



Global Action Network

Sustainable Food from the Oceans and Inland Waters for Food Security and Nutrition

Gain and share

This gain and share document serves as basis to develop the '[Gain and Share Tool](#)' at the Global Action Network web page. Through the Gain and Share Tool, Network participants can gain and share knowledge to promote sustainable food from the oceans and inland waters for food security and nutrition. Elements in this dynamic document are results from input and suggestions by the Network participants and some may be more detailed than others.

By exchanging best practices from different nations, through identifying challenges, resources and achievements, we can foster mutual learning related to the key elements of food security: '*sufficient*', '*safe*', '*nutritious*', '*dietary needs*', '*food preferences*' and '*leaving no one behind*'. Many actors play important roles to realize the potential contribution of aquatic foods to food security and nutrition, thus, "*towards common goals*" is also added as key element and a part of the Gain and Share Tool.

The key elements are listed separately with subsections of identified challenges related to aquatic foods paired with knowledge and solutions. References to the relevant Sustainable Development Goals (SDG) and recommendations from the Committee on World Food Security ([CFS policy recommendations](#)) are also added. Examples of SMART commitments (Specific, Measurable, Achievable, Relevant and Timebound) by network members will be included as examples under solutions. For some challenges, knowledge (scientific research and reports etc.) and solutions (guidelines, actions and tools) may already be available, while for others, new knowledge and solutions will need to be identified. These gaps will be denoted with '**LINK?**'. Some examples of 'knowledge' and 'solutions' may be relevant to more than one challenge; thus, these may be mentioned more than once. Aquatic foods will be the term used throughout the document and refers to all (edible) plant and animal sources from oceans and inland waters - suitable, known or unknown, for human consumption.

Key element SUFFICIENT AQUATIC FOOD

The key element SUFFICIENT refers to the amount of food from oceans and inland waters available for human consumption and relies on: amount of food we can harvest, produce and preserve; reduction of food loss and waste; and access to affordable aquatic food. Relevant SDGs related to this element are SDG [2](#), [3](#), [4](#), [6](#), [9](#), [12](#), [14](#), [16](#) and [17](#).

Challenges		Knowledge	Solutions	SDG	CFS
A	Sustainable fisheries management	CFS HLPE #7 ‘Sustainable fisheries and aquaculture for food security and nutrition’ Sustainable utilization of marine living resources – EAF-Nansen Programme Ecosystem Approach to Fisheries (FAO) – ICES The International Council for the Exploration of the Sea Multi- and bilateral projects – EAF-Nansen Programme Ecosystem Approach to Fisheries (FAO) Monitoring for scientific advice – The Ecosystem Approach to Fisheries (EAF) Illegal, Unreported and Unregulated (IUU) fisheries – Blue Resilience Project (UNDP) Reports – Assessment of commitments on sustainable fisheries to the Our Ocean conferences – Fisheries in the drylands of sub-Saharan Africa - Fish come with the rain (FAO) – CFS HLPE #7 ‘Sustainable fisheries and aquaculture for food security and nutrition’ – The State of World Fisheries and Aquaculture biennial reports (FAO) – CFS HLPE #17 ‘Data collection and analysis tools for food security and nutrition’	CFS policy recommendations ‘Sustainable fisheries for food security and aquaculture for food security and nutrition’ Monitoring national fisheries – Fisheries monitoring Centre (Norway) – Stock assessment for data limited fisheries • FAO • NOAA • MSC – Act relating to the management of wild living marine resources (Norway) Examine the potential to use mesopelagic resources – Ocean to oven – MEESO (EU) High quality seed for aquaculture – From Learner to Leader (WorldFish) Implementation of guidelines – Securing sustainable small-scale fisheries: Showcasing applied practices in value chains, post-harvest operations and trade Illegal, Unreported and Unregulated (IUU) fisheries – Blue Justice Initiative Resource – Convention on Biological Diversity (CBD) Target 6 (quick guide) (ICSF) – Sea Around Us – The FishPath tool Guidelines – Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food (No. 2 and 8E) (FAO)	2, 4, 9, 12 & 14.	4A.4 & 4C.
		Sustainable feed ingredients – Ocean to oven Reports – Demand and supply of feed ingredients for farmed fish and crustacean – CFS HLPE #7 ‘Sustainable fisheries and aquaculture for food security and nutrition’ – The State of World Fisheries and Aquaculture biennial reports (FAO) – The Ocean as a Solution to Climate Change: Updated Opportunities for Action (Ocean Panel)	Sustainable feed ingredients – AquaVitae Atlantic consortium looking for sustainable solutions for aquaculture – Insects for Peace Guidelines – Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food (No. 2, 3, 8 (E and F)) (FAO) Implementation of guidelines – Guidelines for Sustainable Aquaculture (GSA). Regional consultations started in 2019. There is a report on the Regional Consultation on Africa (FAO) Non-fed aquaculture for food and feed	2, 4, 12, 14, 16 & 17.	3, 4B & 4D.
B	Sustainable aquaculture production			2.5, 12.2, 12.6, 14.c, 16.6, 17.14 & 17.15.	

