



32 COFI

COMMITTEE OF FISHERIES-2016

*Your side
event*

Thursday, July 14
12:30-14:00 hrs.
Room: Mexico
Seafood lunch will be served!

PROMOTING SEAFOOD CONSUMPTION:
A TOOL FOR IMPROVING NUTRITION, HEALTH
AND REGIONAL DEVELOPMENT,
PUBLIC POLICY AND PRODUCERS EFFORT



**Mario Gilberto
Aguilar Sánchez**
National Commissioner
of Aquaculture and Fisheries
of Mexico (CONAPESCA)



Roy D. Palmer
Executive Director of Aquaculture
Without Frontiers / Previous director
of the World Aquaculture Society (WAS)



**José David Castro
Villavicencio**
President of the Mexican Council
for the Promotion of Aquaculture
and Fishery Products (COMEPESCA)

Promoting Seafood Consumption



AQUACULTURE
WITHOUT FRONTIERS

By
ROY PALMER



Global Initiative for Life
Leadership through Seafood

Association of International
seafood
Professionals

ANZMEX - 2013

http://anzmex.org/News/_GILLS_Roundtable__Photo_Gallery_and_presentation



'The Road to Success....' Guadalajara, Jalisco Workshop



‘The Road to Success....’ Mazatlan, Sinaloa Workshop Come rico, come sano....



UTMarT-AwF Tampico/La Pesca



AQUACULTURE
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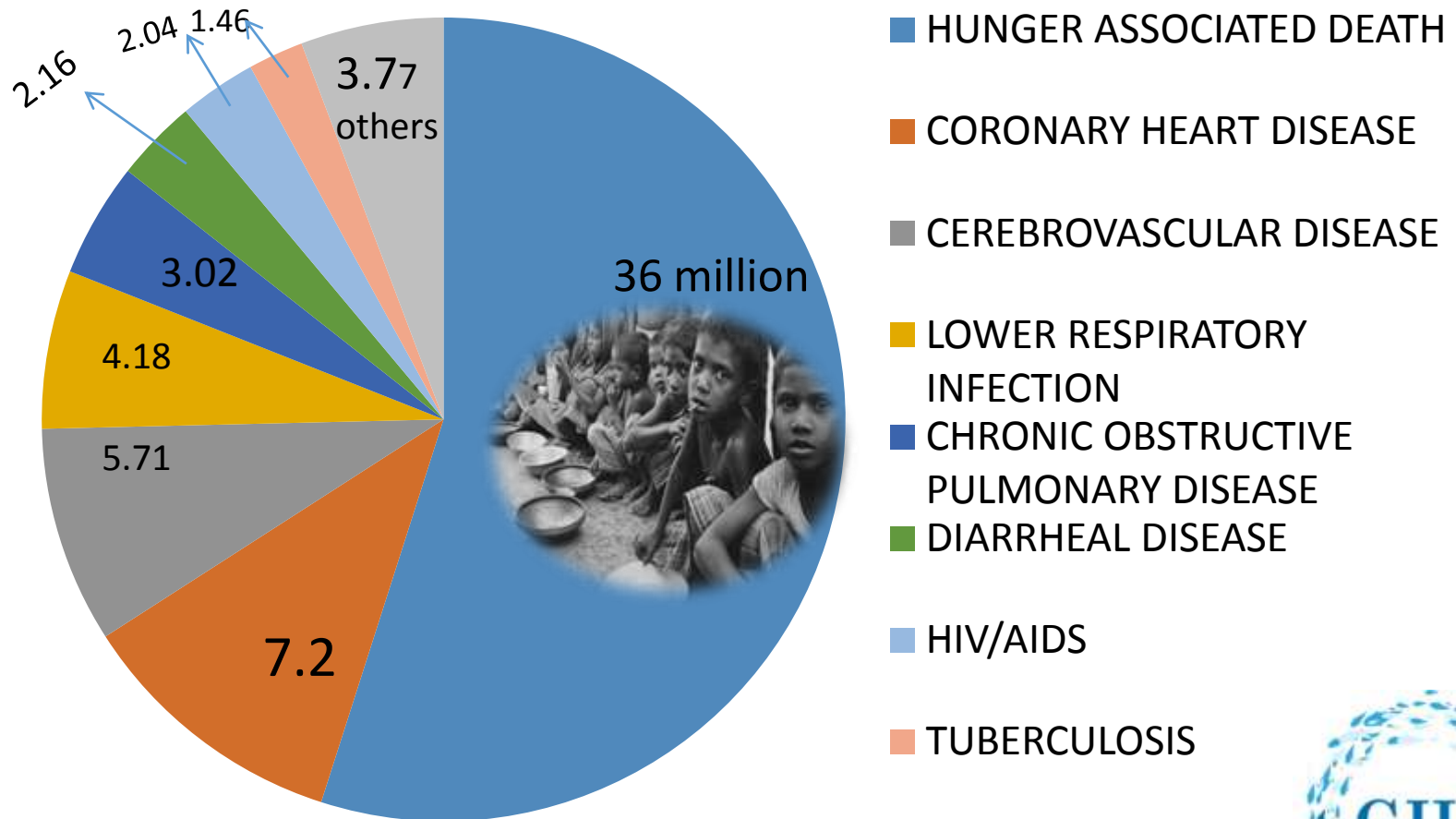


