



FishStat

FAO FISHERY AND AQUACULTURE STATISTICS

Keynote

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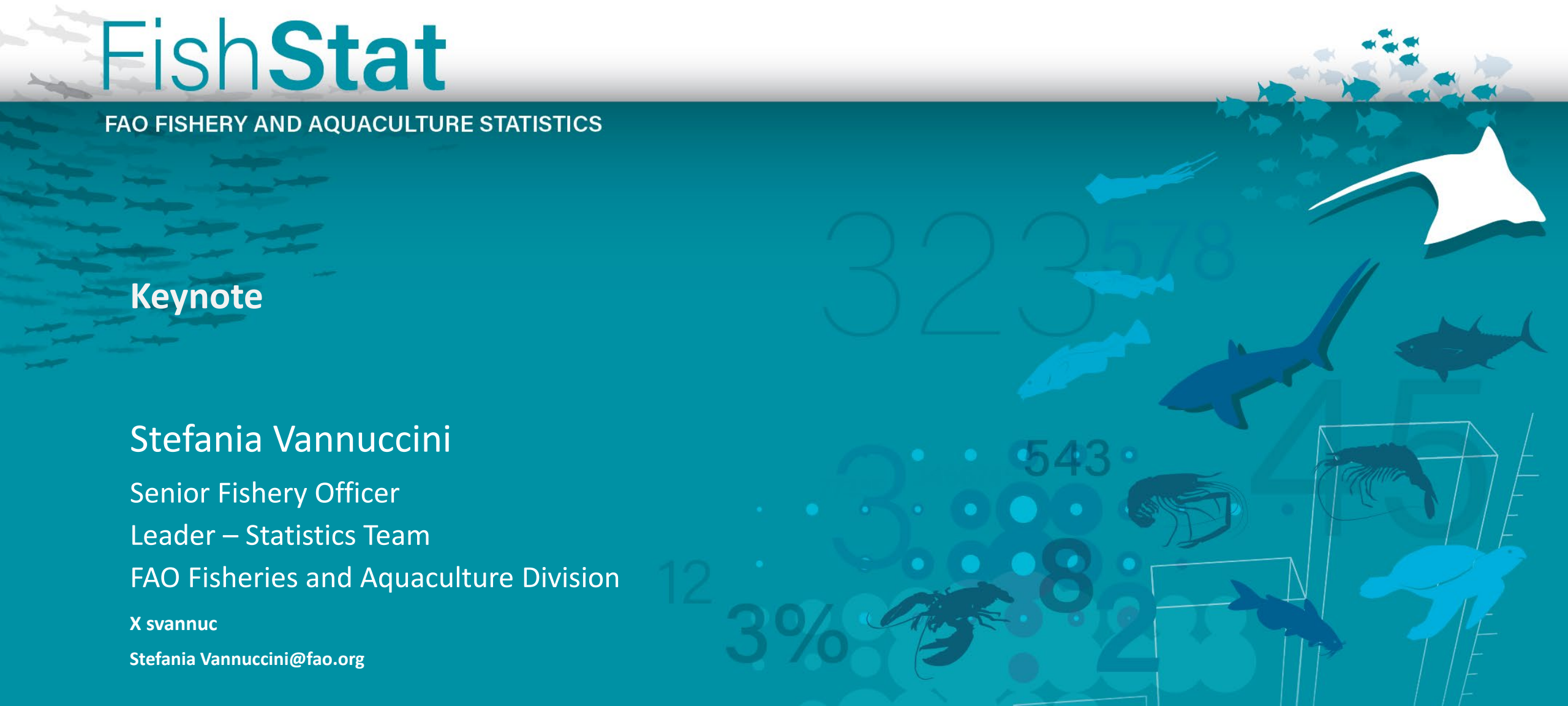
Senior Fishery Officer

