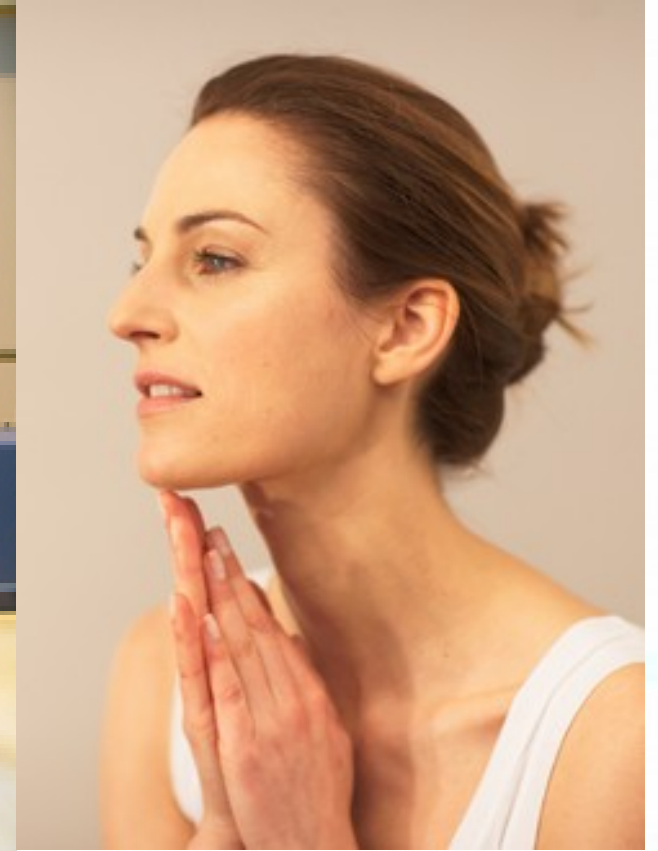


From Science to the Shelves

- 17 years of sustainable mariculture in Kiel Fjord, Western Baltic Sea

Levent Piker, CRM – Coastal Research & Management / oceanBASIS GmbH, Kiel



"Common Heritage of Mankind"

**Sustainable
Use of the Sea**

Development / Marketing
of innovative products
"Made from the sea"

Research on Marine
Living Resources



Key Topic Aquaculture

→ Aquaculture studies in Germany, ...



