

FAO & FISH UTILIZATION: TRENDS AND CASE STUDIES

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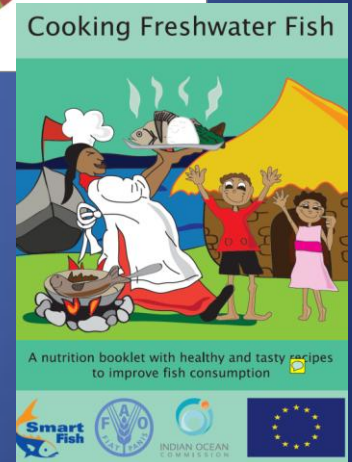
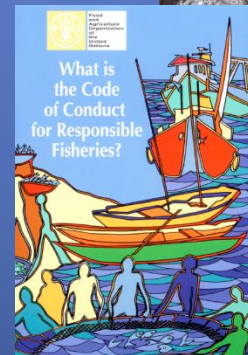
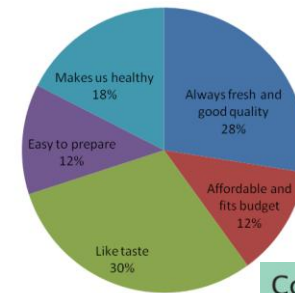


*Food and Agriculture Organization
of the United Nations*

OVERVIEW

- FAO
- FISH UTILIZATION
- CASE STUDIES

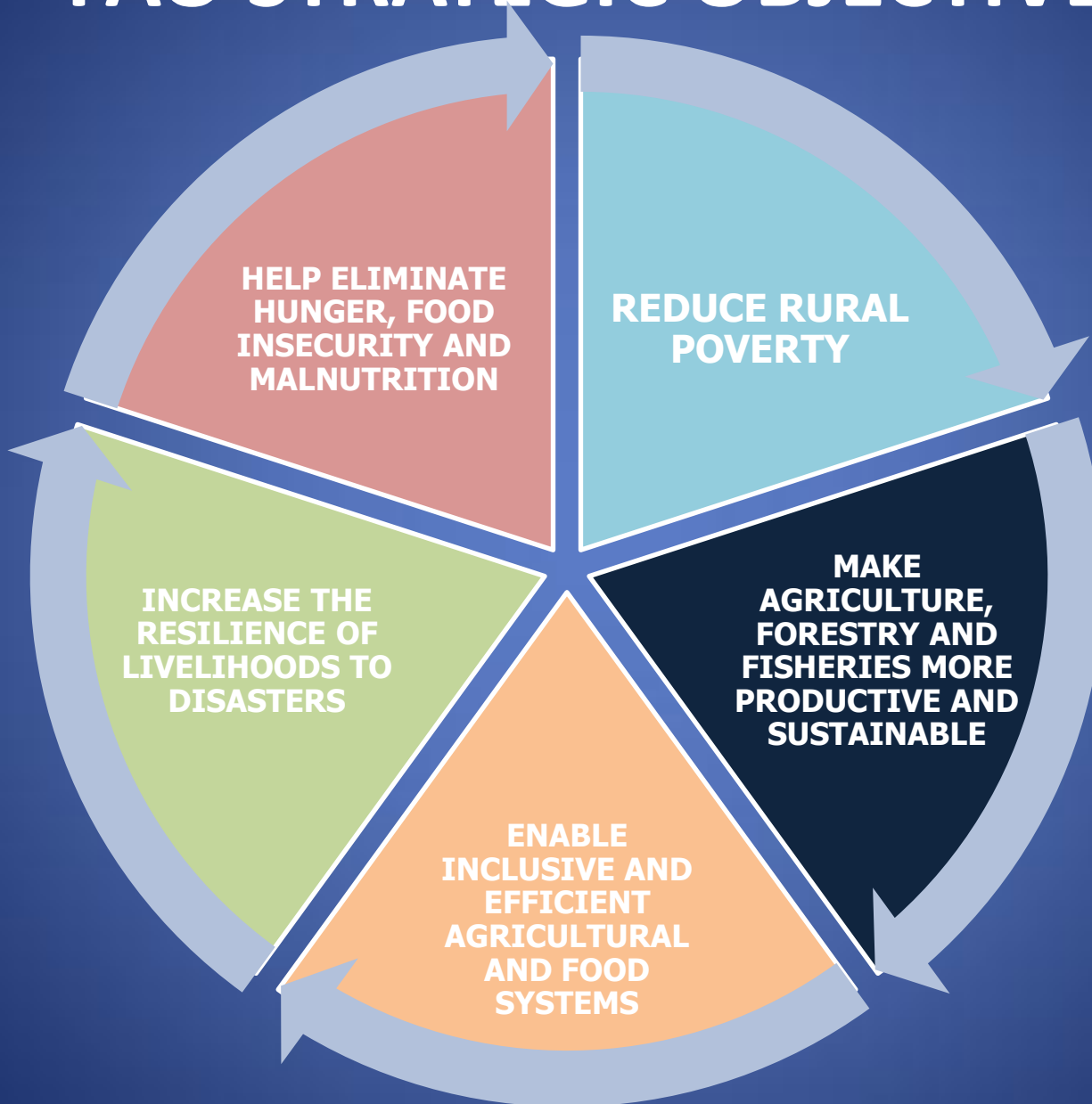
Factors that affect purchase with respect to fish/fish products