Leader – Statistics Team

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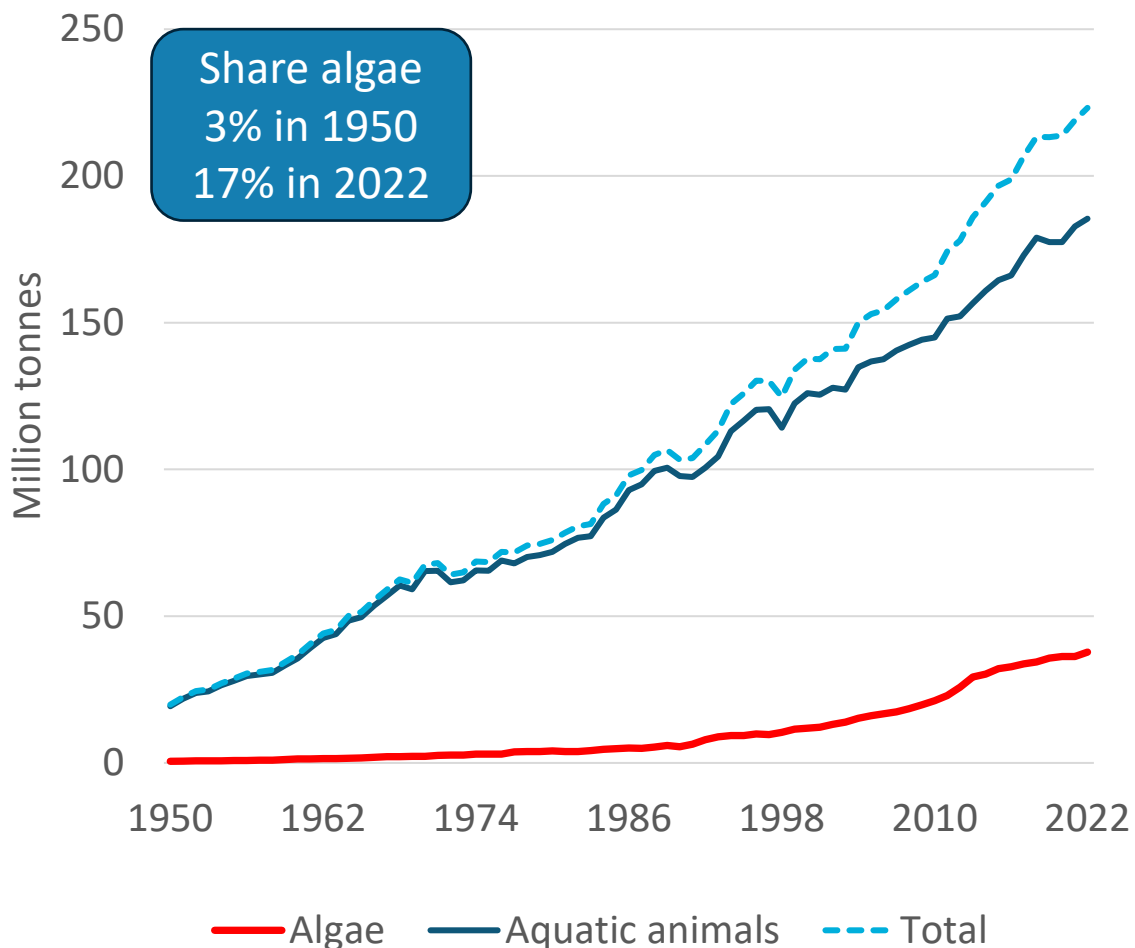
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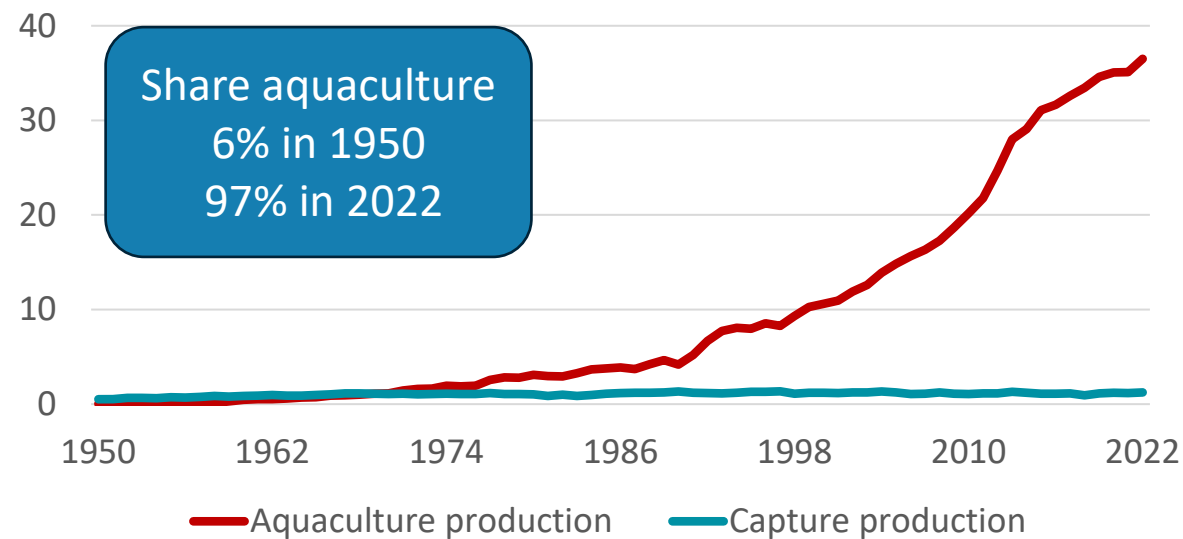
Production