My Journey on Seafood & Health

- Dec 2005 – International Seafood & Health Conference – Washington DC
- Seafood Services Australia - <https://www.youtube.com/user/seafoodservices>
- Nov 2010 – International Seafood & Health Conference – Melbourne, Australia – GILLS....
- July 2011 – Meeting of the minds in Santander
- Nov 2011 – Launching of GILLS at World Seafood Congress, Washington DC
- Ongoing engagement with experts and knowledge flow
- Now on LinkedIn and Facebook – soon to be part of www.seafoodprofessionals.org website (launch 1 August)



HUNGER –associated fatality compared to 10 leading causes of death (In Millions)



SOURCE : MODIFIED FROM WORLD HEALTH ORGANIZATION

Global Nutrition Report

June 2016 (<http://globalnutritionreport.org/>)

- **Malnutrition is a condition that directly affects one in three people globally.**
- **Malnutrition and diet are by far the biggest risk factors for the global burden of disease: Every country is facing a serious public health challenge from malnutrition.**
- **1.9 billion adults are overweight or obese**
- **2 billion suffer from micronutrient deficiency**
- **161 million children under 5 y.o are too short for their age**
- **795 million do not get the food they need to live a healthy life**
- **Serious economic consequences**

Losses of 11 percent of gross domestic product (GDP) every year in Africa and Asia,

whereas preventing malnutrition delivers \$16 in returns on investment for every \$1 spent.

Global Nutrition Report

June 2016

MALNUTRITION TAKES A TOLL ON FAMILY BUDGETS.

8% More money spent on healthcare when one person is obese



UNITED STATES

16.3% of income lost with a diagnosis of diabetes



CHINA

30% More money spent on healthcare with a cardiovascular disease diagnosis



INDIA

One Thousand Days -



Fat in the Critical Thousand Days Ensuring Adequacy of Essential Dietary Fats for Mothers and Children in Low and Middle Income Countries

<http://www.thousanddays.org/>

Shakuntala Haraksingh Thilsted, The WorldFish Center



1000 days?

The 1,000 days between a woman's pregnancy and her child's 2nd birthday are critical for a **child's early development**. Certain nutritional targets have to be reached during the critical early development phase to guarantee healthy development of the child.

During **pregnancy**, malnutrition can have a **devastating impact** on the healthy growth and development of a child. Babies who are malnourished in the womb have a higher risk of **dying in infancy** and are more likely to face lifelong cognitive and **physical deficits and chronic health problems**.

For children under the age of two, malnutrition can be life-threatening and weaken a child's **immune system** and make him or her more susceptible to **dying** from common illnesses such as **pneumonia, diarrhoea and malaria**.



The right nutrition during the 1,000 day window will:

- save more than **one million lives** each year
- reduce the human and economic burden of diseases such as **tuberculosis, malaria and HIV/AIDS**
- reduce the risk for developing late life diseases like **diabetes**, ...
- improve an individual's educational achievement and **earning potential**
- increase a country's GDP by at least **2-3% annually**

What can we do? -> Fish in the first 1000 days of life

Fish is the third **staple food** after rice and vegetables in the everyday diet in developing countries, such as Bangladesh, especially of the rural poor. Being the only animal-source food it improves dietary diversity and supplies multiple nutrients such as **animal protein**, essential fats, vitamins and minerals.

Readily available and cheap, small fish are particularly rich in **vitamin A, iron and zinc**, with high bioavailability. As many small fish species are eaten whole, with bones, they are a source of bio-available **calcium**, important for lactation and growth.



Through basic nutritional education and improvement of availability of this **irreplaceable food source through the development of aquaculture in such countries**, children can have a chance for a better and healthier future from the very start of their lives.

By boosting aquaculture & fisheries techniques, helping government and the people to **help themselves**, we can make a difference.

