The Role of Aquatic Foods in Sustainable Healthy Diets

UN Nutrition Discussion Paper

May 2021

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

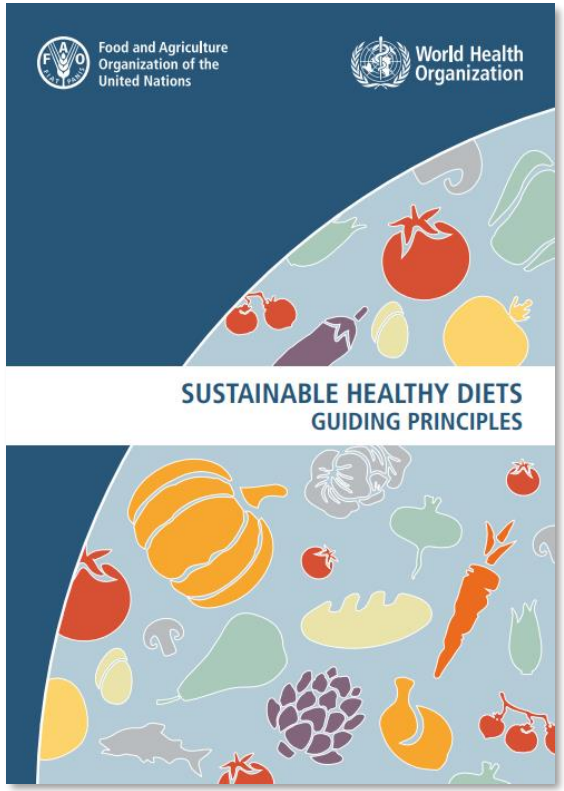
➢ An estimated 3 billion people cannot afford the cost of a healthy diet

➢ 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

EAT-Lancet Planetary Health Guidelines (2019)

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

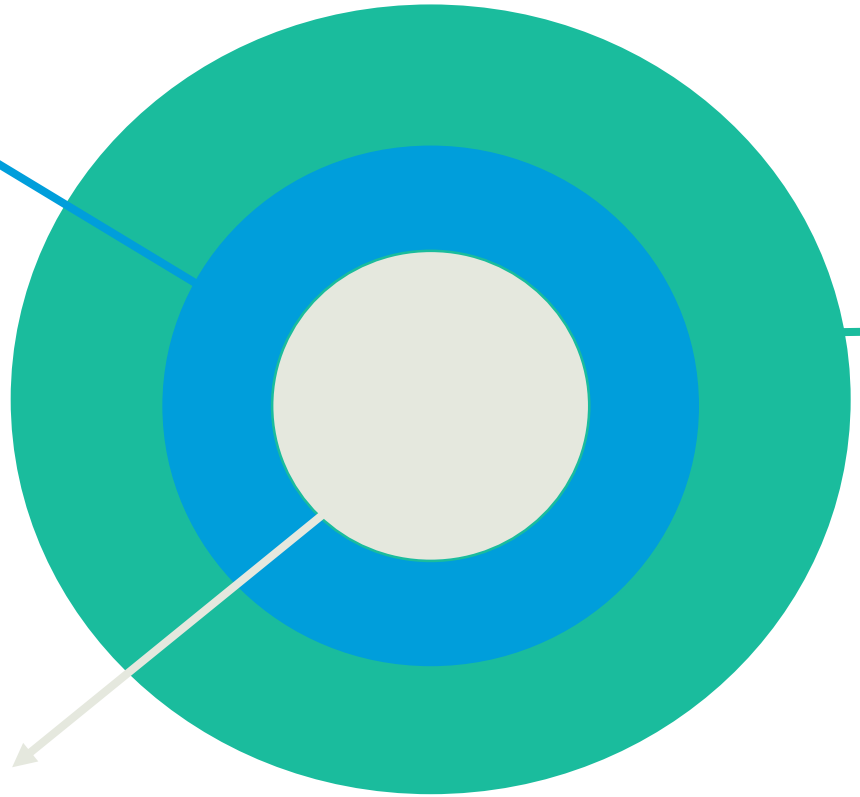
Simplification of aquatic foods as part of animal-source foods

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)



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)