“FOUNDED IN 1943 AND WITH ITS HEADQUARTERS IN ROME, THE AIM OF FAO IS TO ACHIEVE FOOD SECURITY FOR ALL, POVERTY REDUCTION AND THE SUSTAINABLE MANAGEMENT AND UTILIZATION OF NATURAL RESOURCES INCLUDING FISH & FISHERIES.”



FAO STRATEGIC OBJECTIVES





Food and Agriculture
Organization of the
United Nations

2014

The State of World Fisheries and Aquaculture

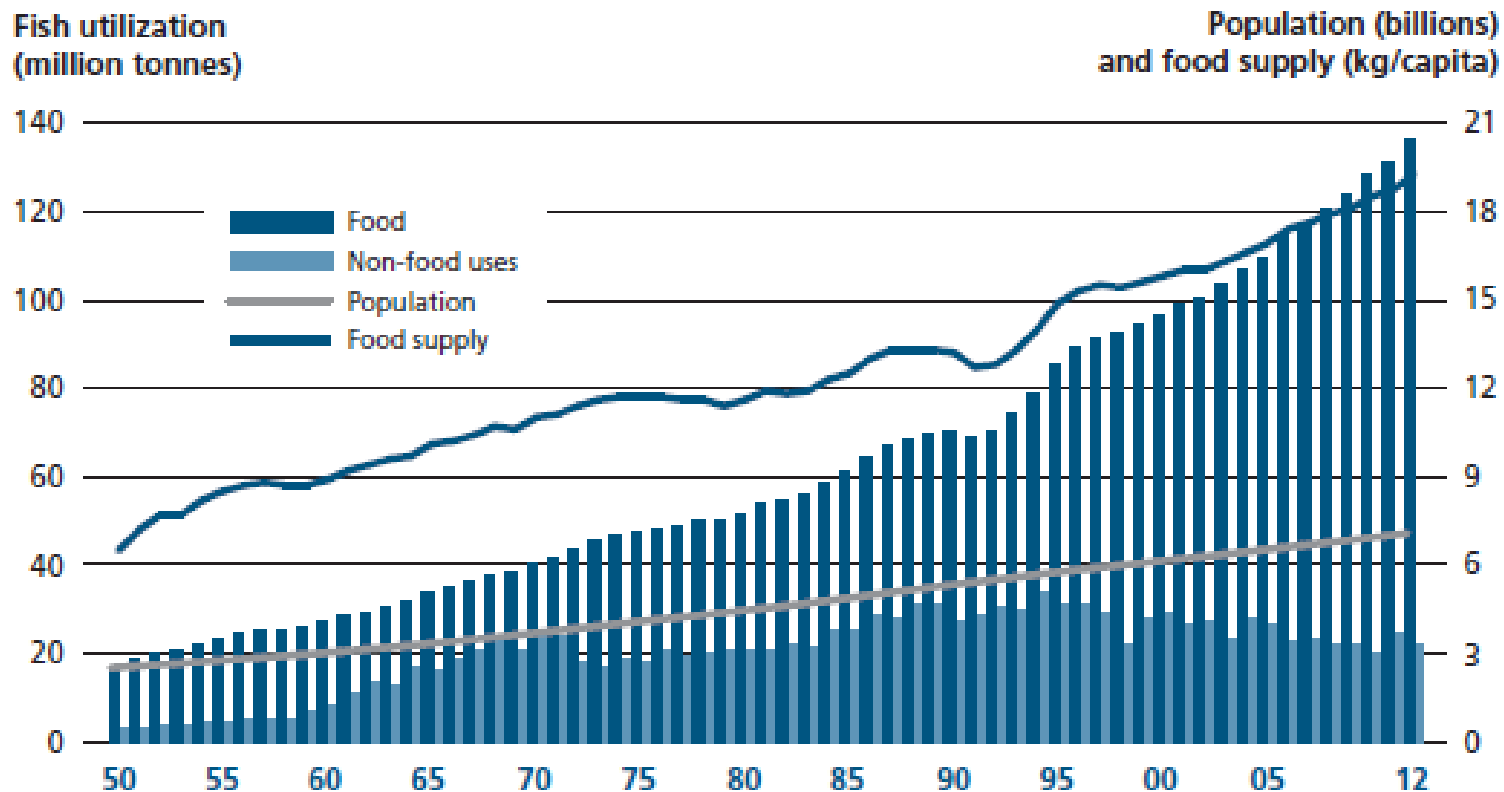


Opportunities and challenges

<http://www.fao.org/fishery/sofia/en>

FISH UTILIZATION: A GLOBAL PERSPECTIVE

World fish utilization and supply



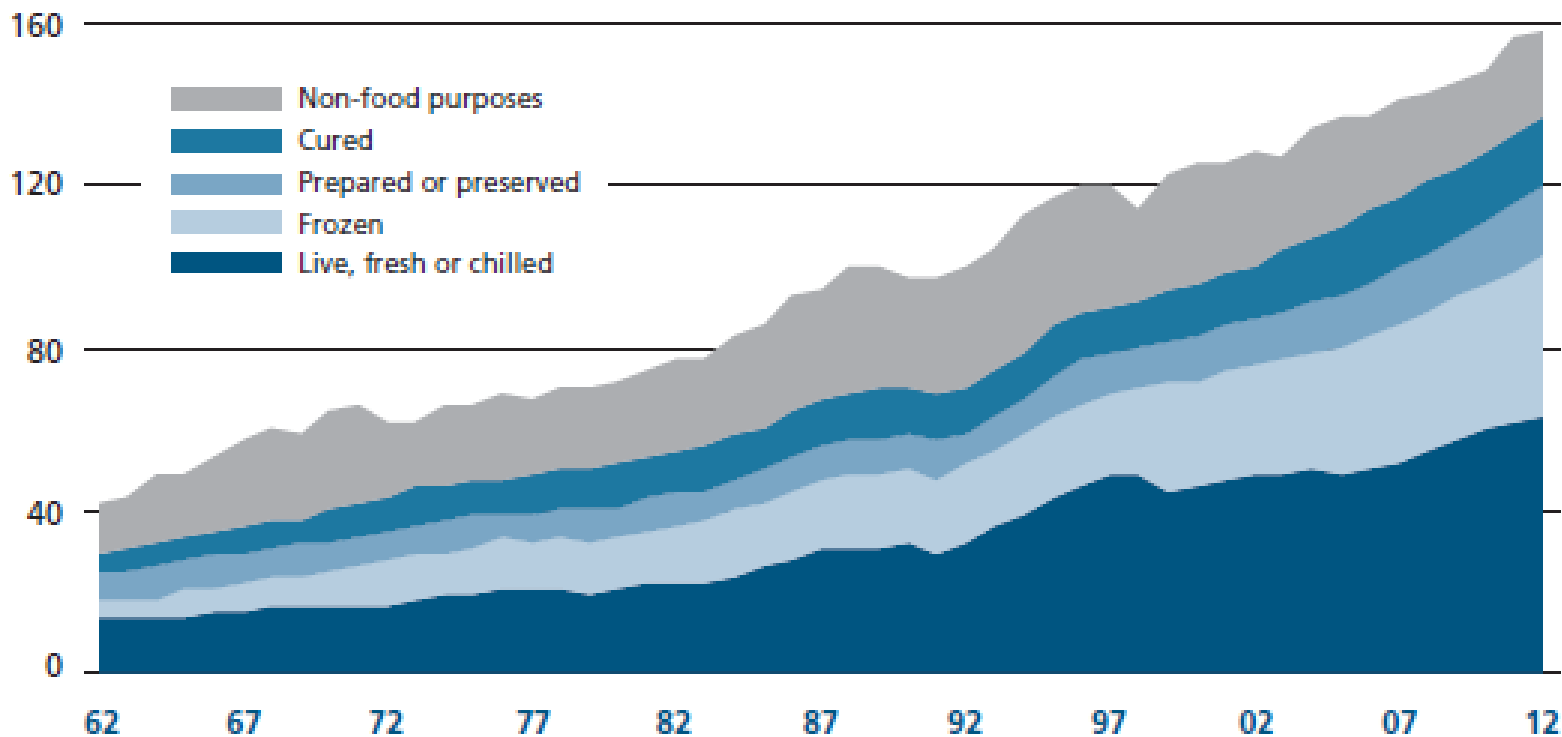
UTILIZATION TRENDS

- **DIRECT HUMAN CONSUMPTION INCREASED TO 86%**