- Seaweed production: ‘[Ocean Forest](#)’; ‘[Red Seaweed Promise](#)’; ‘[Safe Seaweed by Design protocols](#)’
- Small fish aquaculture: ‘[Mola breeding in India](#)’ (WorldFish)

Transparency and traceability (collate, compile and summarise existing information)

- [Data from Norwegian aquaculture](#)
- [Sustainability in the Irish seafood sector](#)

C	Food loss and waste	Reports – CFS HLPE #8 ‘Food losses and waste in the context of sustainable food systems’ – Right to Food Discussion Paper ‘Food loss and waste and the right to adequate food: making the connection’ Resources – Food Loss and Waste in Fish Value Chains (FAO)	Reduce food loss and waste in the value chain – Food loss and waste in fish value chain, FAO web tool – Food Heroes North-West Europe initiative to reduce food losses in fish, meat and fruit & vegetable sector – Stop Food Waste (Ireland) – Reduce post-harvest losses (FAO) – Solutions for Reducing Food Loss and Waste (FLW) (FAO) SMART commitments Norway has made a SMART commitment to by 2030 halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses	6 & 12.	4A.5.
				6.4, 12.3 & 12.5.	

D	Transparency and traceability	Reports – Seafood traceability for fisheries compliance	National industry standards – Automated and differentiated calculation of sustainability for cod and haddock products (EU) – FiTI	2, 12, 14, 16 & 17.	4B & 4D.
				2.5, 12.2, 12.6, 14.c, 16.6, 17.14 & 17.15.	

E	Climate change	Research project – WGIBAR ICES Working Group on the Integrated Assessments of the Barents Sea Reports – ‘Cyclone Ockhi -Disaster risk management and sea safety in the Indian marine fisheries sector’ – ‘FAO’s work on climate change -Fisheries & aquaculture 2019’ (FAO) – Decision-making and economics of adaptation to climate change in the fisheries and aquaculture sector (FAO) – UN Climate report Guidelines – Integrating blue foods into national climate strategies (US)	Climate change on aquaculture – Integrated multi-trophic aquaculture under climate change – Integrated Multi-Trophic Aquaculture Makes Work More Rewarding for Coastal Fish Farmers of Bangladesh (WorldFish)		

Surveillance programs

- [EAF-Nansen Programme](#) Ecosystem Approach to Fisheries (FAO)

[Adaptation toolbox of fisheries in response to climate change](#) (FAO)

[The Ocean as a Solution to Climate Change: Updated](#)

F	Impacts of climate change on fisheries	– FAO's work on climate change Fisheries & aquaculture 2019 (FAO) – Decision-making and economics of adaptation to climate change in the fisheries and aquaculture sector (FAO) – The Ocean as a Solution to Climate Change: Updated Opportunities for Action (Ocean Panel)
G	Ensuring Biodiversity	
H	Covid-19	Resources – COVID-19 impacts on Fisheries and Aquaculture (FAO) – COVID-19 response: Fisheries and Aquaculture (EC) – Fisheries, aquaculture and COVID-19: Issues and policy responses (OECD) – COVID-19 impacts on fish and aquatic food systems (WorldFish) – Information on COVID-19 and small-scale fisheries (FAO)

Key element SAFE AQUATIC FOOD

The key element SAFE AQUATIC FOOD refers to optimising food safety as it is a prerequisite for increased consumption of aquatic food. Actions linked to this key element rely on understanding: the connection between hygienic production and foodborne illness; the connection between environmental pollution; food production and human health; how contaminants and pollutants end up in the food (value) chain; and levels of contaminants. Relevant SDGs related to this element are SDG [2](#), [3](#), [4](#), [6](#), [7](#), [8](#), [9](#), [12](#), [14](#), [16](#) and [17](#).