Fish

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

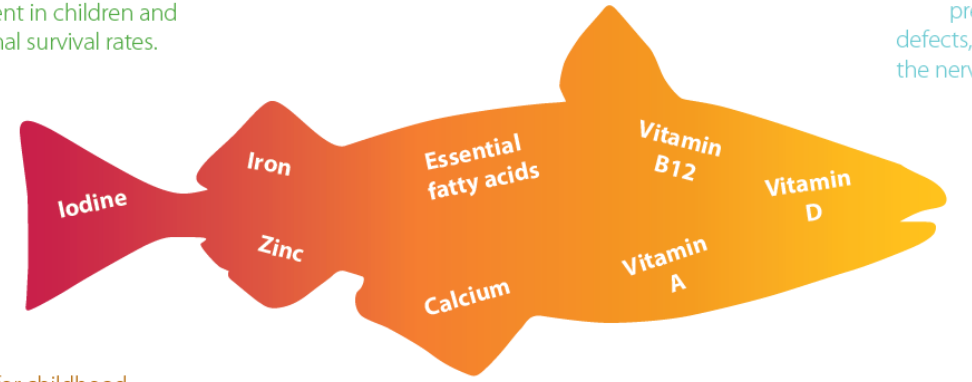
Iron (Fe)
essential for brain development in children and increases maternal survival rates.

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

help prevent preeclampsia, preterm delivery, low birth weight, and support cognitive development and better vision in children.



Calcium (Ca)
helps prevent preeclampsia and preterm delivery, and is essential for strong bones and teeth.

Vitamins

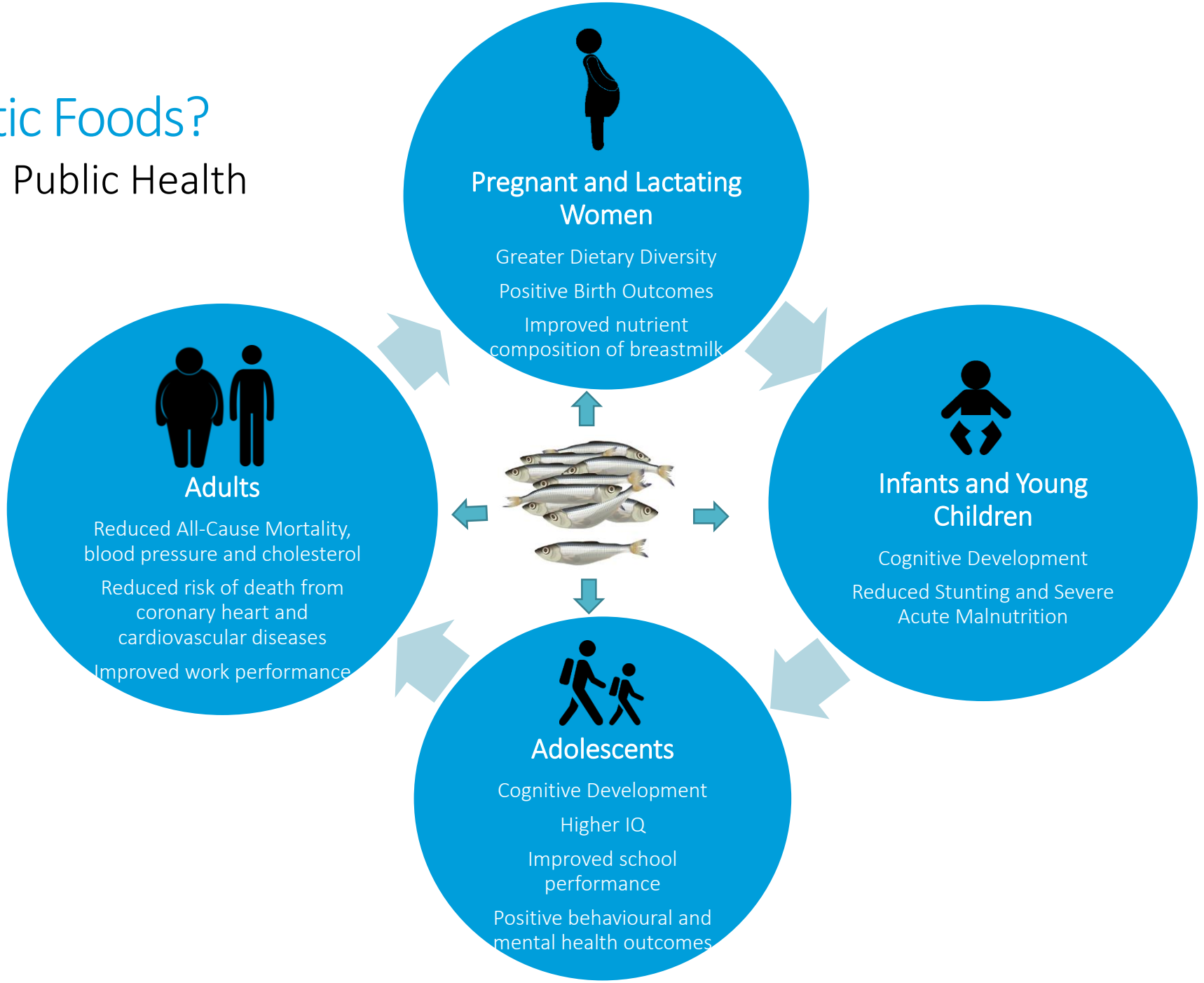
Vitamin B12 (B12)
essential for a healthy pregnancy; helps prevent brain and spinal cord birth defects, and supports healthy maintenance of the nervous system and brain in children.

