



5th United Nations Ocean Forum

SESSION 4: Trade policies and tools for innovative marine-based and low carbon products by SMEs (including foods, nutraceuticals, cosmetics, and non-plastic substitutes)

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3 March 2025

3–4.30 p.m.



➤ Background

Low-cost, **traditional exploitation** of waste, opportunistic marine biomass has been around for some time already.

For example, In the summer of 2018, an almost incomprehensibly large mass of stringy brown seaweed appeared in the Atlantic Ocean. It stretched from one coast to the other, from the shores of West Africa to the Gulf of Mexico. Spanning 8,850 kilometres (5,000 miles), the seaweed bloom, known as the great Atlantic sargassum belt, was the largest ever recorded.

Category	Uses
Agriculture	Livestock feeds
	Fertilizers
	Insecticides
Aquaculture	Finfish and shellfish feeds
Cosmetics	Gelatin/emulsifier
Environmental monitoring	Pollution detection
Fishing	Bait
Materials science	Absorbent polymers
	Cement additive
	Nanoparticle filters
	Antihypertensive peptides
	Anticoagulants
Pharmaceuticals	Antimicrobiotics
	Antioxidants
	Bioactive compounds
	Collagen
	Mucins

Examples of uses for jellyfish other than as food for humans



Drying paper made from Sargassum seaweed



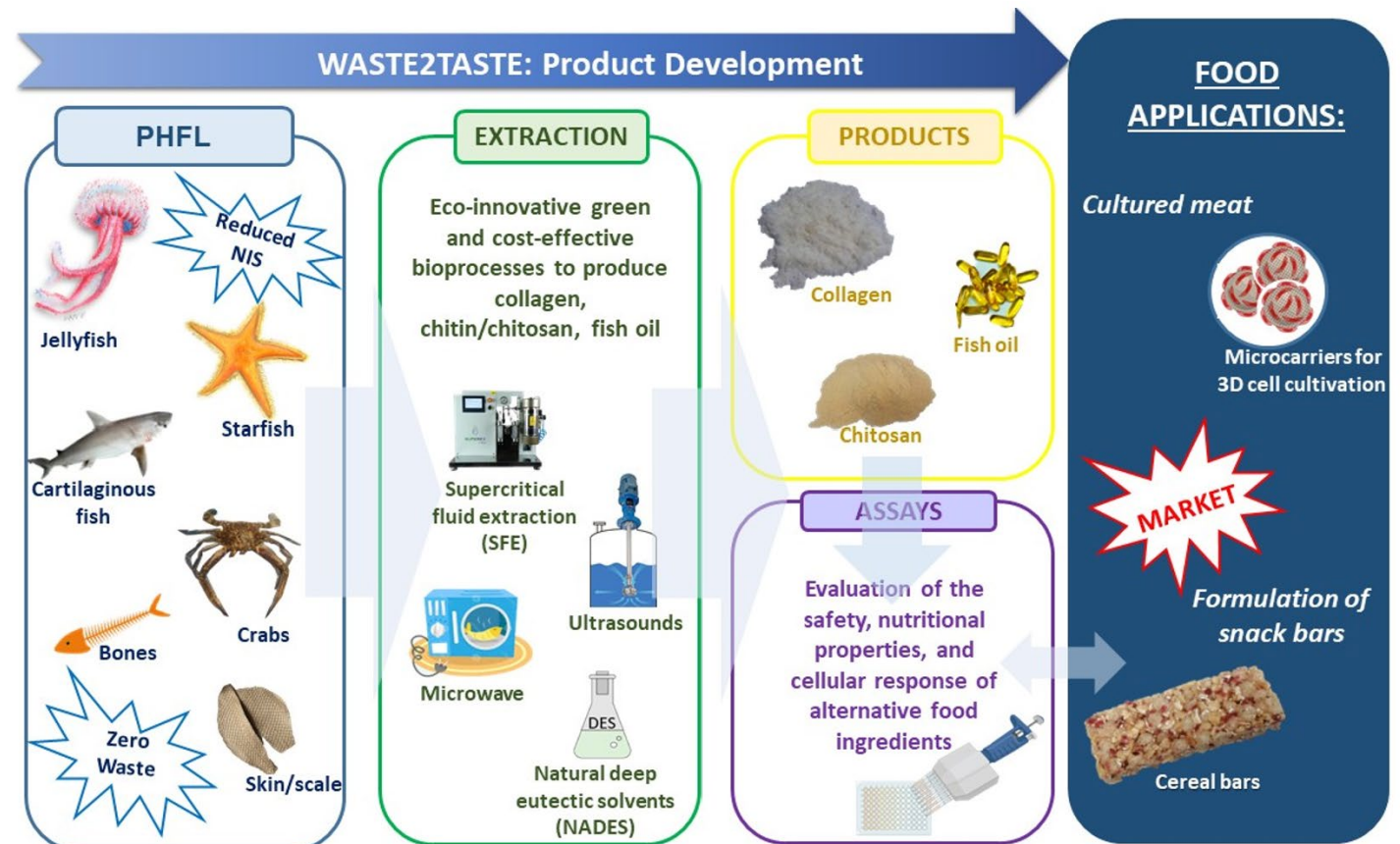
Residents in a Mexican coastal village clearing the beached Sargassum bloom debris

