



SEAFOOD FROM AQUACULTURE, FISHERIES AND PROCESSING INDUSTRY IN THE OCEAN OF TOMORROW

António Marques

H2020 SEAFOOD^{TOMORROW} Coordinator

Portuguese Institute for the Sea and Atmosphere



Outline

- Context
- Challenges
- SEAFOOD^{TOMORROW} project
- Future trends



Context

By 2050, population and economic growth will result in a doubling of demand for food globally

Seafood is one of the most important food commodities consumed in Europe

Seafood is a high quality, balanced, healthy and safe food item, but can be a source of pernicious environmental contaminants

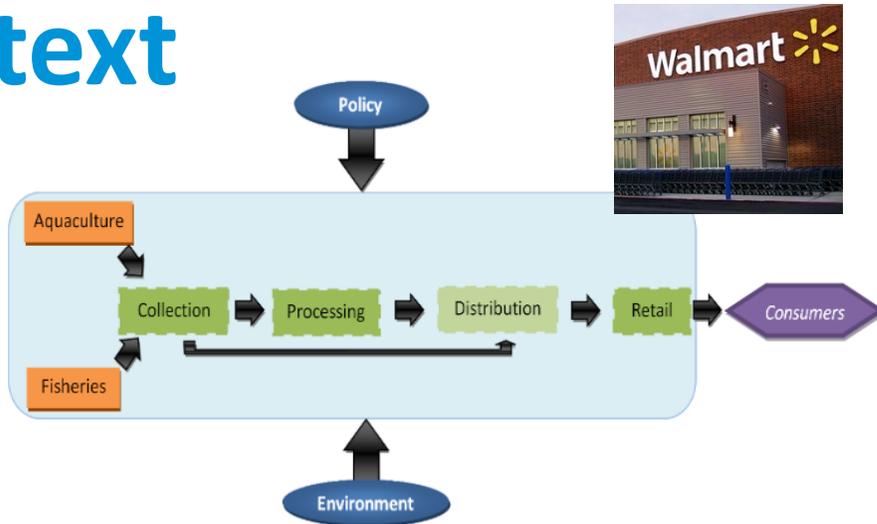
Enormous variability among European countries in seafood species produced and consumed

The vast majority of European consumers, especially children, young adults and elderly people, do not meet the dietary recommendations of eating two portions of fish per week

European consumers are worried about quality, safety, sustainability, frauds and health-related claims regarding seafood



Context



The **seafood sector is complex, heterogeneous and dynamic, but conservative, with supermarket chains/large retailers being the key players in setting product requirements and influencing the markets and consumers choices**



Seafood production has transitioned to farmed species, but still being insufficient to cope with consumers demand, mostly being imported

Seafood processing is essential to maintain the quality and avoid wastes, but is an environmental (water) and energy demanding industry

Permanent monitoring and solutions are implemented for anticipating hazard outbreaks



Challenges

Aquaculture / Fisheries



Optimize fish feed formulation in aquaculture production and **implement better on-farm ethical feed management practices**



Intensify aquaculture production and **diversify species, production systems and practices; strength genetic improvement and domestication**

Focus on the **sustainable utilization of existing fisheries resources**



Decrease the environmental impact of aquaculture on coastal ecosystems

Ensure production, distribution and consumption in a way that is **trustful, traceable, socially, economically and environmentally sustainable and secure**

Challenges

Seafood processing

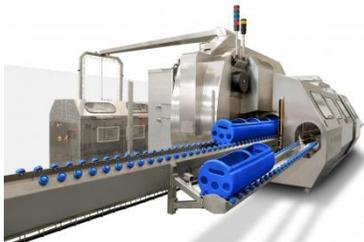
Make available innovative cost-effective and environmental-friendly seafood processing technologies

Implement intelligent packaging/shelf-life and processing towards new products with higher consumer acceptance

Higher volume of raw material available at affordable costs and decrease the dependency on imports from foreign countries through a better management of fish stocks, discard ban and landing obligation