→ in Chile



→ ...in Greenland

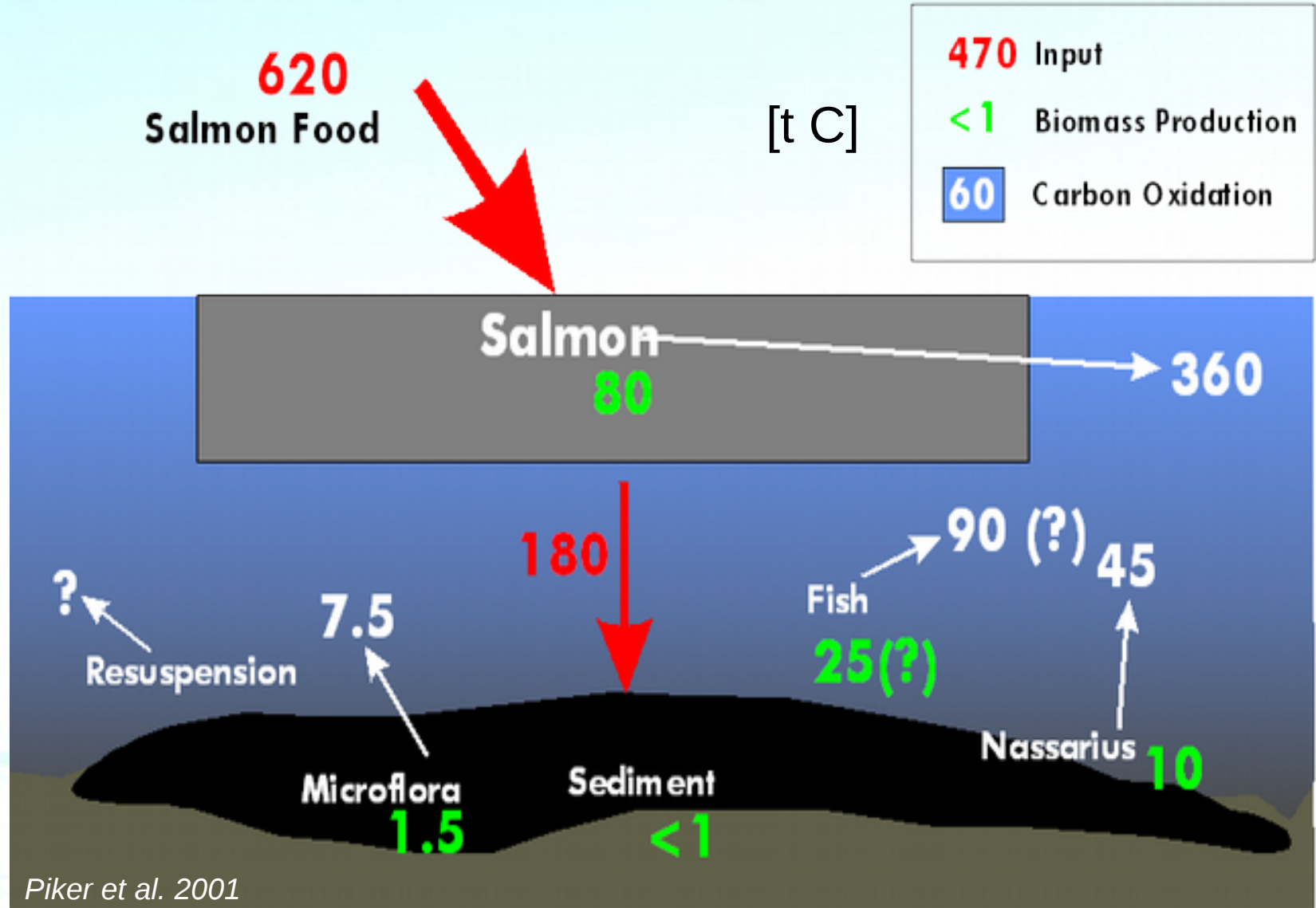


→ ...in Indonesia



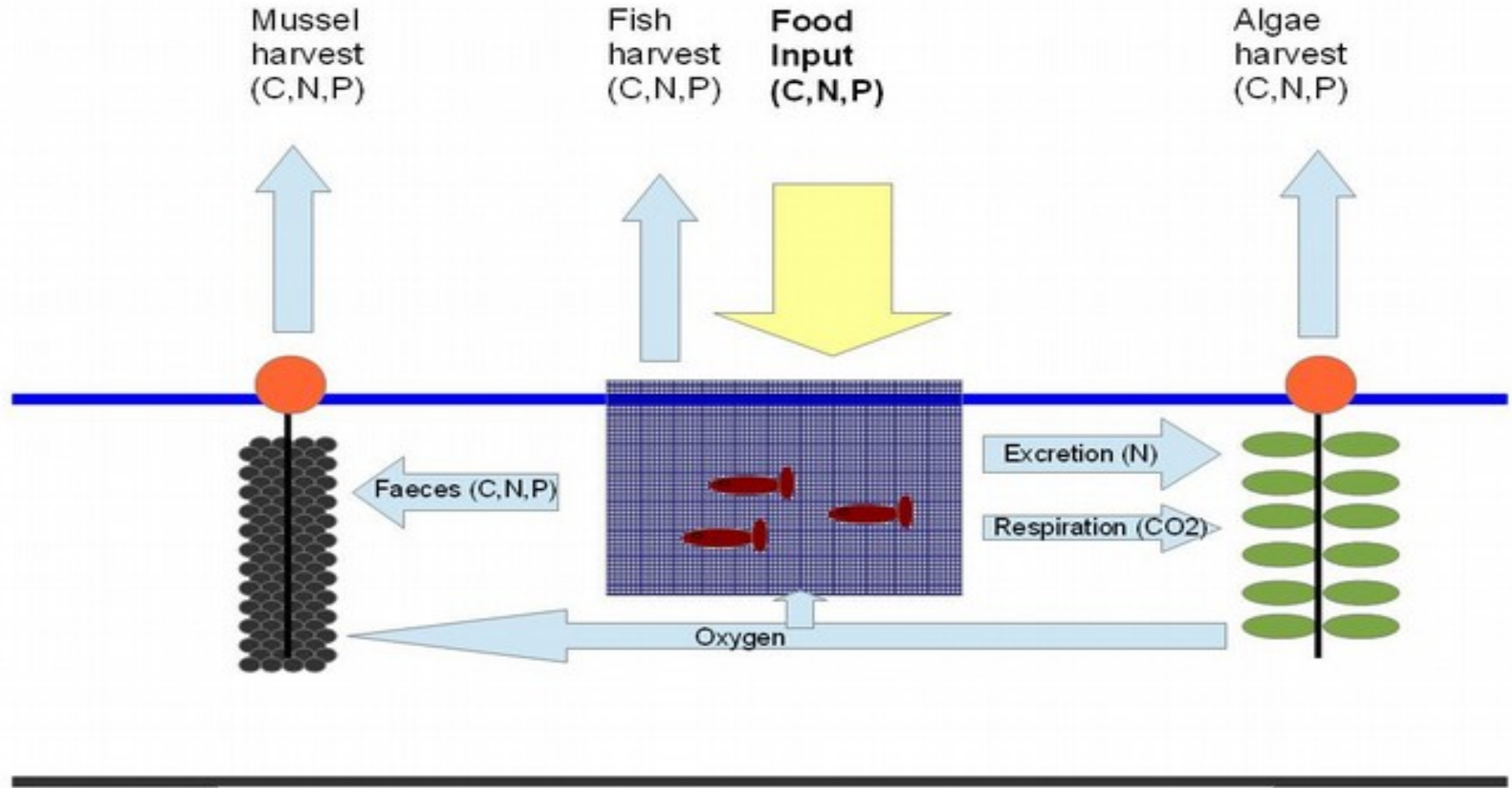