TOTAL F&A PRODUCTION

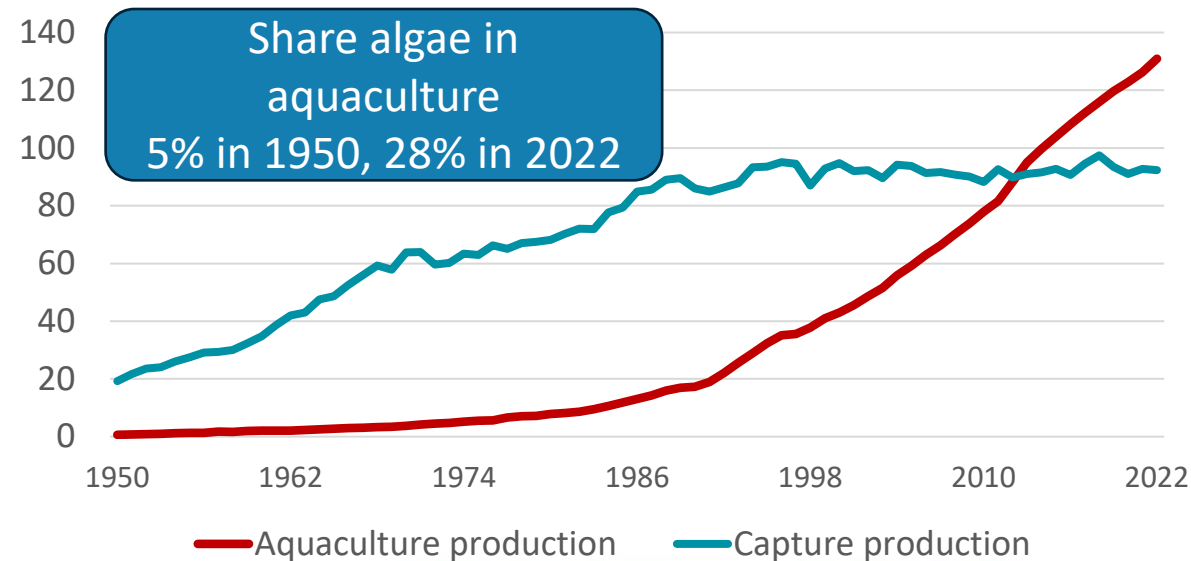


Value from USD 2 billion in 1984 to USD 17 billion in 2022

ALGAE

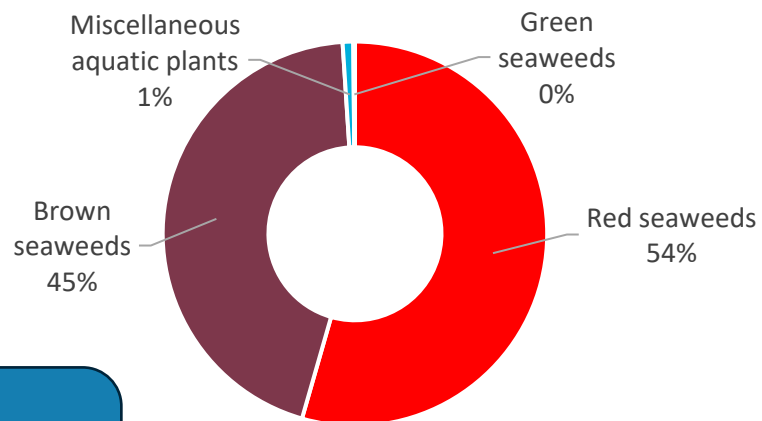


TOTAL F&A PRODUCTION OF AQUATIC ANIMALS+ALGAE