- **14 % NON-FOOD USES FISHMEAL, FISH OIL, ORNAMENTAL, CULTURE (FINGERLINGS, FRY, ETC.), BAIT, PHARMACEUTICALS, DIRECT FEED**
- **GLOBAL 46 % (63 MILLION TONNES) IN LIVE, FRESH, CHILLED**
- **ASIA 54% IN LIVE, FRESH, CHILLED**
- **GLOBAL - FREEZING 54 % OF TOTAL PROCESSED FISH FOR HUMAN CONSUMPTION**
- **ASIA - FREEZING GROWN TO 24% FROM 13% 1992**
- **LAST DECADE – ASIA GROWTH IN PROCESSING & VALUE ADDITION**
 - **DEMAND BY DOMESTIC RETAIL INDUSTRY**
 - **CULTURED SPECIES**
 - **OUTSOURCING OF PROCESSING**
 - **PRODUCERS CLOSER LINKS WITH FIRMS LOCATED ABROAD.**

FISH UTILIZATION: A GLOBAL PERSPECTIVE

Utilization of world fisheries production (breakdown by quantity), 1962–2012

Million tonnes (live weight)

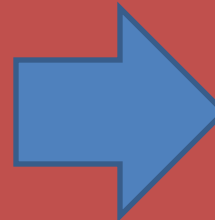


BY-PRODUCT UTILIZATION

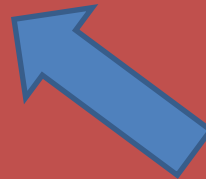
- **PROCESSING GENERATES CONSIDERABLE QUANTITIES OF BY-PRODUCTS**
- **UTILIZATION GAINING ATTENTION**
- **WHY ? SIGNIFICANT SOURCE OF HIGH-QUALITY PROTEINS, LIPIDS WITH LONG-CHAIN OMEGA-3 FATTY ACIDS, MICRONUTRIENTS (SUCH AS VITAMIN A, D, RIBOFLAVIN AND NIACIN) AND MINERALS (SUCH AS IRON, ZINC, SELENIUM AND IODINE)**
- **DESPITE STARTING SLOWLY IN AROUND 2000, THE MARKET FOR OMEGA-3 HAS GROWN CONSIDERABLY IN 2010 OMEGA-3 MARKET WORTH US\$1.595 BILLION**