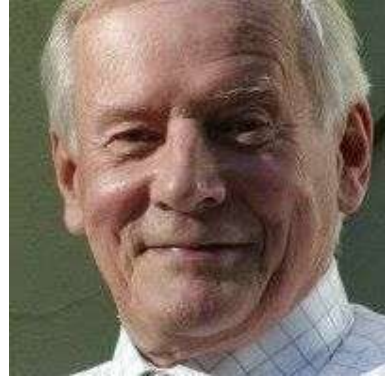
Any money raised will be donated to Aquaculture without Frontiers to be distributed and used in support of the 1000 day initiative.



THE GLOBAL CRISIS IN POPULATION, FOOD AND MENTAL HEALTH

29 & 30 NOV 2016

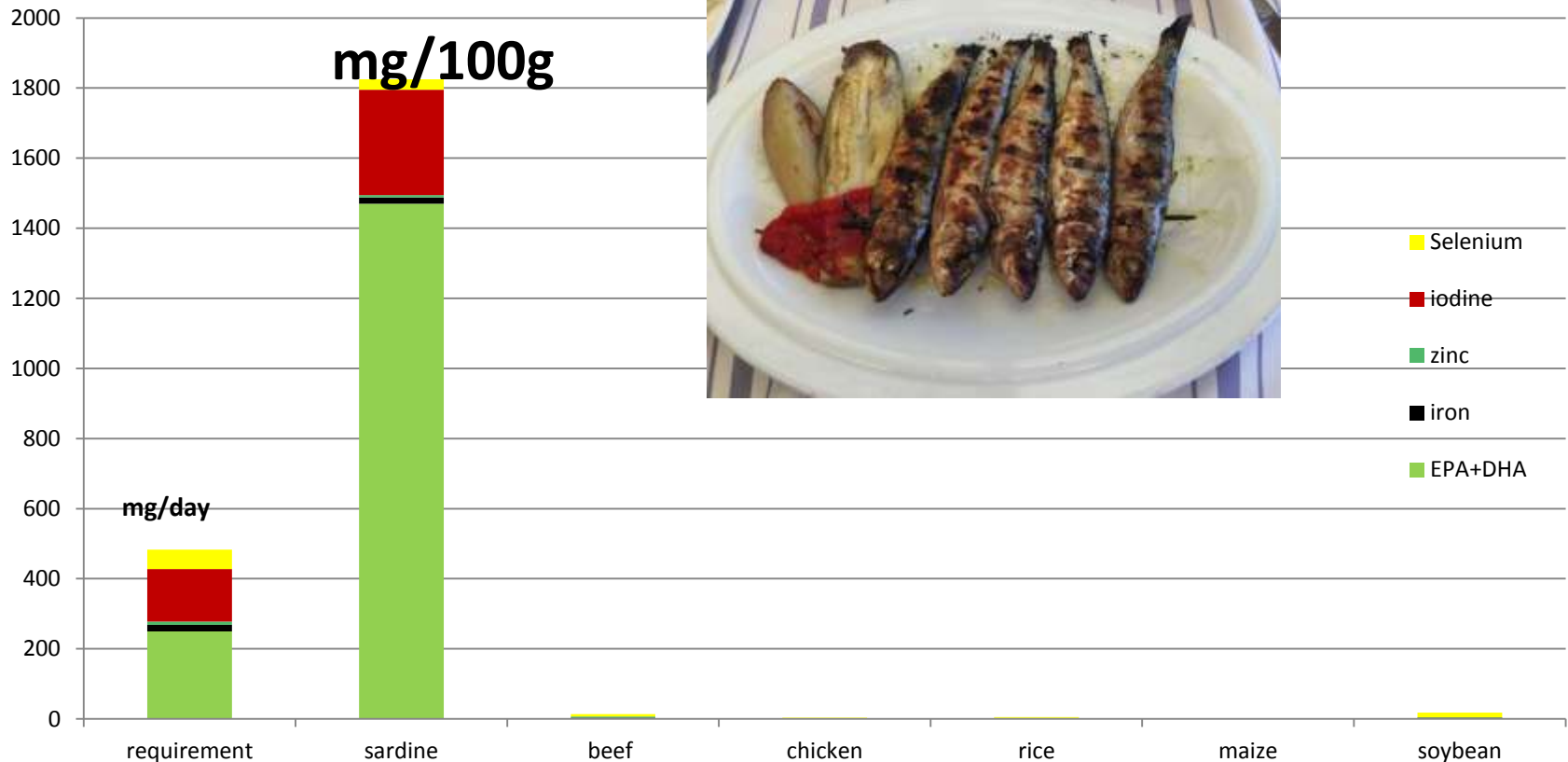
Council of the Royal Society of Medicine, London