Challenges	Knowledge	Solutions	SDG	CFS
	CFS HLPE #7 ‘Sustainable fisheries and aquaculture for food security and nutrition’	CFS policy recommendations ‘Sustainable fisheries for food security and aquaculture for food security and nutrition’		
A	General food safety Reports – Illuminating Hidden Harvests (FAO)	Food Safety Authorities (legislation, enforcement) – Food Safety Authority of Ireland – Norwegian Food Safety Food standards, guides and codes of practice – Codex Alimentarius (FAO) Guidelines – Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (No. 9) (FAO)		
B	Hygiene Cooling systems – ‘Cold’ handling and storage systems (FAO) Monitor for knowledge – on improved ovens for smoking, drying racks, preparation of fish powder etc. LINK? – on climate changes affecting preservation LINK? Research project – SmallFishFood	Food standards, guides and codes of practice – Codex Alimentarius (FAO) Innovation for better methods of preservation – Streamlining fish processing - Shifting from smoking ovens to the FTT-Thiaroye system (FAO) – Application of Appropriate Technology for Artisanal Fish Drying (FAO) Improvement of human skills to handle food	2, 4, 7, 8, 9 & 17. 2.1, 7.1, 7.a & 7.b. 4.7, 7.a, 8.2, 8.3, 9.4, 9.b & 17.7. 4.7, 7.a, 8.2, 8.3	4A.3 & 4B.

		– Good fish handling (FAO) – Capacity development for small-scale post-harvest and trade actors, in particular women * Towards gender-equitable small-scale fisheries governance and development (FAO)	8.2, 8.3, 9.4, 9.b, & 17.7.		
C	Contaminants	Increase knowledge on contamination and food safety in fish – Dioxins and their effects on human health (WHO) – Food safety fact sheet (WHO) – Microplastic LINK? Monitoring programs – IMR seafood monitoring (Norway) Feed with low levels of contaminants and pollutants LINK? Connection to terrestrial industry, Contaminants and pollutants from land-based industry ending up in waters – Water pollution from agriculture: a global review (FAO) Risk-benefit reports – Report of the Joint FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption (FAO/WHO) – Quantitative assessment of the net effects on fetal neurodevelopment from eating commercial fish (US FDA) – Statement on the benefits of fish/seafood consumption compared to the risks of methylmercury in fish/seafood (EFSA) – Benefit and risk assessment of fish in the Norwegian diet – an update (VKM)	Food standards, guides and codes of practice – Codex Alimentarius Developing transparent national databases – Seafood database Contaminant and nutrient levels in fish and seafood (Norway) Make research on contaminants easily accessible to public – Contaminants in the fish caught (Finland) – Seafood database (Norway) – Fishchoice tool Specific recommendations for eating fish and seafood from polluted areas – Restrictions from known polluted areas (Finland) LINK? – Specific advice for women (Norway) Finding the source of contamination – The Hazard Analysis Critical Control Point (HACCP)-system (FAO) Use sustainable and safe feed ingredients LINK? Action across borders ensuring healthy clean waters LINK?	3, 6, 12, 14 & 16. 3.b, 3.9, 3.b & 17.18. 6.3, 12.4, 14.1, 14.a & 14.c.	4B.4.
D	Consumers' lack of knowledge	Teaching plans and information brochures – Public education and communication (FAO) Report – Consumer organizations and the right to adequate food (FAO)	Examples from countries – Consumer information from health and food authorities (Norway) LINK? Guidelines – Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (No. 9) (FAO)		
E	Covid-19	Resources – Information on COVID-19 and small-scale fisheries (FAO)	Sensitization Workshop – COVID-19 sensitization for NAFPTA (National Fishworkers and Traders Association of Ghana) executives (FAO)		