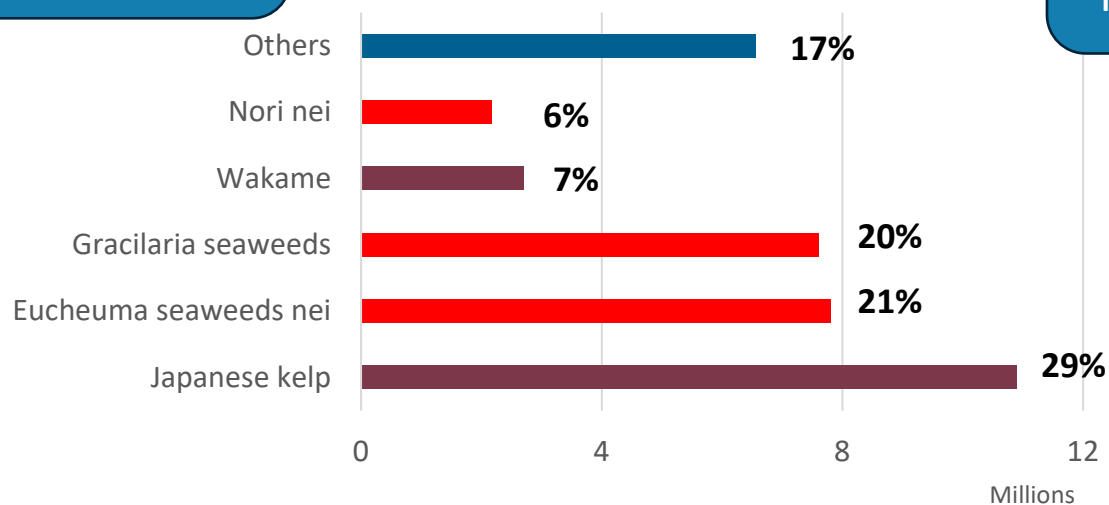
Algae production: Key trends in 2022

ISSCAAP GROUPS



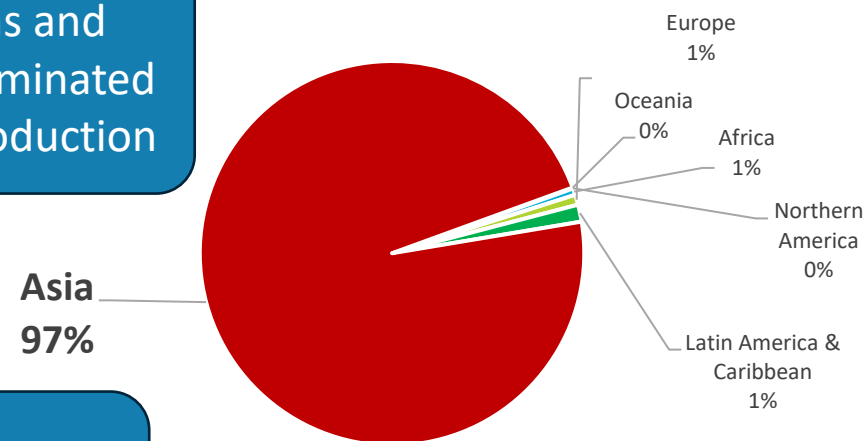
Laminaria/Saccharina
 Kappaphycus/Euchema
 Gracilaria
 Porphyra/Pyropia
 Undaria

