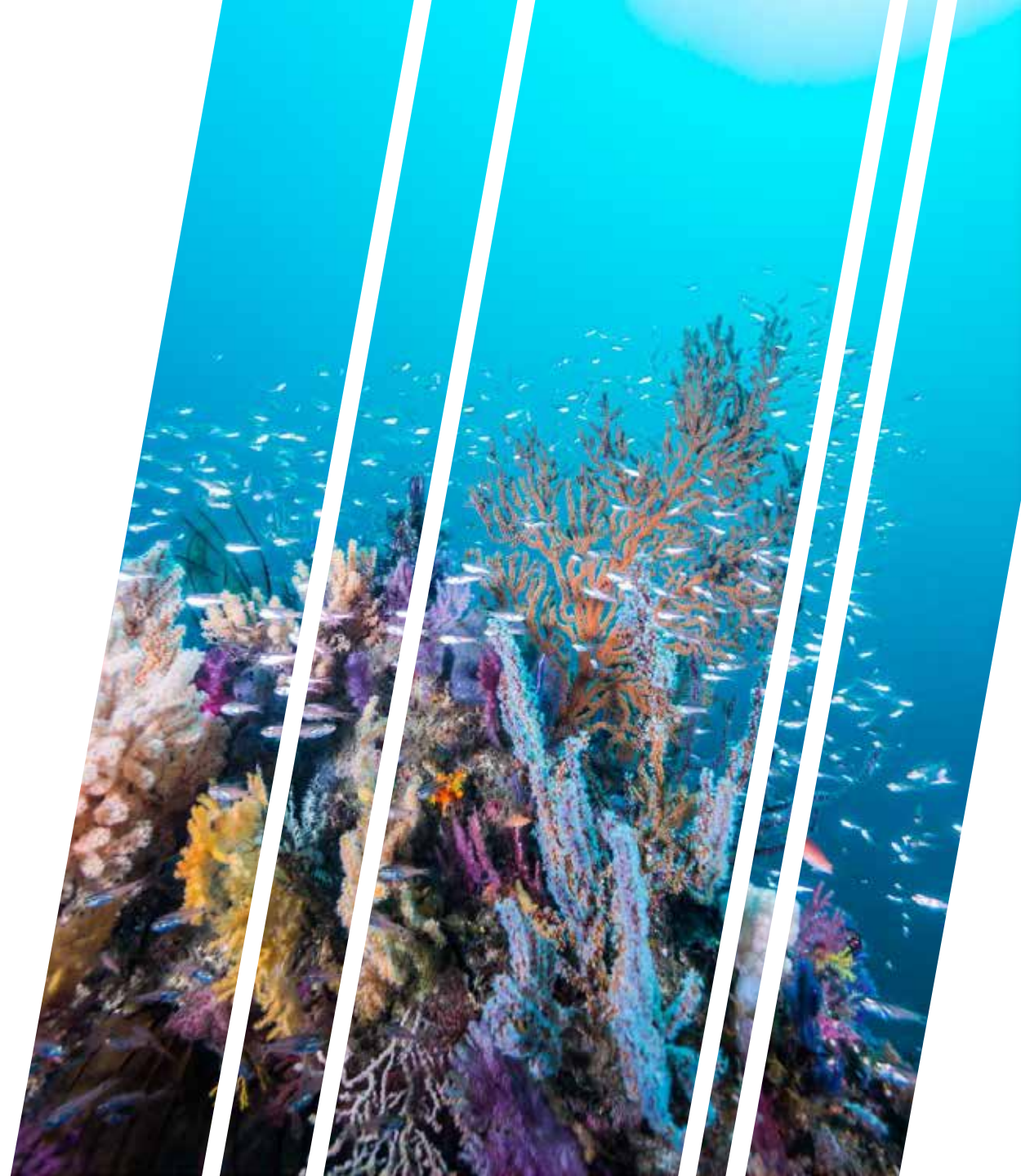