➤ Key message 1

A number of new funding programmes (e.g. SBEP) do exist in order to fund research in the capitalization of **'waste'**

Examples of marine 'waste' include biomass from bycatch, invasive alien species, jellyfish blooms, beached marine vegetation, previously-untargeted species (e.g. sea cucumbers)

- ▶ The re-definition of 'waste' in a **circular economy** context
- ▶ E.g. **PHFL** – Post-Harvesting Fishing Losses



➤ Key message 2

Novel Food is defined as food that had not been consumed to a significant degree by humans in the EU before 15 May 1997, when the first Regulation on novel food came into force.

'Novel Food' can be newly developed, innovative food, food produced using new technologies and production processes, as well as food which is or has been traditionally eaten outside of the EU.

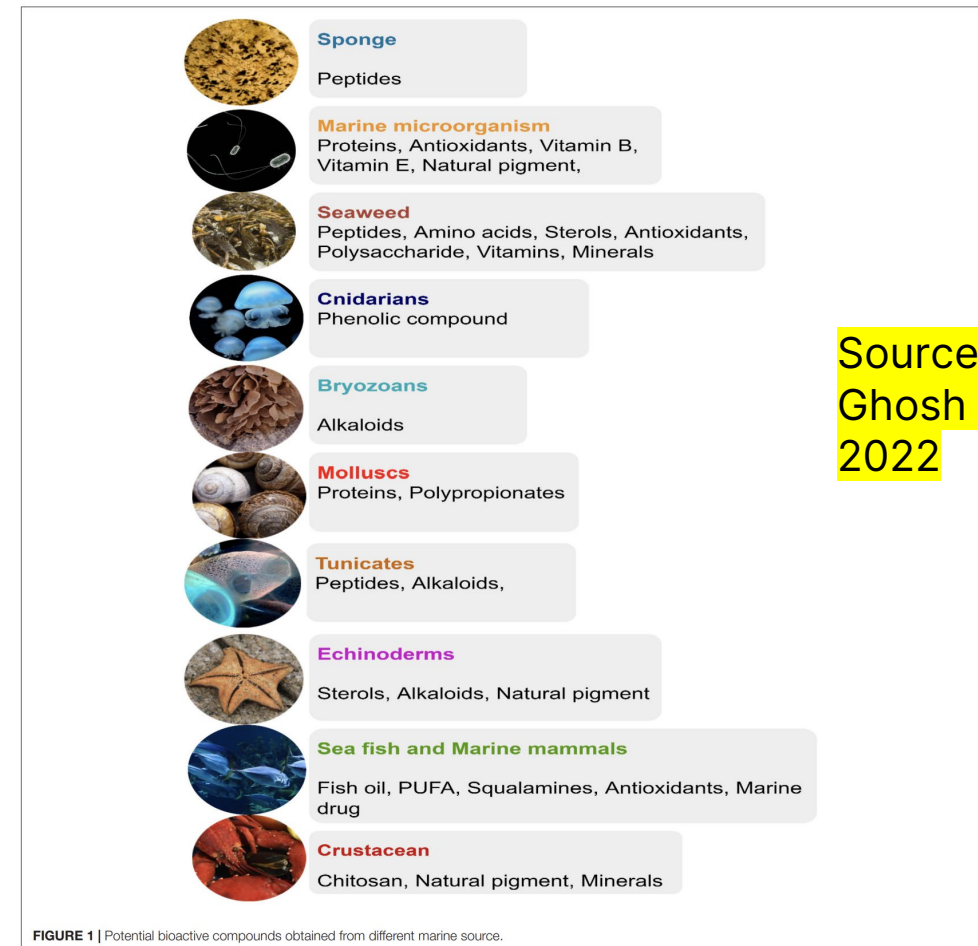
- ▶ The marine base of novel foods (will it compete with other bases – e.g. the insect one?)
- ▶ The health benefits of fish oils and seaweed