- 2011 Think Tank on the Future of Food & Agric - not enough arable land to feed the 8 billion never mind the 10 billion in 2050.
- Failure of the food system to meet the nutrition of the brain and the heart.
- Human milk has the least amount of protein of any large mammal BUT it is rich in the essential fats needed to finalise brain growth and development.
- Rise in mental ill health (now costing more than heart disease and cancer combined - UK 2007 £77 billion, 2010 £105 billion 2013 £113 billion)

SOLUTION – Agriculturise the Oceans - Recast food production policy to serve brain specific nutrition

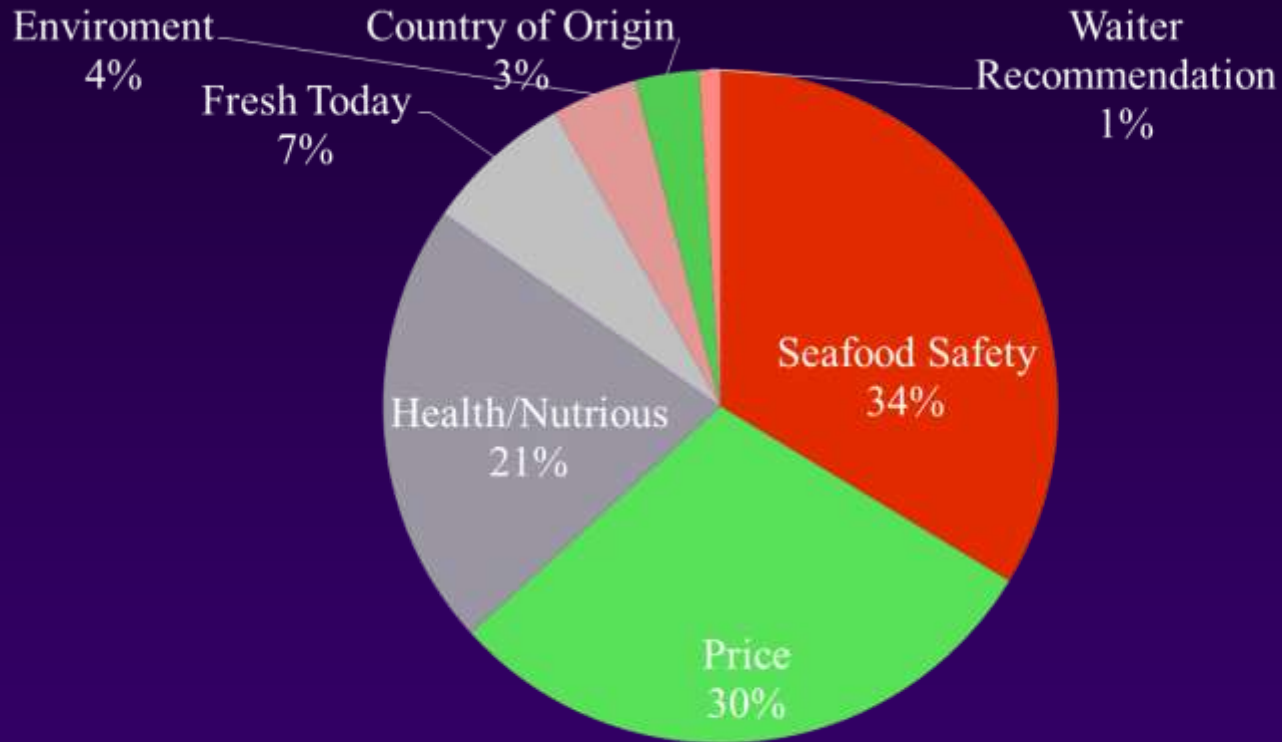
FISH - rich in high quality protein, essential fatty acids and micronutrients compared to other commodities