→ ...in the Gulf of Aqaba



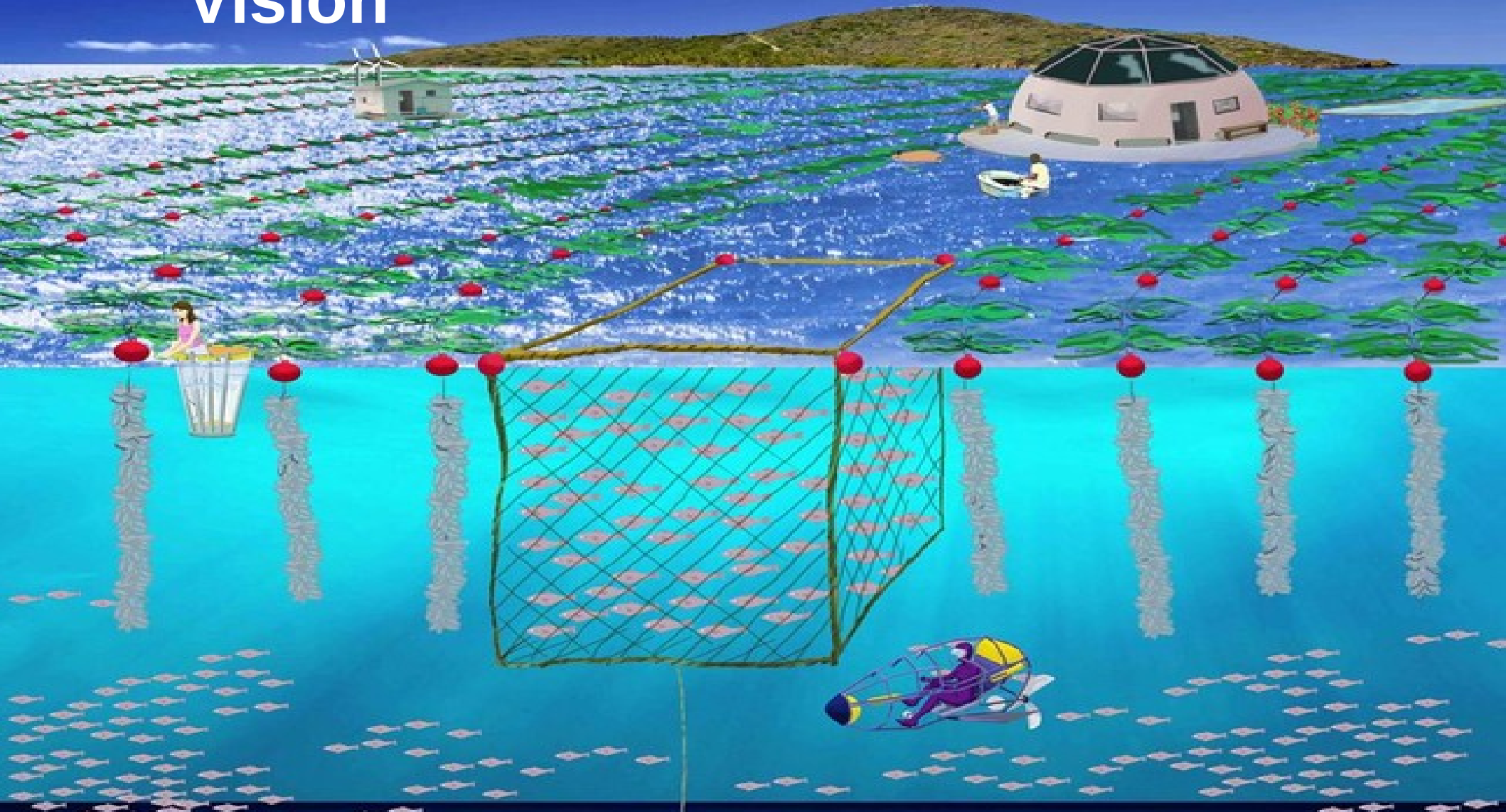


Piker et al. 2001

Alternative: Integrated Extractive Aquaculture