SPECIES



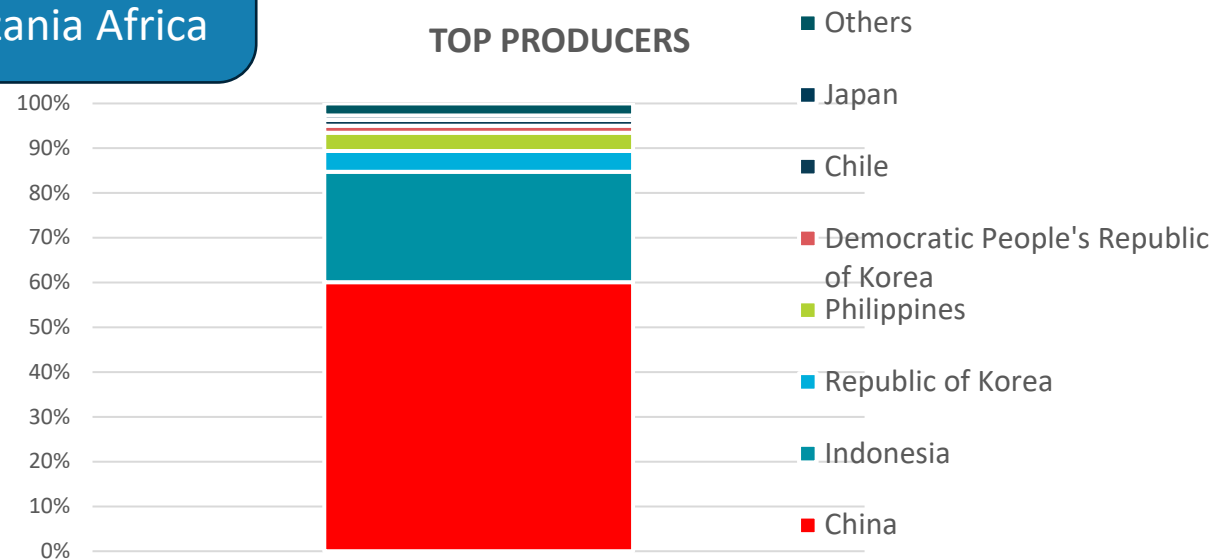
Americas and Europe dominated by wild production