Vitamin D (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 (A)
essential for childhood survival, prevents blindness, helps fight infections and promotes healthy growth.

Why Aquatic Foods?

Nutrition and Public Health



Why Aquatic Foods?

Sustainability

Economy

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

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

Environment

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

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)

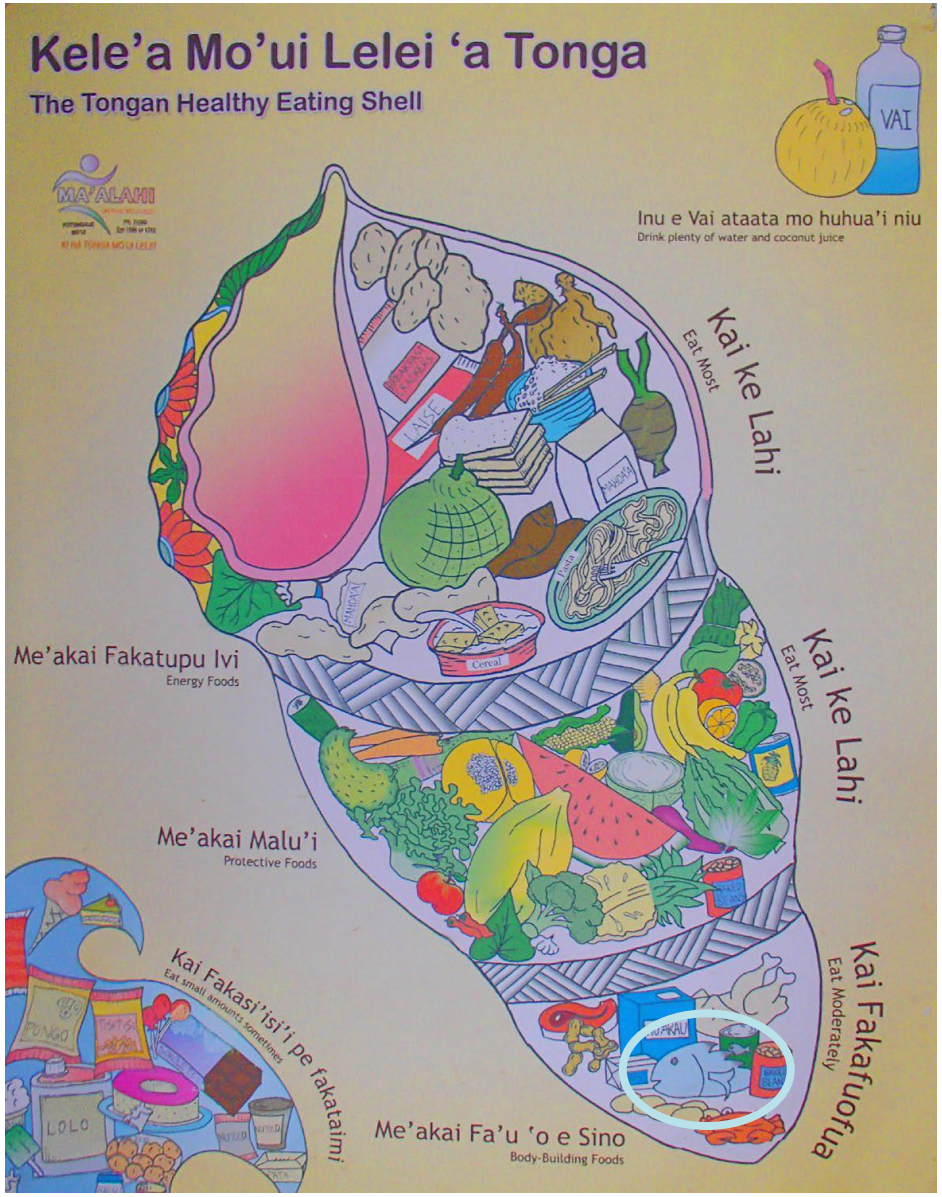
300 g of fish per week for adults (EFSA, 2014)

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


Photo Credit: Zambia National Food and Nutrition Commission, WorldFish


Photo Credit: WorldFish

Photo Credit: Jellyfish ingredient project

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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