked salmon imitation	Rapeseed oil (organic)
Toxic elements	Impacts on human health. Level of contamination by eternal pollutants (PCB, PFAS), heavy metals and microplastics.	5 - PCB, PFAS and microplastic contamination. Main mode of impregnation: oily fish and shellfish.	5 - PCB, PFAS and microplastic contamination. Main mode of impregnation: oily fish and shellfish.	6 - Tuna is the fish with the highest level of mercury contamination.	5 - Oily fish are among the species most contaminated by pollutants.	4 - Shellfish are among the species most contaminated by pollutants.	2 - Algae contamination varies according to water quality.	1 - Smoked salmon imitation contains no toxic elements (PCBs, PFAS, microplastics).	1 - Organic rapeseed oil contains no toxic elements (PCBs, PFAS, microplastics).
Omega 3 intake	Impact on nutritional health. Paradoxically, the French population is deficient in omega-3s, despite the increase in fish consumption. Find out why in our methodology.	2 - Eating 100g of smoked salmon daily covers 73% of daily omega 3 requirements. DHA and EPA type omega 3	2 - Eating 100g of smoked salmon daily covers 73% of daily omega 3 requirements. DHA and EPA type omega 3	5 - Consuming 100g of yellowfin tuna daily covers 29% of daily omega 3 requirements. DHA and EPA type omega 3	1 - Consuming 100g of sardines/mackerel daily covers 93% of daily omega 3 requirements. DHA and EPA type omega 3	5 - Eating 100g of shellfish daily covers 17% of daily omega 3 requirements. DHA and EPA type omega 3	6 - Seaweed does not contain omega 3.	2 - Consuming 100g of similli daily covers 74% of daily omega 3 requirements. DHA and EPA type omega 3	1 - Consuming 100g of rapeseed oil daily covers 328% of daily omega-3 requirements. To reach 100% of daily intake per 100g, 2 to 3 tablespoons a day are sufficient. ALA-type omega 3
Biodiversity	Impacts on aquatic and terrestrial ecosystems & on wild and farmed animal species.	5 - Strong environmental pressures linked to salmon feed: the supply of vegetable meal contributes to deforestation in Amazonia; fish meal exacerbates over-fishing and the decline in wild fish populations.	6 - Strong environmental pressures linked to salmon feeding and significant degradation of water quality in the marine environment: discharge of nutrients and excrement, eutrophication and phytoplankton bloom, discharge of pesticides and microplastics.	6 - The techniques used by tuna fisheries impact many non-target species (100,000 tonnes of by-catches and discards every year in the world's tuna fisheries).	4 - Terrestrial and freshwater acidification, depletion of energy and water resources, ecotoxicity for freshwater aquatic ecosystems.	4 - Depletion of energy resources.	5 - Acidification of land and freshwater, depletion of mineral resources.	2 - Low impact on terrestrial and aquatic ecosystems and wildlife.	1 - Organic production has virtually no impact.
Carbon footprint	Greenhouse gas (GHG) emissions.	6 - The carbon footprint of salmon (land-based farming) is estimated at between 2 and 14kg of CO2 equivalent per kg of salmon produced.	5 - The carbon footprint of salmon (sea farming) is estimated at between 7 and 10kg of CO2 equivalent per salmon produced.	3 - The carbon footprint of yellowfin tuna is estimated at 4.4kg of CO2 equivalent per kg of tuna produced.	4 - The carbon footprint of sardines/mackerel is estimated at 7.26kg of CO2 equivalent per kg produced.	4 - The carbon footprint of shellfish is estimated at 5.7kg of CO2 equivalent per kg produced.	4 - The carbon footprint of seaweed is estimated at 6.7kg of CO2 equivalent per kg produced (average for ulva, nori, kombu breton, haricot de mer).	1 - The carbon footprint of similli is estimated at 1.6kg of CO2 equivalent per kg produced.	2 - The carbon footprint of rapeseed oil is estimated at 2.3kg of CO2 equivalent per kg produced.
Social impact	Impacts on human rights, fair access to food and employment.	6 - Strong detour of soya production and small pelagic fisheries to feed salmon, to the detriment of human populations: 90% of the world's industrial fishing catches are made up of species directly edible by humans.	6 - Strong detour of soy production and small pelagic fish fishing to feed farmed salmon, to the detriment of human populations: 90% of the world's industrial fishing catches are made up of species directly edible by humans.	6 - Tuna farming on farms (65% of the tuna produced) pollutes water and land with chemicals and antibiotics. Fish get sick, and diseases can spread quickly via the seabirds that eat them.	4 - Sardine/mackerel fishing is carried out in the North-East Atlantic Ocean (Mediterranean, Morocco and Mauritania) using purse trawls and pelagic seines, jeopardizing the food security of local communities.	3 - Shellfish production is a major source of employment (around 17,000 people), and involves family labor.	1 - The development and consumption of algae is recommended as a means of transforming the food system by international (FAO) and European institutions, and corresponds to the SDG (Sustainable Development Goal) on sustainable/low-trophic-level aquaculture. This is a booming sector.	2 - Local, job-creating production.	1 - Rapeseed oil production is a job-creating industry. It needs support for organic production.
Animal condition	Impacts on animal living conditions according to cage density, disease, farming and fishing practices.	6 - On land-based salmon farms, densities range from 70 kg to 150 kg of salmon per cubic metre of water, increasing the risk of infectious diseases.	5 - In sea-cage salmon farms, densities are around 25 kg of salmon per cubic meter of water. Welfare is degraded at a threshold of around 10-20 kg/m3.	6 - Suffering of captured tuna: after suffocation and agony, they are frozen alive in the holds of ships. 100,000 tonnes of non-target species are caught and discarded each year in the world's tuna fisheries.	3 - Stress and suffering linked to the agony of fish trapped in nets.	2 - Little impact on animal welfare.	1 - No impact on animal welfare.	1 - No impact on animal welfare.	1 - No impact on animal welfare.