Implement quality certification schemes for seafood and strength market availability of healthy, safe and tailor-made products

Implementation of fast screening methods for seafood quality and hazard assessment



CONSORTIUM

- 1 Instituto Português do Mar e da Atmosfera IP (IPMA)
- 2 Fundacion AZTI - AZTI Fundazioa (AZTI-Tecnalia)
- 3 Universiteit Gent (UGent)
- 4 Istituto Superiore di Sanità (ISS)
- 5 Rijksinstituut voor Volksgezondheid en Milieu (RIVM)
- 6 Agencia Estatal Consejo Superior de Investigaciones Científicas (CSIC)
- 7 Instituto de Ciências, Tecnologias e Agroambiente da Universidade do Porto (ICETA)
- 8 Danmarks Tekniske Universitet (DTU)
- 9 Instituut voor Landbouw en Visserijonderzoek (ILVO)
- 10 Centre for Environment, Fisheries and Aquaculture Science (Cefas)
- 11 Institut de Recerca i Tecnologia Agroalimentàries (IRTA)
- 12 Institut technique de developpement des produits de la mer (IDMer)
- 13 Universitat Rovira i Virgili (URV)
- 14 Centro Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR)
- 15 Aquatt UETP CLG (AquaTT)
- 16 Tarelaks AS (Tarelaks), in collaboration with third parties:
- 16A Sulefisk AS (Sulefisk)
- 16B Engesund Fiskeoppdrett A/S (Engesund)
- 16C Osland Havbruk AS (Osland Havbruk)
- 17 MRAG Ltd. (MRAG)
- 18 European Food Information Resource AISBL (EuroFIR AISBL)
- 19 RISE Research Institutes of Sweden AB (RISE)
- 20 Asociación Nacional de Fabricantes de Conservas de Pescados y Mariscos, Centro Técnico Nacional de Conservación de Productos de la Pesca (ANFACO-CE-COPESCA)
- 21 Mareforskning Ålesund AS (MF)
- 22 SPAROS Lda (SPAROS)
- 23 Spread European Safety GEIE (SPES), in collaboration with third parties:
- 23A Federazione Italiana dell'Industria Alimentare Associazione (FEDERALIMENTARE)
- 23B Federation of the Food and Drink Industries (FFDI)
- 23C Lebensmittelversuchsanstalt (LVA)
- 23D Union of Dairy, Meat, Food Industrialists and Manufacturers (SETBIR)
- 24 Aelforia srl (AEIFORIA) in collaboration with Università Cattolica del Sacro Cuore (UCSC))
- 25 Zachodniopomorski Uniwersytet Technologiczny w Szczecinie (ZUT)
- 26 Campden BRI Magyarország Nonprofit Kft. (CBHU)
- 27 Queen's University Belfast (QUB)
- 28 European Consumers Union (ECU), in collaboration with third parties:
- 28A Federazione Nazionale di consumatori e Utenti (FEDERCONS)
- 28B Lietuvos nacionalinė vartotojų federacija asociacija (LNCF)
- 29 Aquimer (AQUIMER), in collaboration with third parties:
- 29A Société Nouvelle des Etablissements Jacques MAES (Jacques MAES)
- 29B SAS Delabli (DELPIERRE)
- 29C Mer Hérault Poly Production (MHP Production)
- 30 Xenobics Ltd (XEN)
- 31 Irskie Centrum Rybactwa Sp. z o.o. (ICR)
- 32 Westcounty Mussels of Fowey Ltd (WCM)
- 33 PtC Phage Technology Center GmbH (PTC)
- 34 SKALOMA SA (SKALOMA)
- 35 Predell Services (PS)

35 PARTNERS (19 RESEARCH INSTITUTES, 12 SMEs, 4 INTEREST ASSOCIATION GROUPS (IAGS)) AND 12 THIRD-PARTY AFFILIATE ORGANISATIONS BASED IN 19 EUROPEAN COUNTRIES



● Research Institutes ● SMEs ● IAGs ● Third Parties



Nutritious, safe and sustainable seafood for consumers of tomorrow

www.seafoodtomorrow.eu

PROGRAMME
H2020 (EC)

