Presentation Outline

Background
Defining Key Terms
Objectives
Why Aquatic Foods?
Aquatic Foods in Sustainable Healthy Diets
Recommendations: Menu of Solutions for Aquatic Foods in the Future
Background

Global Narrative on Nutrition:
- By 2030 end all forms of malnutrition and leave no one behind (UNSCN, 2017)
- UN Decade of Action on Nutrition (2016 – 2025)
- 2030 Agenda
- Commitment and framework for action of the Second International Conference on Nutrition (ICN2)

World Committee on Food Security (CFS) High Level Panel of Experts (HLPE) report on fisheries and aquaculture, 2014

Global Action Network on Sustainable Food from the Oceans and Inland Waters for Food Security and Nutrition

At present:
- Sufficient food is produced
- An estimated 3 billion people cannot afford the cost of a healthy diet
- Exacerbated by COVID-19

- Need to promote diets that are socially, economically and environmentally sustainable
- Present food systems fail to recognize the diversity of aquatic foods and their potential for sustainable healthy diets – providing not just protein, but also essential micronutrients and fatty acids
Sustainable Healthy Diets

**FAO and WHO Guiding Principles for Sustainable Healthy Diets (2019)**

*Promote all dimensions of individual’s health and wellbeing*

*Have low environmental pressure and impact*

*Accessible, affordable, safe and equitable and are culturally acceptable*


*Emphasizes a plant-forward diet*

*Identifies environmental limits for sustainable food systems that define a safe operating space for food production within planetary boundaries*

Efforts to promote the growing importance of sustainable healthy diets

Debate on the role of animal-source foods in diets

Simplification of aquatic foods as part of animal-source foods

Failure to recognize the diversity and potential of aquatic foods
Defining Aquatic Foods

Seafood

Definitions vary, most common: edible marine fish and shellfish (Merriam Webster)

Fish

Fish, crustaceans, mollusk and other aquatic animals, excludes aquatic mammals, reptiles, seaweeds and other aquatic plants (FAO, 2020)

Aquatic Foods

Animals, plants and microorganisms that are farmed in and harvested from water, as well as cell- and plant-based foods emerging from new technologies (WorldFish, 2020)
Objectives

To build consensus on the role of aquatic foods in sustainable healthy diets
Presenting the breadth of evidence available to inform and steer policy, investments and research

To make full use of the vast potential of aquatic foods in delivering sustainable healthy diets
Meeting the SDGs
Why Aquatic Foods?

Multiple Nutrients

**Minerals**
- **Iron (Fe)**: essential for brain development in children and increases maternal survival rates.
- **Iodine (I)**: essential for brain development in fetus and young children and helps prevent stillbirth.
- **Zinc (Zn)**: crucial for childhood survival, reduces stunting in children and fights diarrhea.

**Essential fatty acids**
- **Calcium (Ca)**: helps prevent preeclampsia and preterm delivery, and is essential for strong bones and teeth.

**Vitamins**
- **Vitamin B12**: essential for a healthy pregnancy, helps prevent brain and spinal cord birth defects, and supports healthy maintenance of the nervous system and brain in children.
- **Vitamin D**: essential for the development of strong, healthy bones, teeth and muscles in children and helps prevent preeclampsia, preterm delivery and low birth weight.
- **Vitamin A**: essential for childhood survival, prevents blindness, helps fight infections and promotes healthy growth.

**Essential Fatty Acids**
Why Aquatic Foods?
Nutrition and Public Health

Pregnant and Lactating Women
- Greater Dietary Diversity
- Positive Birth Outcomes
- Improved nutrient composition of breastmilk

Infants and Young Children
- Cognitive Development
- Reduced Stunting and Severe Acute Malnutrition

Adolescents
- Cognitive Development
- Higher IQ
- Improved school performance
- Positive behavioural and mental health outcomes

Adults
- Reduced All-Cause Mortality, blood pressure and cholesterol
- Reduced risk of death from coronary heart and cardiovascular diseases
- Improved work performance

Nutrition and Public Health
Why Aquatic Foods?

**Sustainability**

- **In many poor, rural populations,** aquatic foods may be the most affordable and preferred animal-source food.
- **3.3 billion** people depend on fish and fish-based products for **20%** of animal protein intake.

**Economy**

- Aquatic foods are produced more sustainably than terrestrial animal-sourced food.
- Within aquatic foods, lower-trophic species such as pelagic small fish, bivalves and seaweed are more sustainably harvested.

**Social**

- Many rural poor are engaged in small-scale fisheries and aquaculture for livelihoods.
- **59.5 million** people employed in the fisheries and aquaculture primary sector, **14% are women**
- **50% women** engaged when secondary sector is included.
Aquatic Foods in Sustainable Healthy Diets

Dietary Recommendations

Varying recommendations:
1-2 x 100 g servings of fish per week for adults (FAO and WHO, 2011)
300 g of fish per week for adults (EFSA, 2014)
28 g of fish per day for adults (range 0 – 100 g) (EAT-Lancet, 2019)

National Food-based Dietary Guidelines (FBDG)

Aquatic foods in 78 out of 94 FBDG
Varying recommendations on quantity, species etc. across regions and countries
Aquatic Foods in Sustainable Healthy Diets

Evidence from Nutrition Interventions
Nutrient-rich fish powder for the first 1000 days in Malawi and Zambia
Low-cost fish species and by-products for school feeding programs

Sustainable Supply: Reduce Food Loss and Waste
Seasonality
Technology and infrastructure
Gendered issues in food loss and waste
Aquatic Foods in Sustainable Healthy Diets

Sustainable Supply: Marine and Inland Capture Fisheries

Capture fisheries: varying environmental impacts from fuel consumption, GHG emissions, impact on biodiversity and aquatic community structures

Small-scale fisheries: livelihood and food and nutrition security to coastal communities

Contribution is under-recognized in fiscal instruments and policies
Aquatic Foods in Sustainable Healthy Diets

Sustainable Supply: Marine and Freshwater Aquaculture

Aquaculture rapidly expanding food production sector

Environmental impacts: vary on method, species, scale, practices, facilities and integration with other food-producing activities

Challenges to tackle: feed ingredients, the diversity of species, land and water usage, equitable distribution
Menu of Solutions for Aquatic Food Consumption

Promote consumer **behavior and demand** for more sustainable, diverse and low-trophic aquatic foods through:

*Food-based dietary guidelines (FBDG)*

*Public procurement (school feeding, social safety nets)*

*Nutrition interventions in the first 1000 days of life*

*Innovative, affordable and convenient aquatic food products from low-trophic aquatic foods and by-products*
Menu of Solutions for Aquatic Food Consumption

Sustainable Supply

Target diverse aquatic foods, particularly low-trophic species with high biomass

Focus on sustainable harvesting and catch use (e.g. encouraging consumers to choose ‘catch of the day’ and by-catch)

Promote sustainable and diversified aquaculture approaches that mainstream nutrition

Reduce the loss and waste and encourage the use of by-products and of aquatic foods

Reduce reliance on feed

Support small-scale fishers and processors to produce aquatic food products with an long shelf life.

Adopt and implement the Voluntary Guidelines for Securing Sustainable Small-scale Fisheries and the CFS Recommendations on Fisheries and Aquaculture
Menu of Solutions for Aquatic Food Consumption

Democratize Knowledge, Data and Technologies

Improve quality of data

- Nutritional composition and contaminants
- Better understand consumption patterns
- Consumer demand

Engage private sector to develop desirable, convenient products
Diverse aquatic foods have an essential role in sustainable healthy diets for many people around the world, now and in the future.
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