Key element NUTRITIOUS AQUATIC FOOD

The key element NUTRITIOUS AQUATIC FOOD concerns nutrient composition of aquatic food. Relevant, reliable and recent food composition data published open access are important for assessing the nutrient content. Also, it is important to understand how conservation, storage and preparation may influence nutrient content. Nutrient content of feed may affect the nutrient content of food. Relevant SDGs related to this element are SDG [2](#), [3](#), [4](#) and [17](#).

Challenges		Knowledge	Solutions	SDG	CFS
A	Ensuring data on nutrients in aquatic food	CFS HLPE #7 ‘Sustainable fisheries and aquaculture for food security and nutrition’ Data collection – EAF-Nansen Programme Ecosystem Approach to Fisheries (FAO) – SmallFishFood Interdisciplinary research project with a sub-goal of assessing nutritional quality and safety of small fish along the value chains – Blue Food Assessment Paper which compiles nutrient information on aquatic foods released prior to the 2021 UN Food Systems Summit Nutrient composition of aquatic foods – Serving up data on nutrient composition of aquatic foods (WorldFish) Reports – Illuminating Hidden Harvest (FAO) International CoP – International CoP on Nutrient Composition of Aquatic Foods Meeting	CFS policy recommendations ‘Sustainable fisheries for food security and aquaculture for food security and nutrition’ Databases with open access – FAO/INFOODS (International Network of Food Data Systems) Food Composition Databases (FAO) – Seafood database Contaminant and nutrient levels in fish and seafood (Norway) – FAO/INFOODS Global food composition database for fish and shellfish – FAO/INFOODS Food Composition Database for Biodiversity – Afrofoods – Food composition, based on analytical data of African foods – NUTRAQUA Nutritional composition of aquatic products (France) – EUROFIR (European Food Information Resources) Member-based food composition datasets from 30 countries worldwide – Search FishBase – Aquatic Food Composition Database (harvard.edu) Methodology – build on and/or upscale on the methods used in the Illuminating Hidden Harvest (FAO) Useful tools – Fishchoice tool (EU)	2 & 17. 3.d & 17.18.	4A.1 & 4A.6.
B	Attention and literacy of aquatic food as important food sources	Report – UNSCN Discussion Paper ‘Aquatic foods in sustainable healthy diets’ (FAO) – CFS HLPE #12 ‘Nutrition and food systems’ Teaching plans and information brochures LINK? Food and nutrition programmes – The State of School Feeding Worldwide 2022 (WFP) – School based food and nutrition education (FAO) Non-traditional aquatic food – Small fish for food security and nutrition (FAO) – Promoting nutrition-sensitive aquaculture in India through small indigenous fish species (WorldFish) – School feeding pilot in Assam (WorldFish)	Tool for dietary reference values – EFSA’s dietary reference values Nutrition recommendations and food based dietary guidelines – Food-Based Dietary Guidelines in Europe (EFSA) – Food-Based Dietary Guidelines (FAO) Dietary recommendations and advices regarding aquatic food – Summary of FBDG recommendations for fish for the EU, IS, NO, CH, and UK (EFSA) – Advice about Eating Fish (US FDA) – School based food and nutrition education (FAO) Food and nutrition programmes – Fiskesprell (Norway) – A Guide to Serving Local Fish in School Cafeterias (ICES, US) – Improving livelihoods and nutrition for women and children (India) – School food and nutrition programmes (FAO)	2 & 3. 3.d 2.1, 2.2, 3.b & 3.d. 2.1, 2.2 & 3.d	2, 4A.1 & 4A.6. 4.1 & 4.7.

- Guidelines**
- [Voluntary Guidelines](#) on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (No. 9, 10 and 11) (FAO)

Key element DIETARY NEEDS

The key element DIETARY NEEDS refer to the fact that consumption of fish can play a unique role in providing healthy nutrients to reduce the burden of disease. Also, cognitive development and growth can be improved by increasing fish consumption not only in the first 1000 days, but throughout adolescence. This key element covers actions to optimise consumption of aquatic food as part of a healthy diet. Relevant SDGs related to this element are SDG [2](#), [3](#), [4](#), [5](#), [14](#) and [16](#).