INSTRUMENT
Innovation Action

TOTAL BUDGET
€7.5 million

DURATION
Nov 17 – Oct 18 (36M)

COORDINATOR
IPMA



Project objectives

- **SEAFOOD^{TOMORROW}** aims to develop innovative sustainable solutions for improving the safety and dietary value of seafood in Europe. In addressing the challenges to meet a growing market need for safe and sustainable seafood, the project will generate new knowledge to develop commercially viable eco-innovative solutions for improving the socio-economic and environmental sustainability of European seafood production, and the processing industry.



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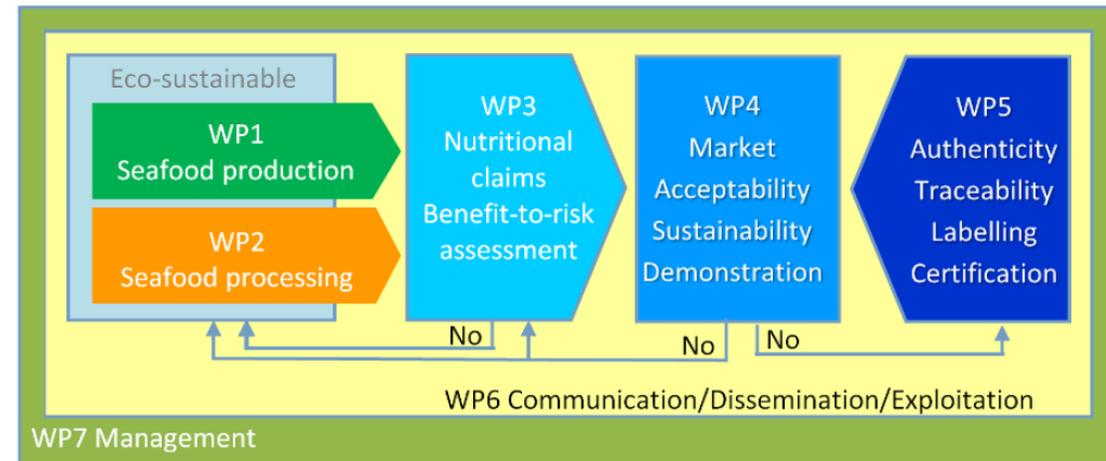


Project approach

- **SEAFOOD^{TOMORROW}** is working directly with recognised industry experts and established innovation institutions. The project's knowledge management structures will ensure that innovative solutions will be transferred to end-users in the seafood production and processing sectors. Using a collaborative approach, **SEAFOOD^{TOMORROW}** offers a strong and transdisciplinary partnership that is addressing food security challenges.