– Create Level Playing Field

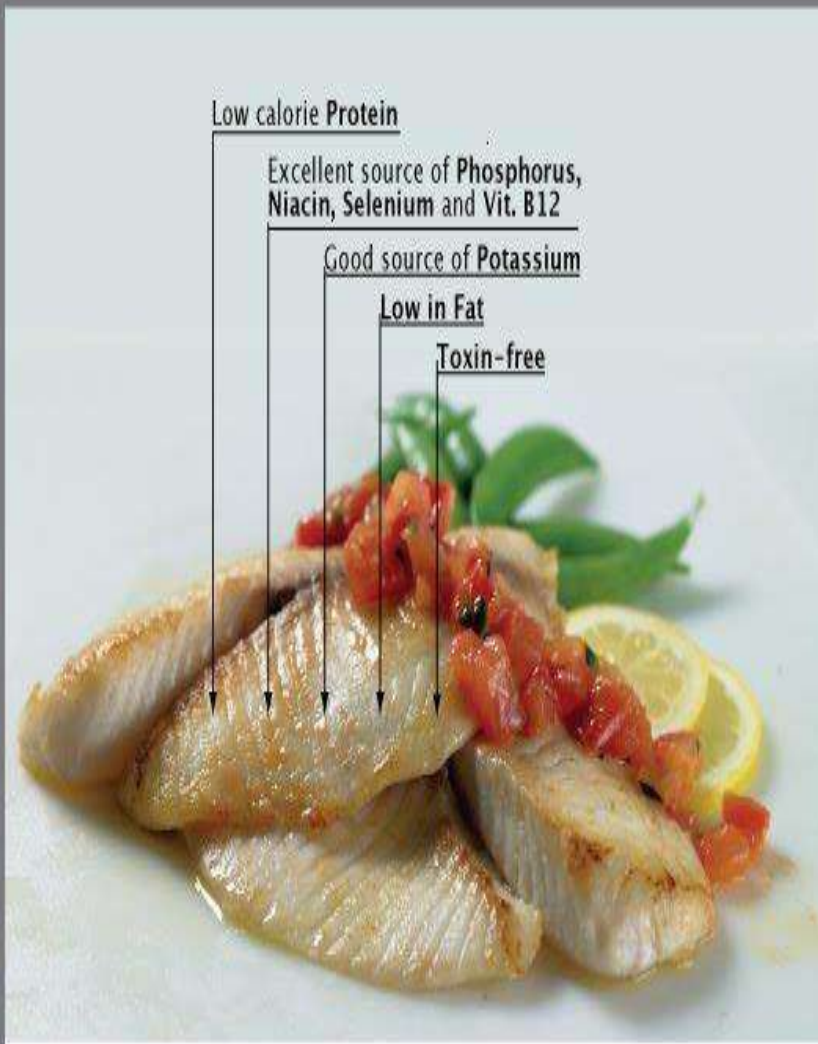


What is Most important to Seafood Customers in a Restaurant. Retail Was Similar



Source: Seafood Business 2014

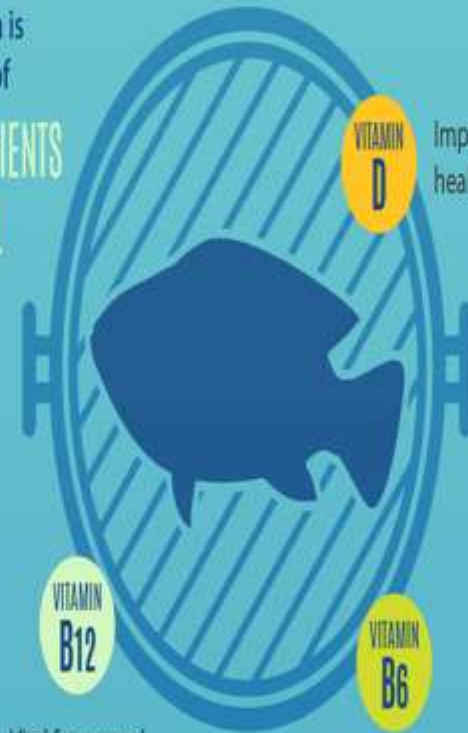
Tilapia as example



MICRONUTRIENTS

When steamed, grilled or poached tilapia is a healthy source of

PROTEIN, NUTRIENTS AND ESSENTIAL FATTY ACIDS.



VITAMIN D

Important for bone health, and for immunity.

VITAMIN B12

Vital for normal brain and nervous system function.

VITAMIN B6

Plays an important role in converting food into energy and helping the body to metabolize fats and proteins.

HEALTH
WELLBEING
NUTRITION
VITAMINS
OMEGA-3'S
MICRO-NUTRIENTS
PREVENTATIVE HEALTH
Inc MENTAL HEALTH &
VIOLENCE



RENEWABLE
SUSTAINABLE
RESILIENT
JOBS
TRADE
LOW CARBON
FOOD SECURITY
NUTRITION



Factors Affecting Seafood Consumption

ECONOMIC FACTORS

Income
Prices

INDIVIDUAL FACTORS

Dietary requirements
Taste preferences
Availability of product and time
Awareness about safety and sustainability
Allergies

CULTURAL FACTORS

Culture & tradition

SOCIAL FACTORS.

Corporate social responsibility & public image
Regulations



Improvements and Solutions?

- IUU
- Antibiotics
- Malachite Green
- Food Dyes
- Sodium tri-polyphosphates
- Poor communications
- Glazing
- OH&S
- Labour Issues
- Plastic
- Fish Substitution/FRAUD
- Weights/Counts
- Potable Water
- Food Safety
- Carbon Monoxide
- Animal Welfare
- Education & Training
- Allowing myths to linger
- Poor planning
- Wastage



Failing to act GLOBALLY

HEALTH BENEFITS OF SEAFOOD



Seafood is the single most important food one can consume for good health. Regular consumption may help to increase intelligence, reduce the risk of various diseases and disorders.