Vision



Development of a Sustainable Mariculture



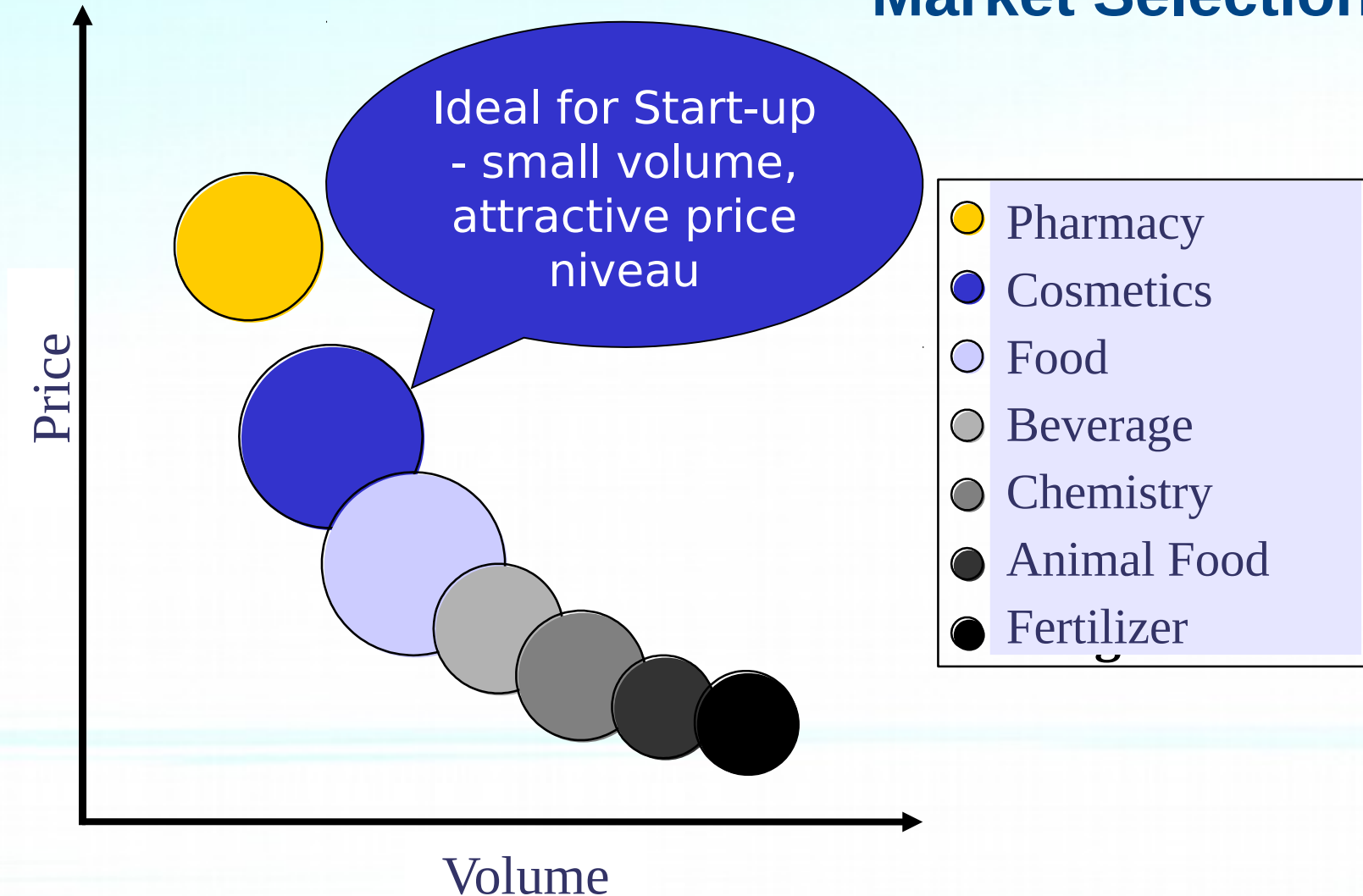
Development of a Sustainable Mariculture