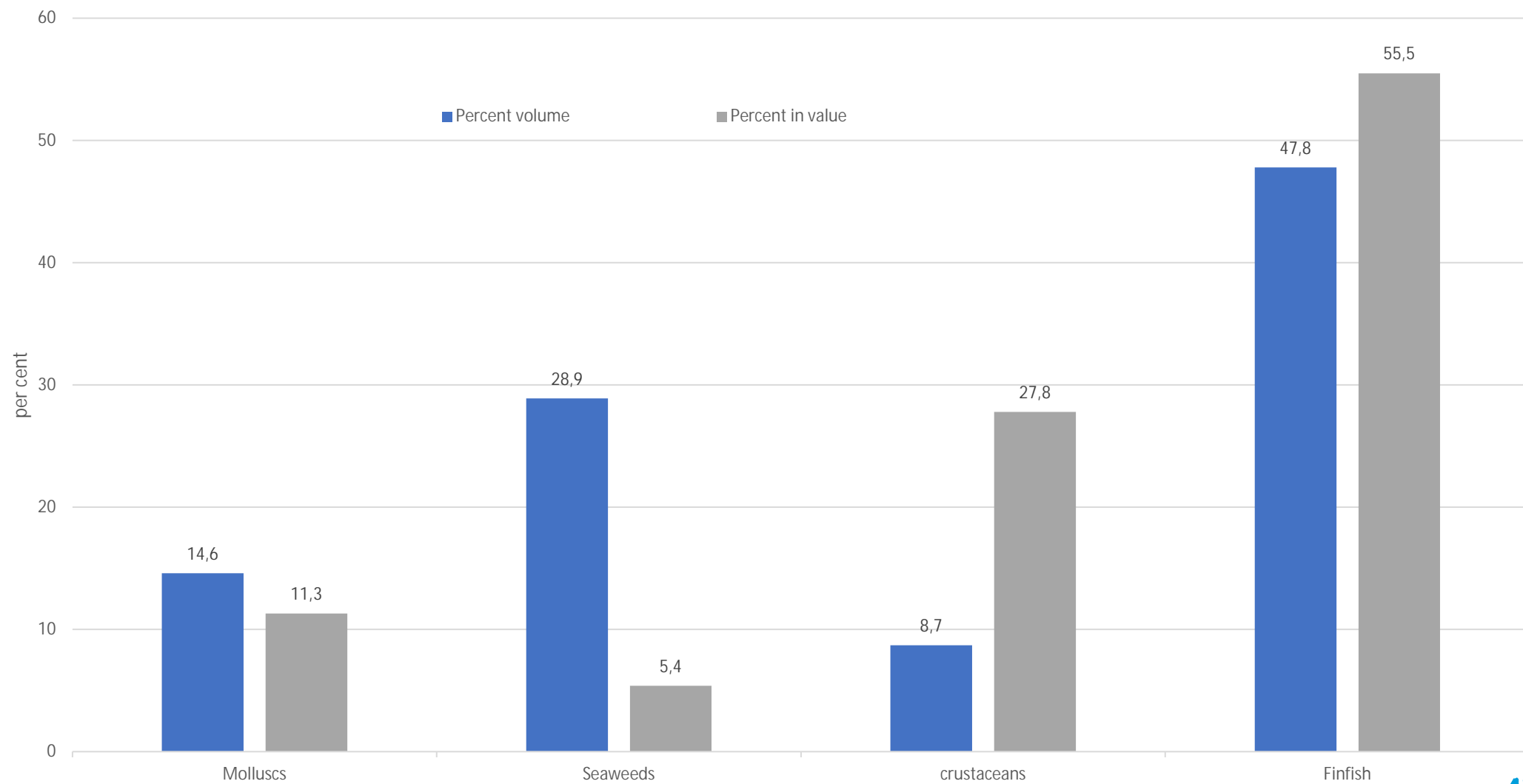