Challenges	Knowledge	Solutions	SDG	CFS
	CFS HLPE #7 ‘Sustainable fisheries and aquaculture for food security and nutrition’	CFS policy recommendations ‘Sustainable fisheries for food security and aquaculture for food security and nutrition’		
A Low consumption of aquatic food	Risk-benefit reports – Joint FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption (FAO/WHO) – A quantitative assessment of the net effects on fetal neurodevelopment from eating commercial fish (US FDA) – Statement on the benefits of fish/seafood consumption compared to the risks of methylmercury in fish/seafood (EFSA) – Benefit-risk assessment of fish and fish products in the Norwegian diet – an update (VKM)	Nutrition recommendations and food based dietary guidelines – Food-Based Dietary Guidelines in Europe (EFSA) – Food-Based Dietary Guidelines (FAO) Reports – UNSCN Discussion Paper “The role of aquatic foods in sustainable healthy diets” Dietary recommendations and advice regarding aquatic food – Summary of FBDG recommendations for fish for the EU, IS, NO; CH and UK (EFSA) – Advice about Eating Fish (US FDA) Food and nutrition programs – Fiskesprell (Norway) – Improving livelihoods and nutrition for women and children (India) Nutrition and dietary recommendations – Nordic Nutrition Recommendations – Eating and learning together – recommendations for school meal (Finland) – Health and joy from food – meal recommendations for early childhood education and care (Finland) – National action plan for a healthier diet (Norway) Empower women – in small-scale fisheries post-harvest sector LINK? (See also solution to challenge B, Leaving no one behind) Model diets for better health – Mediterranean and New Nordic diets LINK? Guidelines – Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (No. 10 and 11) (FAO)	2 & 5. 2.1, 2.2, 3.b, 3.d	4A.1, 4A.2, 4A.6 & 4G.
			5.5, 5.b & 5.c.	

					– Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (FAO)
					SMART – Norway has made a SMART commitment to increase consumption of fish by 20% by 2025
B	Visibility of aquatic food in food-based advices				Reports – Science for ocean actions – Eat-Lancet – Common scientific basis for national nutrient recommendations and food-based dietary guidelines integrating environmental aspects
					Nutrition recommendations and food based dietary guidelines – Food-Based Dietary Guidelines in Europe (EFSA) – Food-Based Dietary Guidelines (FAO) – Food-Based Dietary Guidelines (Denmark, Finland, Iceland, Norway and Sweden)
					Dietary recommendations and advices regarding aquatic food – Summary of FBDG recommendations for fish for the EU, IS, NO, CH and UK (EFSA) – Advice about Eating Fish (US FDA) – Fish and seafood recommendations in the Nordic Countries
					Bringing fish as food into current and coming agendas and fora – The International Year of Artisanal Fisheries and Aquaculture 2022 (UN)
					Recommendations – CFS policy recommendations ‘Sustainable fisheries for food security and aquaculture for food security and nutrition’
C	Fake news				Solutions to avoid ‘fake news’ concerning fisheries and aquaculture (Brazil) LINK?
D	Vulnerable groups				Knowledge on food technology – on low-cost/small infrastructure technology for improving handling, processing, and storage LINK? – Processing and storage SmallFishFood – Sustainable food for all (Nofima, Norway)
					Knowledge on specific vulnerable groups consumption – Intra-household consumption (women, children) LINK? – Fish in diets of indigenous peoples
					Share recipes and products that are easier to eat Solutions for small-scale infrastructure along the value chain which small producers/processors and vulnerable groups can access and utilize in order to deliver – safe aquatic foods LINK? – affordable aquatic foods LINK? – acceptable aquatic foods LINK? – convenient aquatic foods LINK?
					Equitable distribution of aquatic foods – Equal access to markets and technology for improved fish value chains and reduced time burden of women (IYAFA IWD event) – Equal rights - Gender Transformative Approach and its adoption in the field (IYAFA IWD event)
					Guidelines – Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (No. 12) (FAO)

Key element FOOD PREFERENCES

For many people, aquatic food is not part of the diet due to obstacles like poor quality, high prices, food culture, dietary habits, and being perceived as inconvenient. Actions to overcome these obstacles, and others, are related to this key element. Relevant SDGs related to this element are SDG 4, 12 and 16.