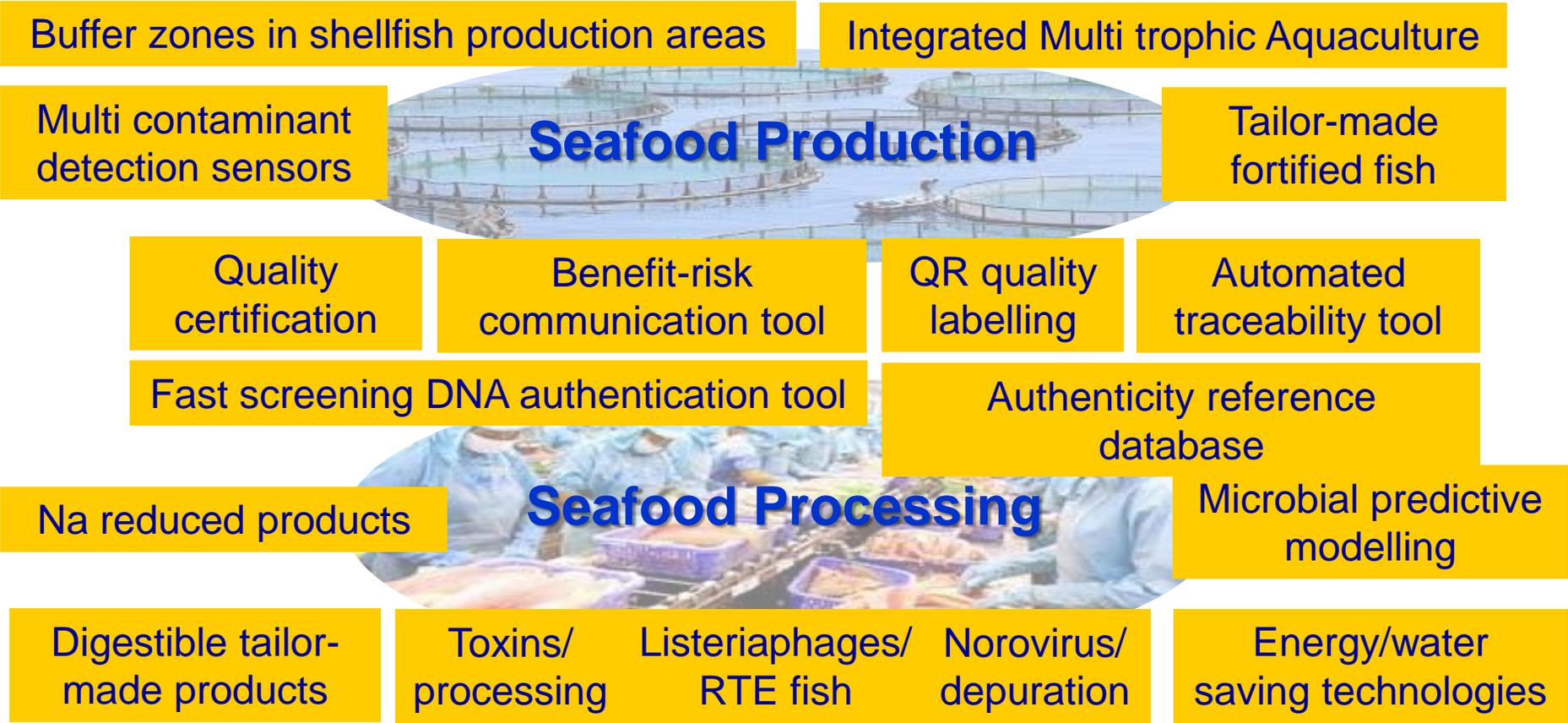
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Project solutions



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Expected results

- Market-driven, consumer-focused, eco-innovative seafood products of improved quality, traceability, authenticity and safety.
- Innovative, economically-viable seafood production and processing technologies that mitigate hazards and environmental damage.
- New validated strategies to prevent or remove contaminants such as *Norovirus*, *Listeria* and marine toxins from seafood.
- New tools and methodologies to facilitate traceability, authentication, labelling and benchmarking of EU seafood products.



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- Improved understanding of market acceptance of eco-innovative seafood solutions in different European regions and amongst different demographics.
- Benchmark tool for seafood quality and traceability certification schemes for industry to strengthen consumer confidence and trust in European seafood.
- Reduction of public health risks and promotion of seafood consumption through transparent and responsible communication, dissemination, knowledge transfer and exploitation of project outcomes to stakeholders.

Concluding remarks

In the Ocean of Tomorrow successful implementation of eco-innovative solutions can occur by:

- Implementing policy actions that lead to less bureaucracy, sustainable strength of the European socio-economy and ensure the trust of consumers in seafood quality
- Involving all actors in the decision-making process
- Strengthening the innovation capacity of SMEs through multi-disciplinary approaches
- Understanding the needs and vision of all actors through multi-sectorial collaboration
- Understanding the future societal challenges (ex. climate change), assessing the consequences to the different actors and implementing mitigation and action plans
- Strengthening funding programs for the development of innovation actions that improve European industrial competitiveness in this food sector
- Strengthening the education of stakeholders focusing on seafood quality and safety



Thank You

Contact Details:

amarques@ipma.pt

 **@SEAFOOD_TMRW**