The seaweed sector as a lever for sustainable economic recovery

Lahsen Ababouch, Senior expert
FAO/UNCTAD

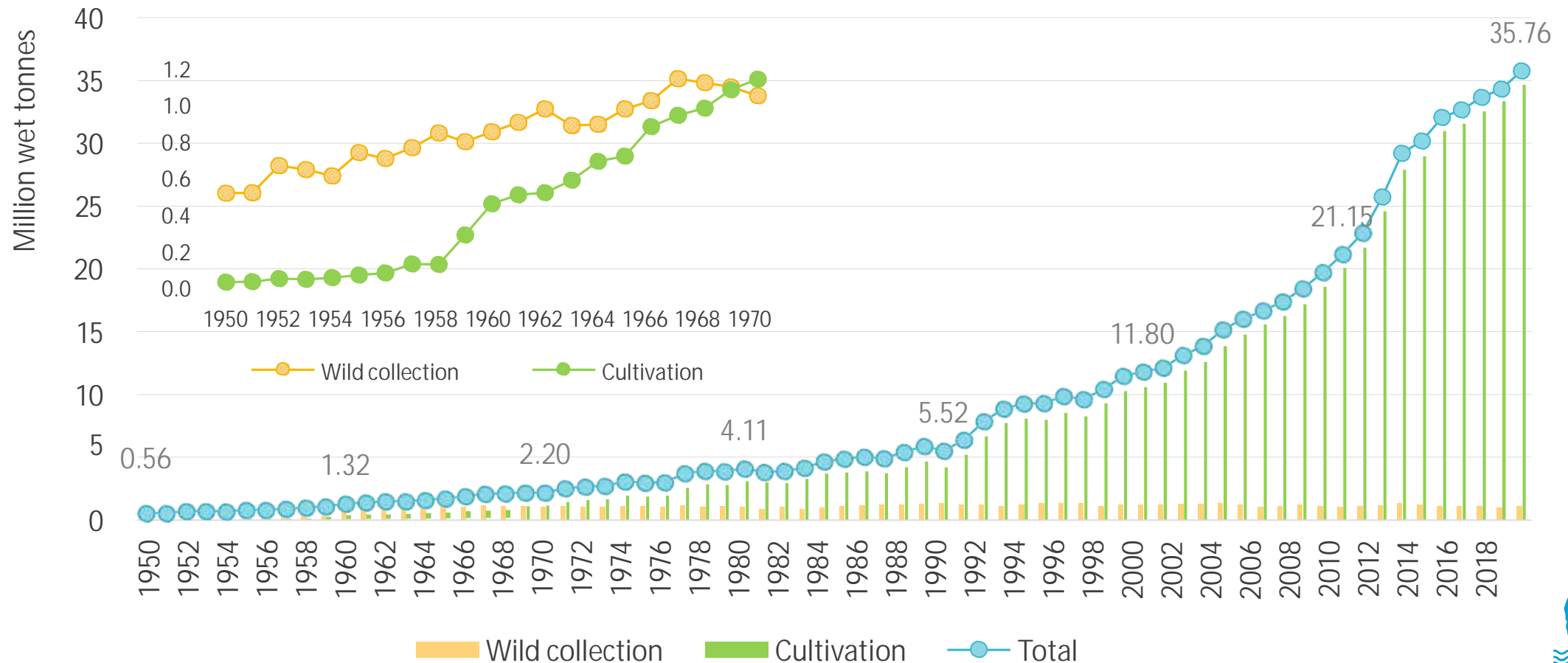


Importance of fed species and extractive species in aquaculture, 2019



- ü In 1969, the 2.2 million tonnes of world seaweed production was evenly contributed by wild collection and farming.
- ü In 2019, wild production remained at 1.1 million tonnes , farming reached 34.7 million tonnes (97% of total).
- ü **World seaweed farming increased 1,000 folds between 1950 and 2019.**

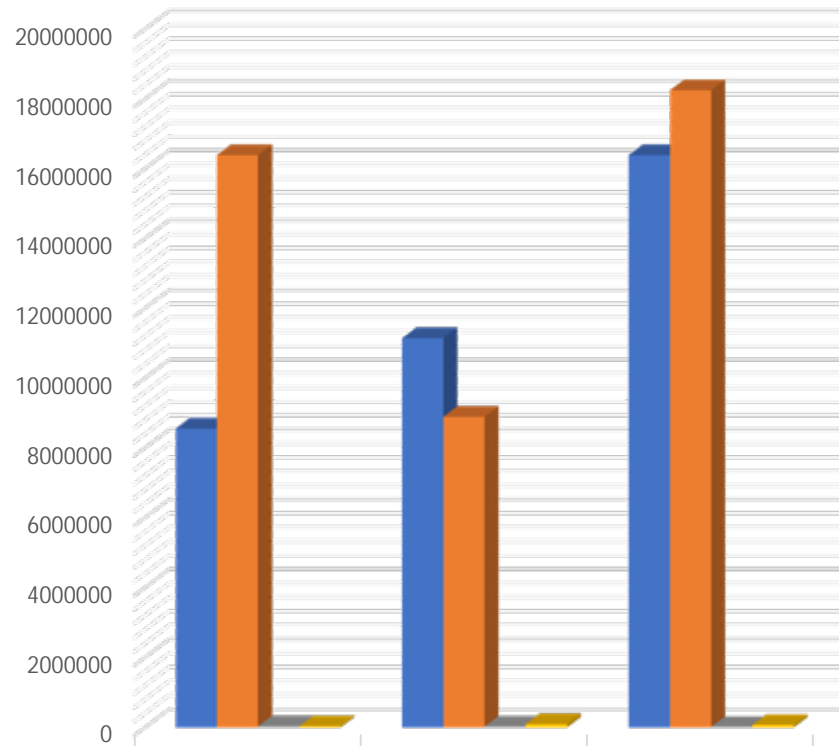
Status and trends of global seaweed production, 1950 – 2019