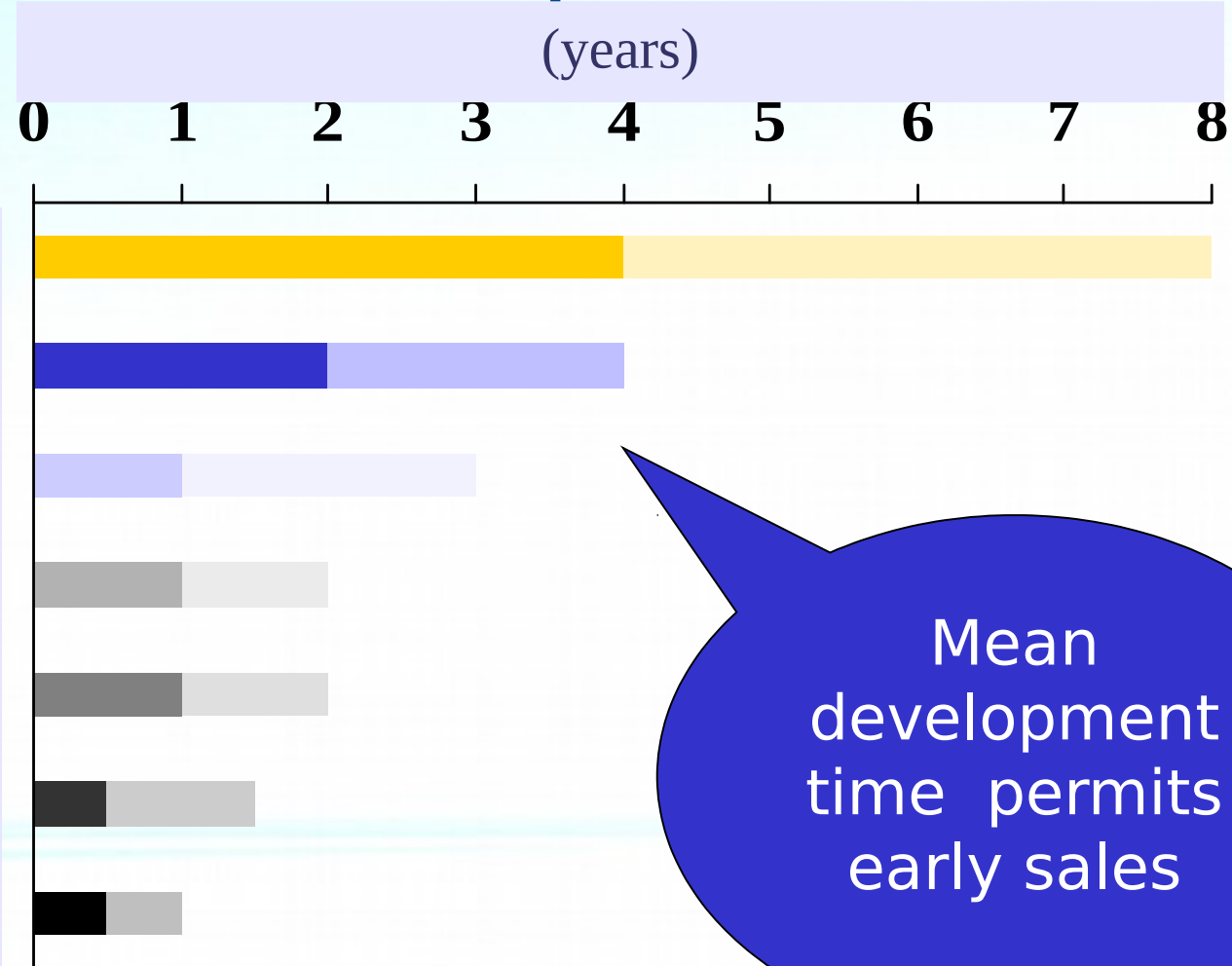
Development of a Sustainable Mariculture