➤ Key message 3

Several marine microorganisms (fungi, myxomycetes, bacteria, and microalgae) have been isolated that produce antioxidant, antibacterial, apoptotic, antitumoral, and antiviral chemicals. Anticoagulant, anticancer, and hypocholesterolemic effects have been demonstrated for bioactive peptides extracted from fish protein hydrolysates, as well as algal fucans, galactans, and alginates. Omega-3 fatty acids are abundant in fish oils and marine microorganisms, while potent antioxidants such as carotenoids and phenolic compounds can be found in crustaceans and seaweeds

- ▶ Beyond 'novel foods', the market for marine-derived BAMs is expanding
- ▶ **BAMs – Biologically-Active Molecules**; those that affect biological processes, beyond the nutritional value, in a way which has an impact on body function.



Source:
Ghosh et al.,
2022

➤ Recommendations

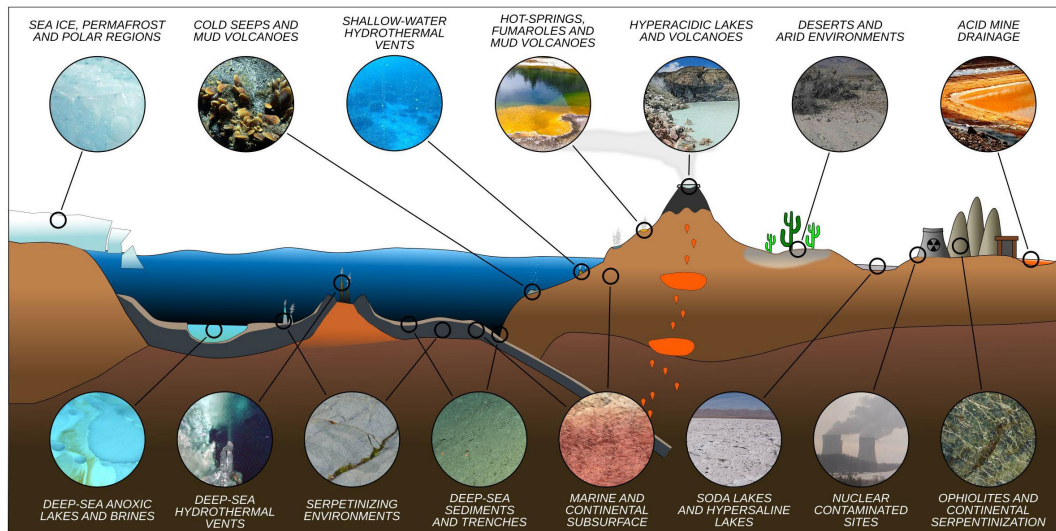
1. Promoting (e.g. through trade policies, fiscal incentives, etc) the exploitation of marine-derived products should be made against ROBUST sustainability assurances;
2. **Artisanal/small-scale operators** should be safeguarded and even promoted, as opposed to industrial operators;
3. **ABS (Access to Benefit-Sharing; Nagoya Protocol)** provisions should be respected;
4. Consumer acceptance still an issue
5. **Climate change forcings** should be taken into consideration (e.g. impact on seaweed farmers)



➤ Recommendations

Sustainability concerns:

- A. Sampling of **'extremophiles'** (organisms that live in "extreme environments," under high pressure and temperature.) – highly vulnerable ecosystems (low resilience to disturbance)
- B. Extraction techniques (toxic solvents, disposal, etc)
- C. Risk of over-exploitation



Thank you