Data source: FAO 2021. FAO Global Fishery and Aquaculture Production Statistics (FishStatJ; March 2021; www.fao.org/fishery/statistics/software/fishstatj/en).

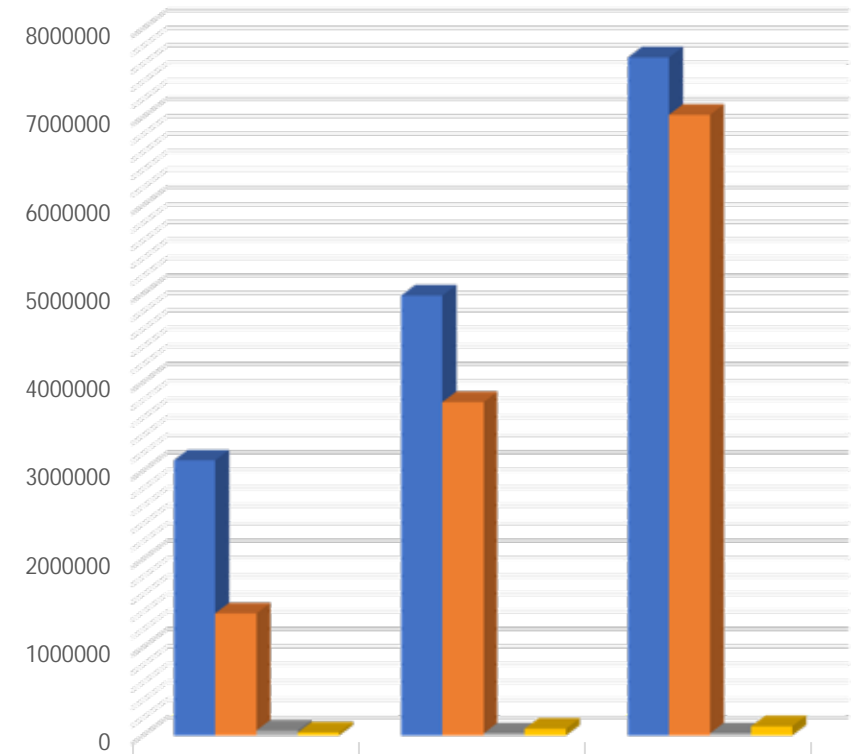


Main seaweed groups (tons)



■ brown seaweeds	8556930	11149248	16393764
■ red seaweeds	16393764	8895657	18251474
■ green seaweeds	33891	26924	16944
■ other (mainly microalgae)	32503	102489	73407

Main seaweed groups (\$ 1000)



■ brown seaweeds	3119865	4979815	7672578
■ red seaweeds	1385339	3778570	7024164
■ green seaweeds	58456	24322	25560
■ other (mainly microalgae)	35385	77823	106584

ü **35.8 million tonnes** of world seaweed production contributed by **49 countries/territories**