(Harvard School of Public Health, 2006).

Fish is rich in omega-3 fatty acids which are known to contribute for the healthy development of brain tissue and retina

(Natural News Network, 2006)



**Japanese
eat daily
@150-
200 g fish**

START OF LIFE

Eating fish during pregnancy may help reduce the risk of delivering premature baby, increase breast milk and strengthen the bones of mothers who delivered baby

(Natural News Network, 2006)

Low maternal seafood intake was also associated with increased risk of suboptimum outcomes for prosocial behaviour, fine motor, communication, and social development scores. For each outcome measure, the lower the intake of seafood during pregnancy, the higher the risk of suboptimum developmental outcome. **(ALSPAC study: an observational cohort study)**

Children who eat fish may be less likely to develop Asthmas
(Dept of Nutrition, Australia, 2004)



LATER IN LIFE



Regular fish consumption may relieve the symptom of rheumatoid arthritis, psoriasis and auto immune diseases
(Cardiff University, 1998)

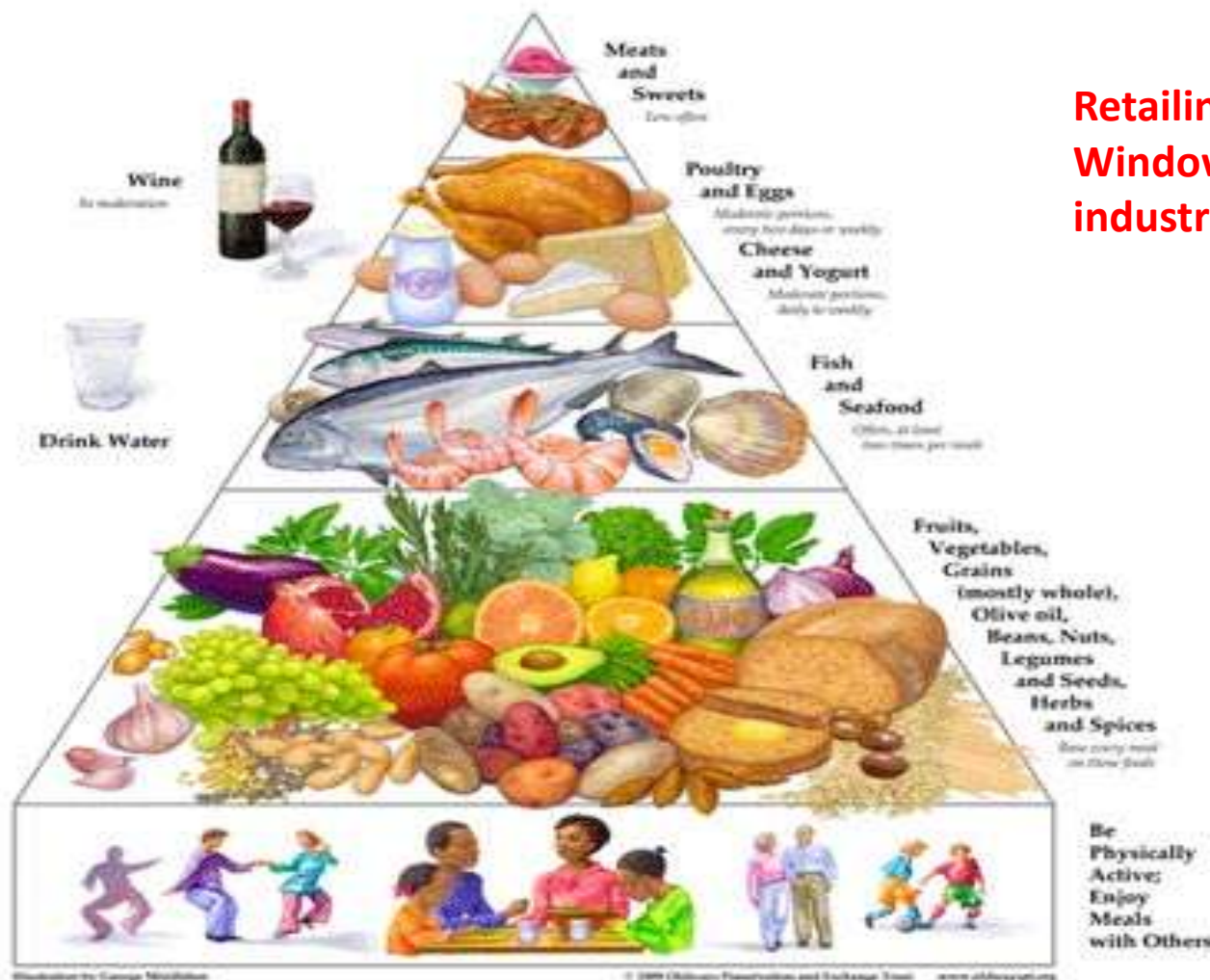
Elderly people who eat fish have a lower incidence of depression due to the presence of omega 3 fatty acids in brain **(Deccan Health Care Network, 2010)**