Challenges	Knowledge	Solutions	SDG	CFS
	CFS HLPE #7 ‘Sustainable fisheries and aquaculture for food security and nutrition’	CFS policy recommendations ‘Sustainable fisheries for food security and aquaculture for food security and nutrition’		
A Including aquatic foods in the sustainable diet narrative	Report – CFS HLPE #7 ‘Sustainable fisheries and aquaculture for food security and nutrition’ – Recipe for change: An agenda for a climate-smart and sustainable food system for a healthy Europe (EC) – Greenhouse gas emissions of Norwegian seafood products in 2017 (SINTEF, Norway)	Policy recommendations – CFS policy recommendations ‘Sustainable fisheries for food security and aquaculture for food security and nutrition’	14.	4B.2.
			14.a.	
B Consumer education and literacy	Reports – Illuminating Hidden Harvests Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries Food and Agriculture Organization of the United Nations (fao.org) – Consumer Organizations and the Right to Adequate Food (FAO)	Education programs – Guide to conducting participatory cooking demonstrations (FAO) – Fiskesprell (Norway) – A Guide to Serving Local Fish in School Cafeterias (ICES, US) – Women’s role in promoting and raising awareness of consuming safe and healthy aquatic foods (IYAFA CFS50 side event)	4 & 16.	
		Introducing neglected and underutilized species unknown to consumers – recipe books LINK? – cooking demonstrations LINK? – convenience products made from aquatic species LINK?		
		Establishment of Partnerships with – Slowfish		
		Guidelines – Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (Guidelines 10-11, 15) (FAO)		
	Knowledge – improved processing such as drying technologies (drying racks, solar tents, solar baskets, etc.) smoking technologies (FTT and other) – improved storage – improved handling practices LINK?	Education programs – Fish Handling, Quality and Processing: Training and Community Trainers Manual (FAO)		
	Cooling systems – ‘Cold’ handling and storage systems (FAO)	Guidelines – Guidelines for increasing access of small-scale fisheries to insurance services in Asia (FAO) – Guidelines for micro-finance and credit services in support of small-scale fisheries in Asia (FAO)		

C Quality throughout the value chain	Small scale infrastructure, capacity building/training, awareness raising (in addition to access to finance as is noted) – post-harvest best practice work that FAO are doing under the Norad project LINK? Improve quality of fish and fish products – ProFISH, an NGO including actors in the fish value chain (Finland) – Good fish handling (FAO) – Food waste and loss in the value chain (FAO & Norad) – Post-harvest fisheries development project (UNIDO CAPFISH) Collaboration with industry and innovation LINK?
D Practicality and tradition of aquatic food	Increase consumer's knowledge of fish and fish products – ProFISH aims to increase consumers knowledge of fish and fish products, ways to use fish and their role in nutrition (Finland) Promote food culture – Ruokatieto promotes Finish food culture and makes recommendations of fish intake (Finland) Product development – Develop products that are easy and quick to prepare LINK? – Fish powder LINK? Information on how to prepare new species available due to climate change LINK? Guidelines – Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (No. 10) (FAO)
E Vulnerable groups	Convenient tasty products important to increase fish consumption LINK? Technological developments which maintain food safety and quality LINK? Guidelines – Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (No. 13) (FAO)
F Consumer education and literacy	Consumer trust labelling – Codex Alimentarius – The Keyhole labelling – regulations for healthier alternatives with the same conditions in Norway, Sweden, Denmark and Iceland Increase seafood consumption through expanded theoretical and practical knowledge of aquatic foods – Fiskesprell (Norway) Transparency – Moving towards greater transparency in the seafood sector (FAO) LINK? Guidelines – Voluntary Guidelines on the Progressive Realization of