Market Selection



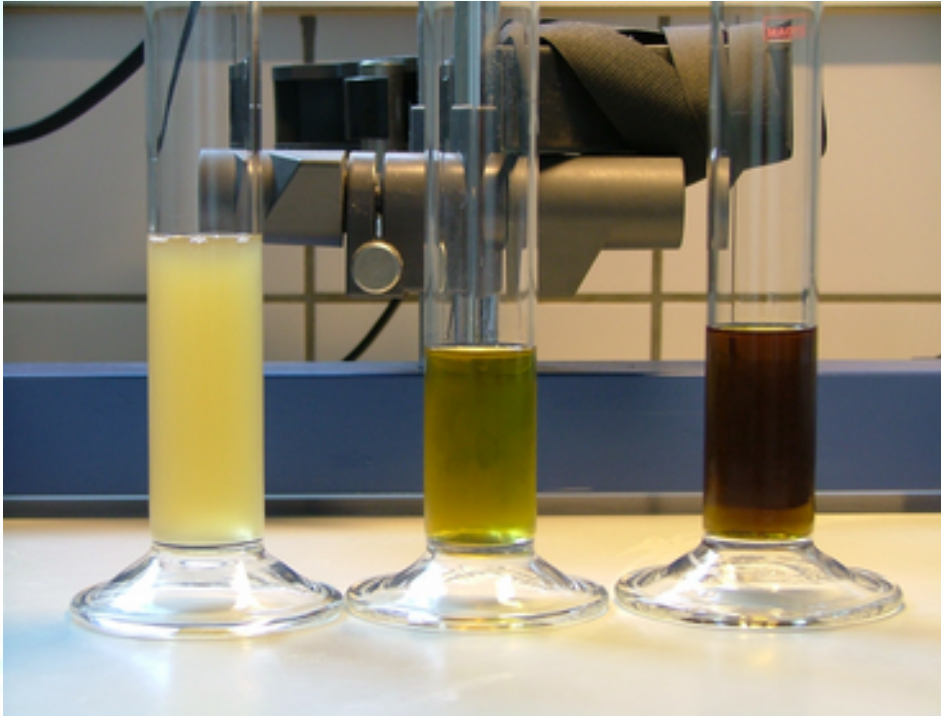
Product Development Time



Mean
development
time permits
early sales

Development, production and marketing of:

Bioactive Seaweed Extracts



Development, production and marketing of:

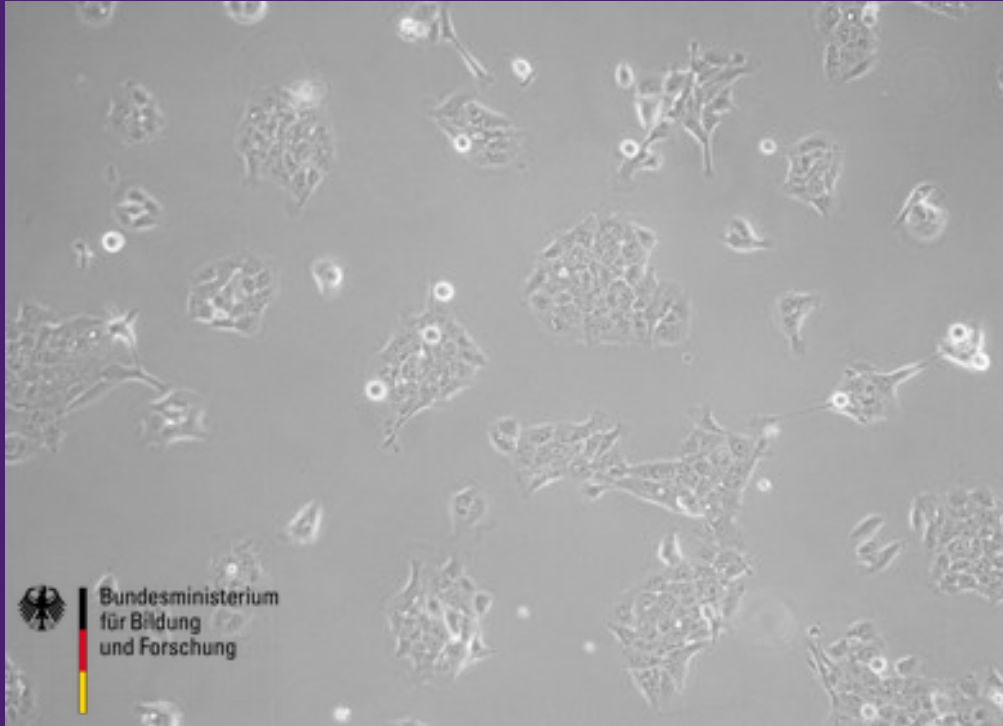
Natural Cosmetics

- effectively moisturizing, protecting, regenerating, revitalizing

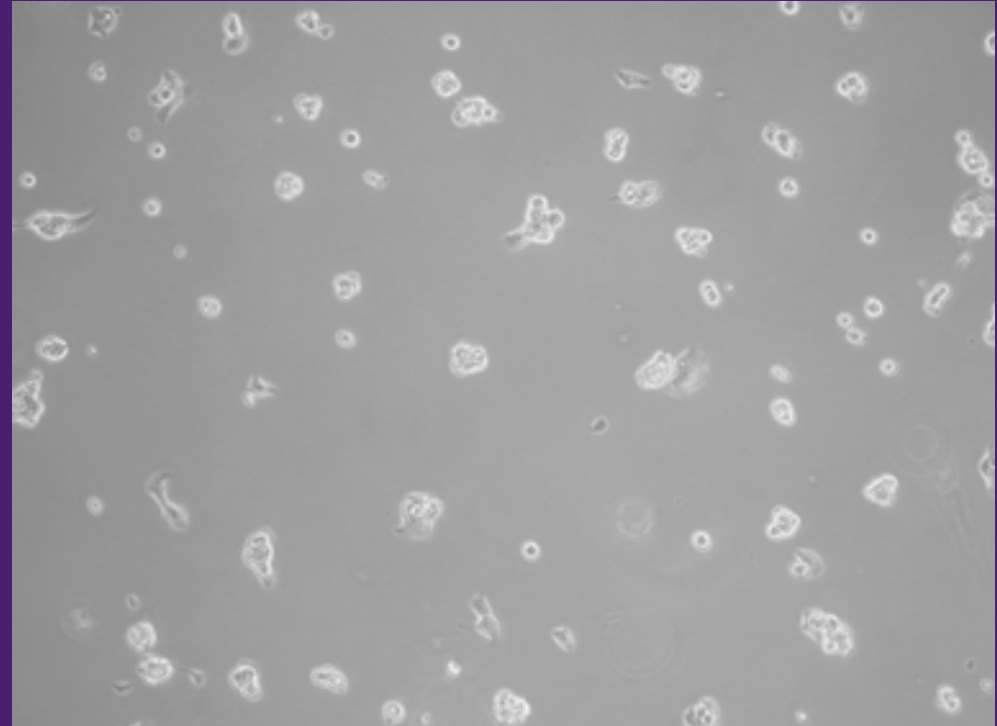


Extract from *Fucus vesiculosus* inhibits growth of pancreatic cancer cells

Control



KF1 extract



(after 24 h incubation)

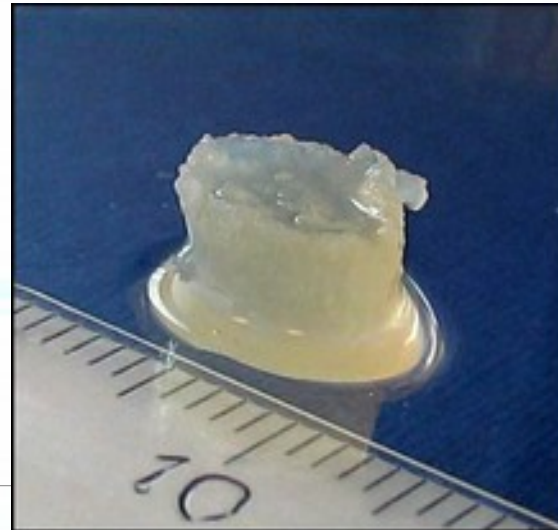
Geisen et al. 2015
Zenthoefer et al. 2017