Eating Fish reduces the risk of heart disease and stroke by reducing blood clots and inflammation, improving blood vessel elasticity, lowering blood pressure, lowering blood fats and boosting 'good' cholesterol
(American Heart Association, 2010)

PROMOTE HEALTHY EATING

Mediterranean Diet Pyramid

A contemporary approach to delicious, healthy eating



FAO COFI 32 Nutrition

These two questions were posed:

- 1. Advise on how best to prioritize fish consumption in nutrition strategies to maximally reap the nutrition and health-promoting benefits; and
- 2. Advise on approaches to improve data collection on the nutrient composition of fish and fishery products.

AISP – what are we doing?

- Engaging our members to respond to the questions and will report back on all relevant suggestions
- Building *The Seafood Knowledge Highway*
- Sowing the seeds on many agendas through nutrition and food security platforms
- Will absorb GILLS into our programs – see further below for Vision and Plans

Aquaculture without Frontiers

- An independent non-profit organisation engaged in responsible and sustainable aquaculture to assist the poor and hungry
- Registered charity in USA, UK & Australia
- Email: comms.awf@gmail.com
- Website:
<http://www.aquaculturewithoutfrontiers.org/>

- [**Aquaculture without Frontiers \(AwF\)**](#)



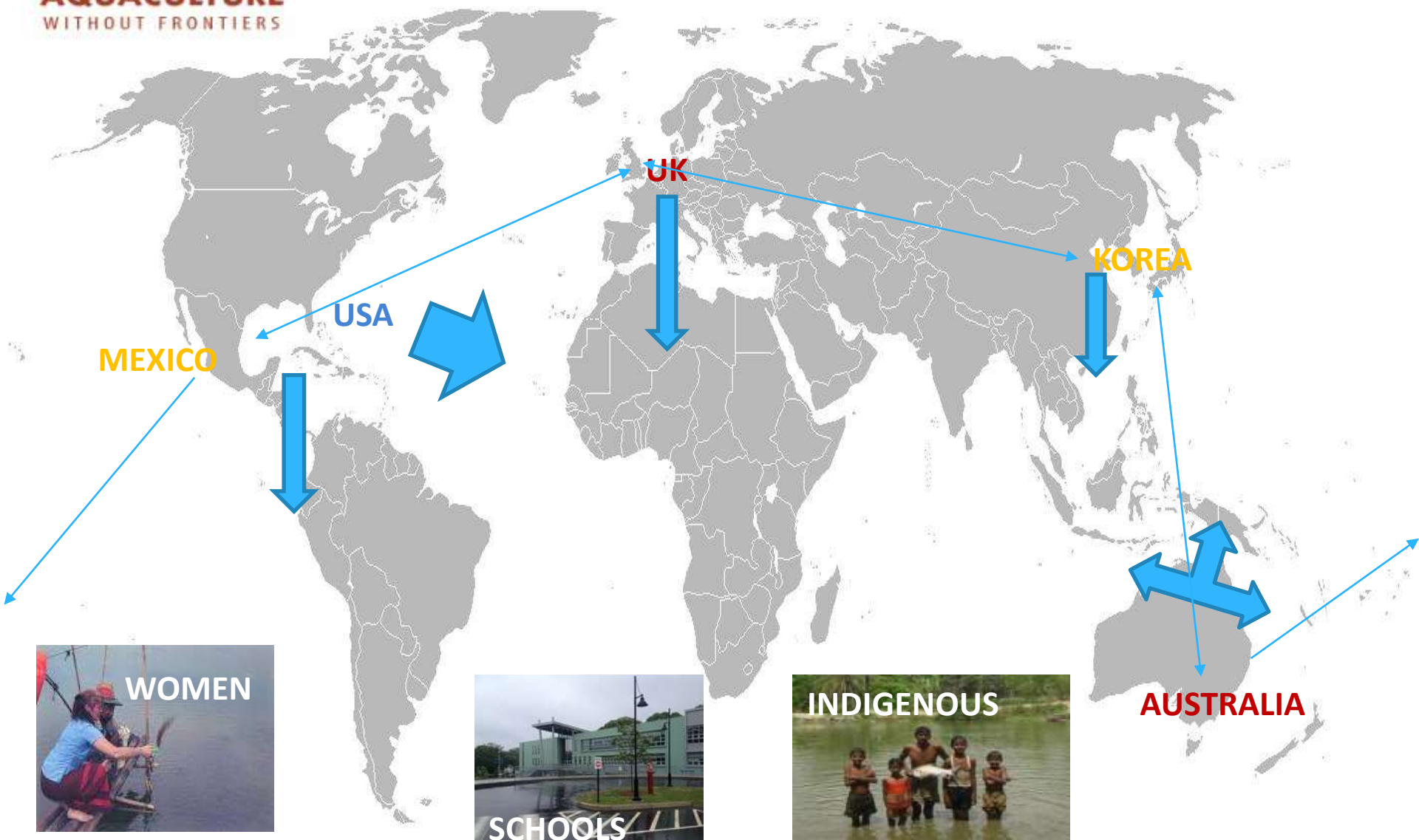
- **@AwFComms @AwFVols**





AQUACULTURE
WITHOUT FRONTIERS

BIGGER PICTURE



AwF Global

- Strategic Plan
- Volunteers (Secretariat)
- Aquaculture Learning Centres
- Women's Network (Secretariat)
- Aquaponics Club
- Ornamental Club
- Global Schools/Students Network (Secretariat)
- Indigenous Network (Secretariat)
- Technical Committee (Secretariat)
- **Milling for Life (AwF UK COI)**
- Funding –Volunteers for Economic Growth Alliance (VEGA); Grants; Sponsorships: Donations
- Communications - Newsletter
- Establish satellite AwF's – Australia, UK, etc
- Affiliations – VEGA; WAS: Florida Atlantic Uni: Deakin Uni, CERES Global, GBTF (UN) – NEPAD, Organic Life, Tamil Nadu



Woman of the Monthly Awards

<http://www.aquaculturewithoutfrontiers.org/womens-network/woman-of-the-month-award/>

- [Dr Jennifer Cobcroft – December 2014](#)
- [Dr T.V. Anna Mercy – February 2015](#)
- [May Myat Noe Lwin – March 2015](#)
- [Dr Flower Ezekiel Msuya – April 2015](#)
- [Professor Arlyn Mandas – May 2015](#)
- [Veronica Esquivel Medina – July 2015](#)