REGIONS



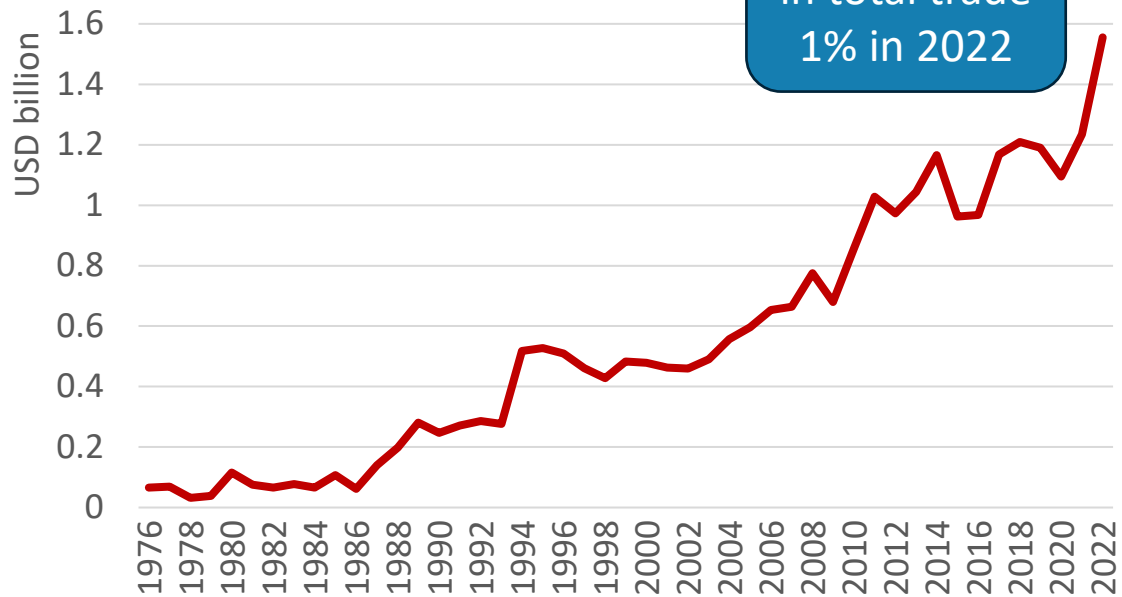
Norway Europe Chile Americas Tanzania Africa

TOP PRODUCERS

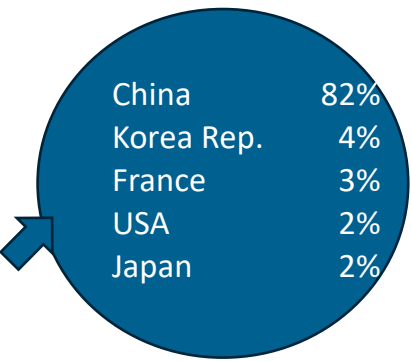


Trade

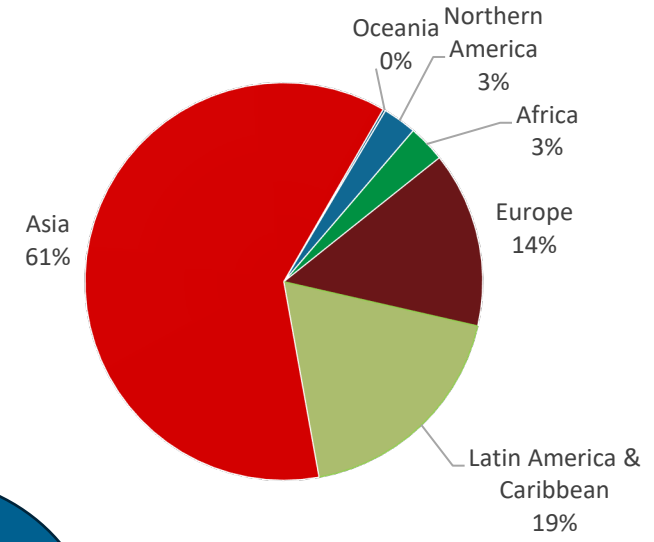
Share algae
in total trade
1% in 2022



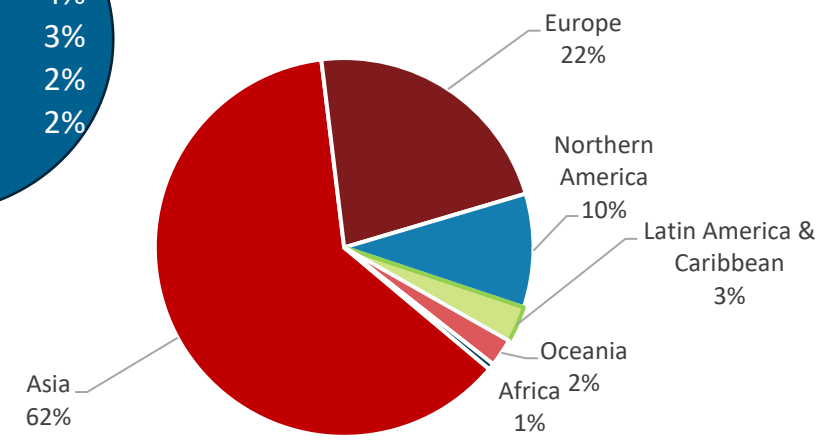
Importers		Exporters	
China	35%	Indonesia	27%
Japan	13%	Korea Rep.	19%
USA	9%	Chile	13%
Russian Fed.	5%	China	10%
France	3%	Peru	5%
Others	36%	Others	27%