BY-PRODUCT UTILIZATION

- HIGHLY PERISHABLE
- LOW VOLUMES & IRREGULAR SUPPLY
- NEED INVESTMENT
- COMPLIANCE GHP, GMP, HACCP
- SYNTHETIC PRODUCTION
- REGULATORY AUTHORITIES
- LACK OF EXISTING MARKETS
- HIGH COSTS EXTRACTION



REALISTIC UTILIZATION
= FOOD OR FEED
INGREDIENT



OPPORTUNITIES

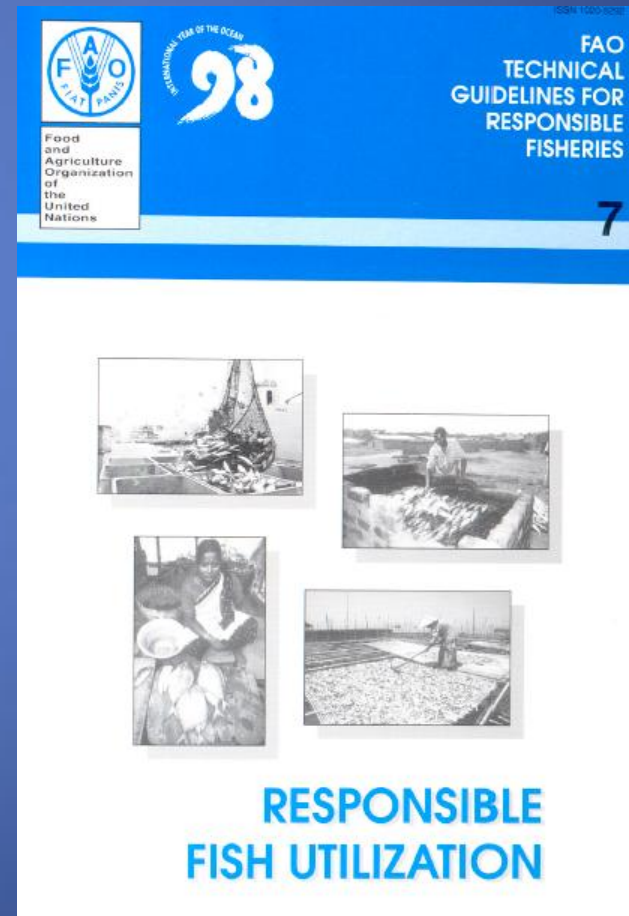
OUTLOOK 2030

- ❑ FISH PRODUCTION 187 MILLION TONNES
- ❑ CAPTURE FISHERIES PRODUCTION STABLE
- ❑ SUPPLY–DEMAND GAP MET BY AQUACULTURE
- ❑ AQUACULTURE GROWTH RAPID SOUTH & SE ASIA
- ❑ TILAPIA, CARP AND *PANGASIU*S/CATFISH
- ❑ INCREASE DEMAND FISHMEAL & FISH OIL
- ❑ SUB-SAHARAN AFRICA DEMAND RISE FOR FISH IMPORTS