- [Ruth Uribe Quintero – September 2015](#)
- [Dr Ann Fleming – October 2015](#)
- [Belinda Miranda-Garrido – November 2015](#)
- [Dr Meryl Williams – January 2016](#)
- [Dr Veikila Vuki – February 2016](#)
- [Professor Indah Susilowati – March 2016](#)
- [Professor Stella Williams – April 2016](#)
- **Dr. Shakuntala Thilsted – May 2016**
- **Dr. Doris Soto – June 2016**
- **Betty More – July 2016**

What is AwF doing?

- AwF are also actively supporting the first question Dr. Albert Tacon (AwF) with co-author Dr. Marc Metain (IAEA) is currently completing a paper entitled "Food matters: fish, income and food supply - a comparative analysis".
- Dr. Janine Pierce (AwF) with Dr Wayne O'Connor 'Impact of Oyster Farming on Rural Community Sustainability in North Vietnam' -
http://link.springer.com/chapter/10.1007/978-94-017-9008-6_13#page-1

GILLS VISION

- Increased understanding of importance of seafood through knowledge sharing
- Better global communication from research through industry to consumers
- Less hunger and better health outcomes
- Increased seafood consumption

GILLS PLAN

- Increase number of Universities engaged
- Omega-3 wellness program
- Continuous improvement with website and other electronic social platforms and media
- Link with major societies/associations, etc through strategic partnerships
- Think Tank on gaps in research and sharing ideas
- Support Global Day/Month/Year concept

Recommendations

- Collaboration is essential
- Share what you are doing and let us create a powerful VISION and empower people through continual improvement and learning
- Beating the fear of Truth, Transparency & Transformation by telling and promoting our story
- Make Nutrition & Food Security our centre-piece from which we build fisheries & aquaculture activities and regulations
- Can we work together and solve this issue?

Take Home Messages

- Life evolved in the ocean - Oceans cover 72% worlds surface – 99% volume of the world
- Seafood is the richest source of many nutrients that optimize the development of baby's brains and nervous systems
- Peer reviewed science repeatedly demonstrates health benefits far outweigh theoretical risks
- Scientific evidence is compelling that seafood deficient diets are a real and present danger
- Prevention through nutrition creates incredible savings for Public Health

YOU KNOW IT MAKES SENSE

QUESTIONS & ANSWERS

Muchas Gracias



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