ü **97 percent** of the world production from **Asia**

ü Production in the **Americas** and **Europe** dominated by **wild collection**

ü Production in **Asia, Africa** and **Oceania** dominated by **cultivation**

Global seaweed production, 2019

Country/area	Total (farmed and wild) production (tonnes)	Share of world total (%)	Aquaculture share in total production (%)
World	35 762 504	100.00	96.97
Asia	34 826 750	97.38	99.10
China	20 296 592	56.75	99.14
Indonesia	9 962 900	27.86	99.55
Korea, Republic of	1 821 475	5.09	99.52
Philippines	1 500 326	4.20	99.98
Korea, Dem People's Rep	603 000	1.69	100.00
Japan	412 300	1.15	83.80
Malaysia	188 110	0.53	100.00
Americas	487 241	1.36	4.69
Chile	426 605	1.19	5.08
Peru	36 348	0.10	0.00
Canada	12 655	0.04	0.00
Mexico	7 336	0.02	0.14
United States of America	3 394	0.01	7.75
Europe	287 033	0.80	3.88
Norway	163 197	0.46	0.07
France	51 476	0.14	0.34
Ireland	29 542	0.08	0.14
Russian Federation	19 544	0.05	54.10
Iceland	17 533	0.05	0.00
Africa	144 909	0.41	81.29
United Republic of Tanzania	106 069	0.30	100.00
Morocco	17 591	0.05	1.55
South Africa	11 155	0.03	19.32
Madagascar	9 665	0.03	91.72
Oceania	16 572	0.05	85.32
Solomon Islands	5 600	0.02	100.00
Papua New Guinea	4 300	0.01	100.00
Kiribati	3 650	0.01	100.00
Australia	1 923	0.01	0.00

USD 2.65 billion world export of seaweeds and seaweed-based hydrocolloids (by 98 countries)
= USD 909 million of seaweeds + USD 1.74 billion seaweed-based hydrocolloids

Seaweeds and seaweed-based hydrocolloids			Seaweeds ¹			Seaweed-based hydrocolloids ²		
Exporter	Million USD	Share of world (%)	Exporter	Million USD	Share of world (%)	Exporter	Million USD	Share of world (%)
1. China	578	21.79	1. Rep. of Korea	278	30.55	1. China	523	30.00
2. Indonesia	329	12.39	2. Indonesia	218	24.01	2. Philippines	214	12.28
3. Rep. of Korea	320	12.08	3. Chile	86	9.43	3. Spain	138	7.91
4. Philippines	252	9.52	4. China	55	6.03	4. Chile	123	7.06
5. Chile	209	7.87	5. Philippines	38	4.23	5. France	114	6.53
6. Spain	145	5.48	6. Ireland	33	3.60	6. Indonesia	110	6.34
7. France	124	4.68	7. Peru	22	2.43	7. USA	84	4.82
8. USA	102	3.85	8. Japan	21	2.33	8. Germany	76	4.39
9. Germany	82	3.11	9. USA ³	18	1.98	9. UK	65	3.75
10. UK	78	2.93	10. Canada	18	1.97	10. South Korea	43	2.45
Rest of the world	432	16.30	Rest of the world	36	3.93	Rest of the world	252	14.47
World	2 652	100.00	World	909	100.00	World	1 743	100.00

Source: UN Comtrade (accessed on 7 April, 2021)

Notes: 1. Seaweeds include cultivated and wild collected commodities under HS120220, HS120221 and HS120229. 2. Seaweed-based hydrocolloids include HS130231 (agar), HS130239 (primarily carrageenan) and HS391310 (alginate).

Opportunities for Seaweed utilization

Food (e.g. Kelp as soup ingredient or snacks, Nori for sushi wrap, Wakame for salads or snacks).

Hydrocolloids such as Carrageenan, Agar or Alginate

Aquaculture feed especially in hatcheries

Livestock feed

Potential for use in cosmetics, nutraceuticals, pharmaceuticals, textiles fibres, bio-packaging, wastewater treatment, biofuel, carbon capture/sequestration, etc.

Barriers



Limited and fragmented industry outside of Asia



Technology barriers



Biosecurity and environmental issues



Conflict between users of coastal and maritime space



Limited understanding of potential

Driving and success factors



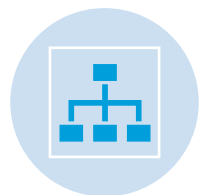
Global collaboration and knowledge-sharing



Market mapping



Science development, research and innovations (e.g., IMTA, offshore seaweed farming)



Harmonized policies, regulations and standards in particular for biosecurity and food safety



Investment promotion and incentives



Thank you!
Lahsen.Ababouch.la@gmail.com