CASE STUDIES

HIGHLIGHT EXAMPLES OF POST-HARVEST FISHERIES WORK OF FAO

- TECHNOLOGY
- VALUE-ADDITION
- CAPACITY BUILDING
- MARKETING
- FOOD SECURITY
- LIVELIHOODS
- REDUCING LOSSES



FOOD V FISHMEAL

ISSUES

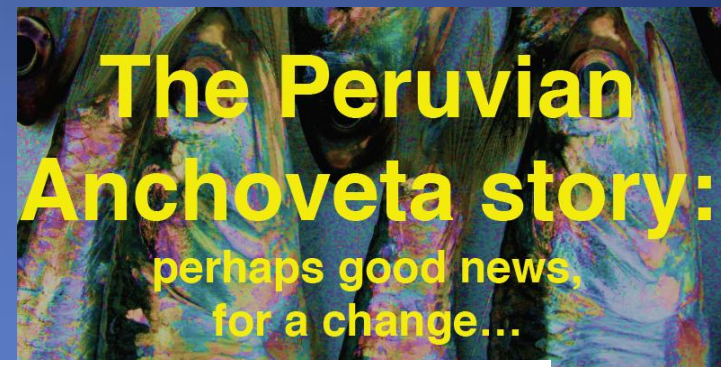
FISH USED FOR FISHMEAL
LACK OF VALUE ADDITION

ACTIVITIES

LEGISLATION
VISUAL CAMPAIGN TO EDUCATE CONSUMERS,
RESTAURANTS
MEDIA & CELEBRITIES
MARKET RESEARCH
INVESTMENT IN TECHNOLOGY

RESULTS

CONSUMPTION 35,000 TO 100,000 MT
56 DIFFERENT PRODUCTS
MSC CERTIFICATION



From Fishmeal

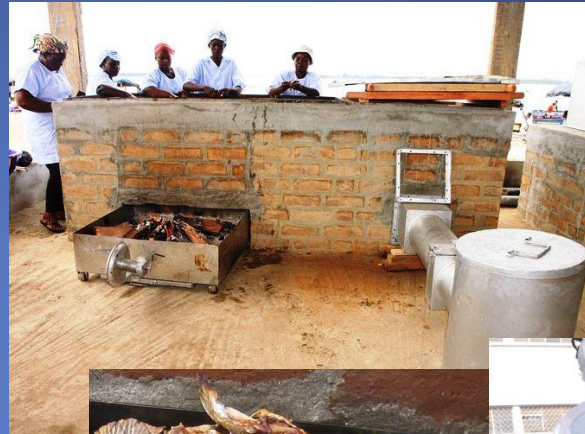
to Fish meals!



IMPROVED TECHNOLOGY

ISSUES

RAINY SEASON LOSSES
HIGH LEVELS OF PAH



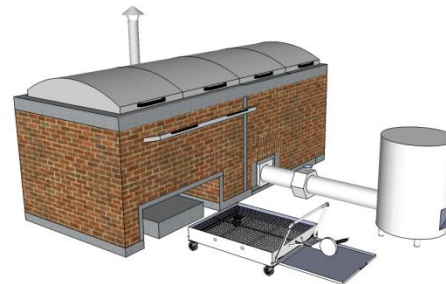
ACTIVITIES

RESEARCH & DEVELOPMENT
DUAL DRYER – SMOKER
FAO THIAROYE TECHNIQUE (FTT)



RESULTS

PRODUCTS ACCEPTED ON INTERNATIONAL MARKET
CONTROLLED DRYING
REDUCED DRYING TIME
CODEX



VALUE ADDITION – MILKFISH

ISSUES

QUALITY LOSS
LACK OF VALUE ADDITION

ACTIVITIES

PHO, PHFLA
CAPACITY BUILDING – WOMENS GROUPS
HANA DURO, PRESTO
PROMOTION & MARKETING

RESULTS

FAST FOOD RESTAURANT
2000 PRODUCTS PER MONTH



RECAP

- **AQUACULTURE TO CONTRIBUTE TO INCREASED PRODUCTION**
- **OVERCOMING CHALLENGES TO BY-PRODUCT COMMERCIALIZATION**
- **TECHNOLOGY COMBINED WITH CAPACITY BUILDING, MARKETING, PROMOTION, LEGISLATION**
- **FOOD FOR THOUGHT!**
- **WWW. <http://www.fao.org/fishery/en>**