G Preservation of aquatic food	Preservation techniques – ‘Cold’ handling and storage systems (FAO)	Innovation for better methods of preservation – Streamlining fish processing- Shifting from smoking ovens to the FTT-Thiaroye system (FAO) – Application of Appropriate Technology for Artisanal Fish Drying (FAO)
---	---	---

Key element LEAVING NO ONE BEHIND

The key element LEAVING NO ONE BEHIND involves actions to overcome societal issues at large which hinder consumption of aquatic food in populations, like global-, regional, and national policies, investment choices, transition from green to blue, malnutrition and hunger. For example, scientific understanding underpinning solutions providing climate smart and nutritious aquatic food, can give [leverage in influencing decision-makers](#). Relevant SDGs related to this element are SDG [5](#), [8](#), [9](#), [10](#) and [14](#).

Challenges	Knowledge	Solutions	SDG	CSF
A Equitable distribution	CFS HLPE #7 ‘Sustainable fisheries and aquaculture for food security and nutrition’ Whole chain LINK?	CFS policy recommendations ‘Sustainable fisheries for food security and aquaculture for food security and nutrition’ Whole chain – Fair Trade US/fish – Abalobi Guidelines – Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (No. 10 and 11) (FAO) – Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (FAO)	10. 4A.1, 4A.2 & 4E.	
	Report – Women central to the global fishing industry (Norway) – CSF HLPE #18 ‘Reducing inequalities for food security and nutrition’	Gender specific groups and network – Global women fisheries network LINK? – AKTEA The network of women in fisheries and aquaculture – AWFishNet African Women Fish Processors and Traders Network – BIM Women in seafood Ireland’s Seafood Development Agency (Ireland) – #IrelandsWomenInSeafood (Ireland) – Inception workshop for “Food from the Oceans” (Ghana) Attention on gender equality – Gender included from the ‘get go’ in global small-scale fisheries study (WorldFish)		
B Gender equality		Empower women in the trade sector – Towards gender-equitable small-scale fisheries governance and development – A handbook (FAO) – Empowering women in small-scale fisheries for sustainable food systems (FAO)	5, 10 & 14. 4G. 5.5, 5.b, 5.c, 10.2 & 10.3.	

		– General Comment (GC12) The right to adequate food (FAO)	Guidelines – Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (FAO) – Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (FAO) – Towards gender-equitable small-scale fisheries governance and development -A handbook (FAO)		
C	Improve social protection		Initiatives – SeaBOS Seafood Business for Ocean Stewardship – Information on COVID-19 and small-scale fisheries – Social protection for small-scale fisheries in the Mediterranean region – Improving livelihoods and nutrition for women and children (India) Guidelines – Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (FAO) – Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (FAO)	8 & 10.	4F.
D	Recognition of the contribution of small-scale fisheries (SSF)	Provide knowledge and information on SSF – Illuminating Hidden Harvest (FAO) – Global Strategic Framework in support of the implementation of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (FAO) – Fish in Sustainable Food Systems (Australia) – Illuminating the multidimensional contributions of small-scale fisheries	Implementation of guidelines – Tanzania's implementation of SSF guidelines (FAO) – Implementation of the SSF Guidelines across the Near East and North Africa (FAO) Attention on SFF – The International Year of Artisanal Fisheries and Aquaculture 2022 (UN) Guidelines – Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (FAO)	14. 14.4 & 14.6. 9.3, 14.7 & 14.b.	4A.7 & 4D.
E	Hidden Harvests	Reports – Hidden harvest: global contribution of capture fisheries (WorldBank) – Illuminating Hidden Harvest (FAO)	Approaches and methods developed under Illuminating Hidden Harvest project can be replicated/upscaled to better connect fisheries and food security and nutrition data, to inform policy and action. – capacity development LINK? – new partnerships between fisheries and food security LINK? – nutrition expertise LINK?	14. 14.4 & 14.6. 14.6, 14.7 & 14.c.	
F	Holistic monitoring		Holistic monitoring of resources including all key elements (sufficient', 'safe', 'nutritious', 'dietary needs', 'food preferences'). LINK?		
			Guidelines		

		– Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (No. 10-11) (FAO) – Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (FAO)	
G	Capacity building	Provide knowledge to increase coordination between research programs of finite duration – EAF-Nansen Programme Ecosystem Approach to Fisheries (FAO) Resources – Building capacity for mainstreaming fisheries co-management in Indonesia (FAO) Approaches and methods developed under Illuminating hidden harvest project Collaboration – African Women Fish Processors and Traders Network Guidelines – Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (No. 11) (FAO) – Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (FAO)	14.b.
H	Covid-19	Reports – CSF HLPE #15 Food security and nutrition - Building a global narrative towards 2030 Resources – Information on COVID-19 and small-scale fisheries (FAO)	

Key element TOWARDS COMMON GOALS

Food security is threatened in many parts of the world, and food from the oceans and inland waters is a crucial component in ensuring food security for the future. This relies on a broad multi-sectoral approach including science, policy, industry and businesses through an overarching common goal across disciplines to achieve sufficient nutritious food for everyone, linked to existing initiatives. Actions for this element may for example range from efforts to bridge the knowledge gap, form regional networks, or other initiatives carried out by different stakeholders to realize the potential of aquatic foods in food security and nutrition. Relevant SDGs related to this element are SDG [2](#), [8](#), [10](#), [12](#), [14](#), [15](#), [16](#) and [17](#).

Challenges	Knowledge	Solutions	SDG	CFS
	CFS HLPE #7 ‘Sustainable fisheries and aquaculture for food security and nutrition’	CFS policy recommendations ‘Sustainable fisheries for food security and aquaculture for food security and nutrition’		
	Reports – Circular economy in fisheries and aquaculture areas – UNFSS 2021 – CSF HLPE #15 ‘Food security and nutrition building a global narrative towards 2030 – Rethinking Our Food Systems: A Guide for Multi-Stakeholder Collaboration (UNDP)	Make aquatic food part of food and nutrition discussions – BIM (Ireland’s Seafood Development Agency) invites organizations in Ireland working with seafood to meet and discuss national initiatives (Ireland) – Bluing the green - greening the blue ‘A common “Land and Sea” language for a Circular Food System’ (The Netherlands) – One food system - Integrating terrestrial and aquatic food systems (Global Action Network HLPF2024 side event) Partnerships/MoUs – Partnership for a healthier diet (Norway) – FAO-WorldFish MoU on small-scale fisheries, food security and nutrition, aquaculture and value chains	2, 12, 14 & 15. 2, 4, 2.a & 14.4. 12, 14.1 & 14.3.	4A.1, 4A.6 & 4B.4. 4A.1, 4A.6 & 4B.4.

A Cross-sectoral cooperation	LINK: – FAO-Duke University MoU on small-scale fisheries – FAO-Michigan State University MoU on inland fisheries Collaborations/Coalitions – Global Action Network - Sustainable Food from the Oceans and Inland Waters for Food Security and Nutrition (UN Nutrition Decade action network) – ‘Too Big To Ignore’ (global) – Accelerating circular and sustainable bioeconomy (Norway) – Global Salmon Initiative – Seafood Nutrition Partnership (USA) – Aquatic Blue Food Coalition (UN) – The School Meals Coalition (UN) – Blue Food Futures (UN Ocean Decade program) – ClimeFOOD (UN Ocean Decade project) – Fish for Africa Innovation Hub (UN Ocean Decade project) Declarations – The International Year of Artisanal Fisheries and Aquaculture 2022 (FAO) Policy briefs – ‘Linkages between the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication and the Framework for Action for Food Security and Nutrition in Protracted Crises’ (FAO) Guidelines – Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (FAO) – Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (in particular Chapter 10 on Policy coherence, collaboration and coordination) (FAO) – Voluntary Guidelines Illuminating Hidden Harvests for Securing Sustainable Small-Scale Fisheries (FAO)
B Trust and transparency of the aquaculture and fisheries industry	Secure transparency – SeaBOS (Seafood Business for Ocean Stewardship) – Sustainability Report from Global Salmon Initiative – FiTI 8, 10, 12, 16 & 17. 4F. 8.7, 10.4, 12.6, 16.5, 16.6 & 17.6.