EXPORTS



IMPORTS



Utilization: high versatility

- Data issues
- Great variety of utilization
- Processed into food products, food additives and supplements and non-food products including cosmetics, pharmaceuticals, feeds, bio-packaging, fertilizers, etc
- Represent healthy, high-fibre and low-calorie food option valued for their rich micronutrient content. They contain minerals (iron, calcium, iodine, potassium, selenium) and vitamins, particularly A, C and B-12.
- Seaweeds are also one of the only non-fish sources of natural omega-3 long-chain fatty acids. They also tend to be high in soluble dietary fibres, and some species can be good sources of protein.
- In some regions, also used as traditional medicines as having anti-inflammatory, prebiotic, antioxidant properties

Human foods (for soups, snacks, salads, pickles, etc)

Hydrocolloids

Abalone feed

Livestock feed

Aquaculture feed

Biofertilizer or biostimulants

Cosmetics, nutraceuticals,
pharmaceuticals

Textile fibres

Bio packaging

Waste treatment

Carbon capture/sequestration

Bioenergy

etc

Role of seaweeds

- Crucial role in shaping national culinary traditions in some regions.
- Major source of livelihood and food security in various regions, primarily in coastal communities, with a major role played by women.
- Various varieties of seaweeds not only grow fast, but their cultivation also does not require fertilizers, land degradation, competition for water or deforestation.
- In addition, seaweeds provide a number of environmental benefits, such as combating ocean acidification, providing habitat for fish, preventing eutrophication and reducing pollutants in the area.



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Constraints and challenges

Various human health contributions, environmental benefits and ecosystem services of seaweeds and microalgae have drawn increasing attention to untapped potential of seaweed and microalgae cultivation

Major potentiality, if properly managed, contributors to global efforts to improve food security and meet the rising demand as an alternative source of nutrients.

BUT

- Limited or uncertain demand for seaweeds, also due to highly imbalanced production and consumption
- Limited or reduced availability of suitable farm sites nearshore
- Shortage of labour
- Constraints over integrated farming systems
- Low or declined seedling quality
- Limited knowledge of genetic diversity and inadequate integration of genetic analysis in seaweed breeding
- Climate change that can exacerbate food safety hazards, with also risks of reduced production and algal bloom
- Environmental/ecosystem impacts in case of improperly managed cultivation

What needs to be done: sustainable growth!

Joint efforts of governments, the industry, the scientific community, international organizations (including FAO with its **Blue Transformation**), civil societies, and other stakeholders or experts are needed to realize the potential, and create a solid foundation for the sector's sustainable development including:

- raising **public awareness** of the sector's environmental and socio-economic contributions+nutritional benefits of seaweeds
- generating and compiling **information** and **knowledge** on algae from production to the market needed for informed decisions in public and private sectors
- develop **science- and evidence-based** laws, regulations and guidelines (environmental regulations, spatial planning, food safety standards, occupational health requirements, technical guidelines and good aquaculture practices, among others)
- establishing effective **mechanisms** to facilitate innovations, capacity-building, technology transfer and knowledge-sharing
- **innovation** needed to support the development of seaweed production more resilient to climate change, improving cultivation techniques, exploring new applications for seaweed products, and conducting research on environmental impacts
- fostering **collaboration** and **partnership** among policy, scientific and business communities



Food and Agriculture
Organization of the
United Nations

Thank you ▪ Merci
Благодарю ▪ ¡Muchas gracias!
謝謝 ▪ شكرا



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<https://www.fao.org/fishery/en/fishstat>