Oceanic collagen

Wound healing



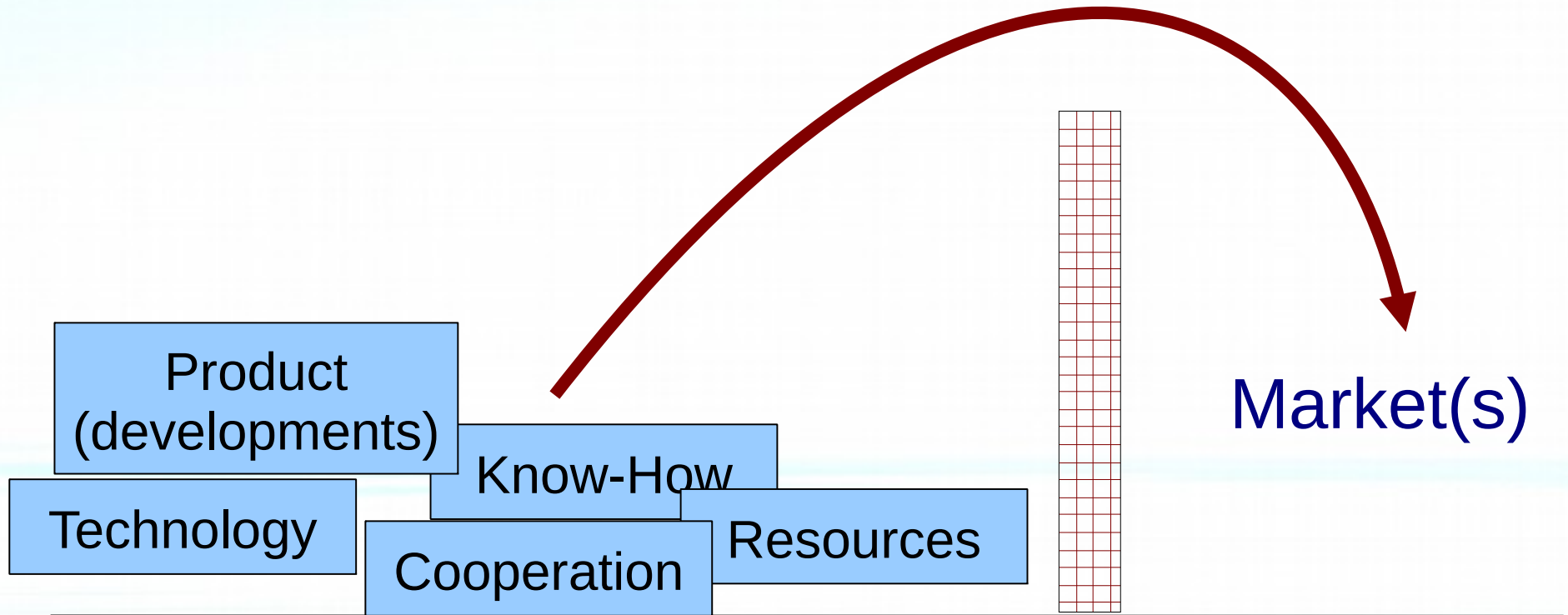
Cartilage regeneration



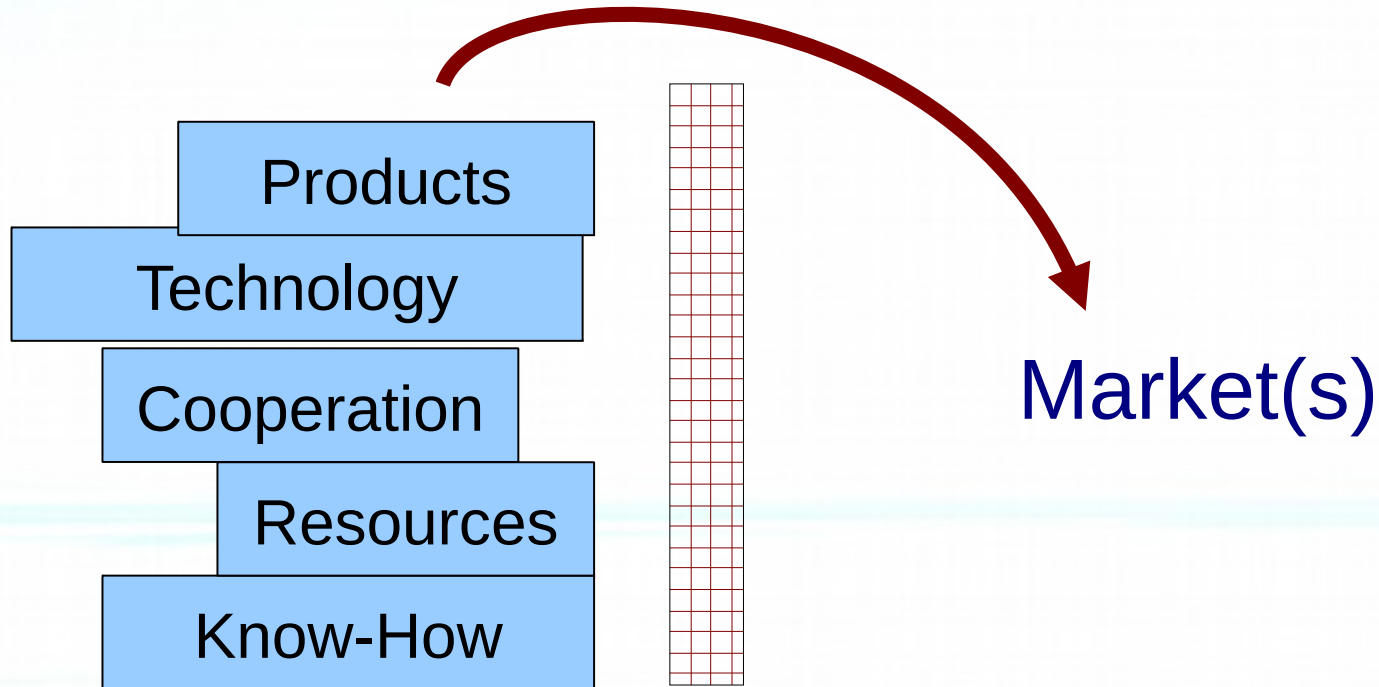
Organic cosmetics
(NATRUE)



Factors of market access „unsorted“



Facilitating collaboration / co-ordination



Support ? - Yes

- Tests for product development

....underpinning protective / anti-aging effects

(New) methods showing \"sexy\" effects are welcome!

- Resource efficient technologies and materials

Examples

- proof of all existing or new health claims
- direct in-vivo-measurements, e.g. optical
- new persuasive activity tests, e.g. showing enhanced preventive function
- new compounds/extracts from GRAS organisms, which can be produced economically
- resource efficient processing of raw material and extracts

→ Achievements

- **Precautionary principles** → UN, EU, ...
- **„Common Heritage of Mankind“** → e.g. UNCLOS,...
- **Sustainable Development Goals (SDG 14)**



We add value to Marine Biodiversity

