

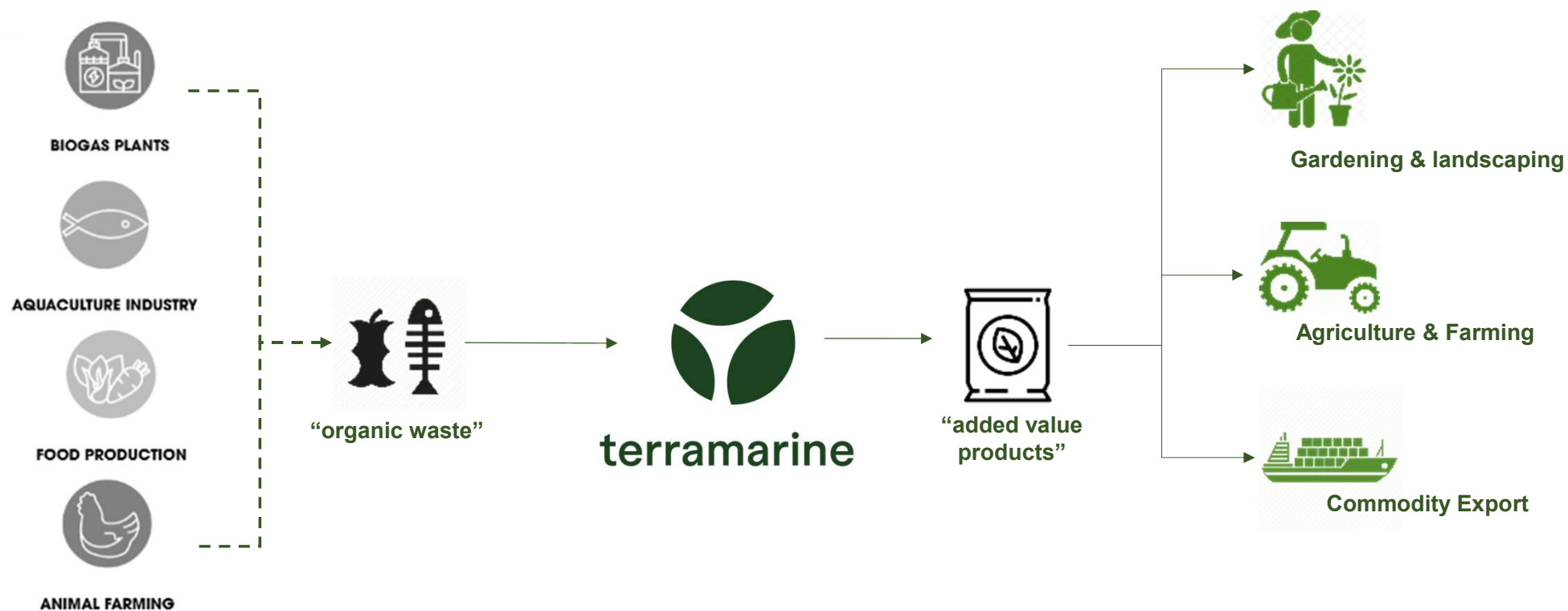
From Waste to Value:

Transforming fish farming sludge into
export-ready fertilizer

Aqua-Ice 2025

Harpa, 30/09 – 01/10/2025

Terramarine AS | Vu Nguyen



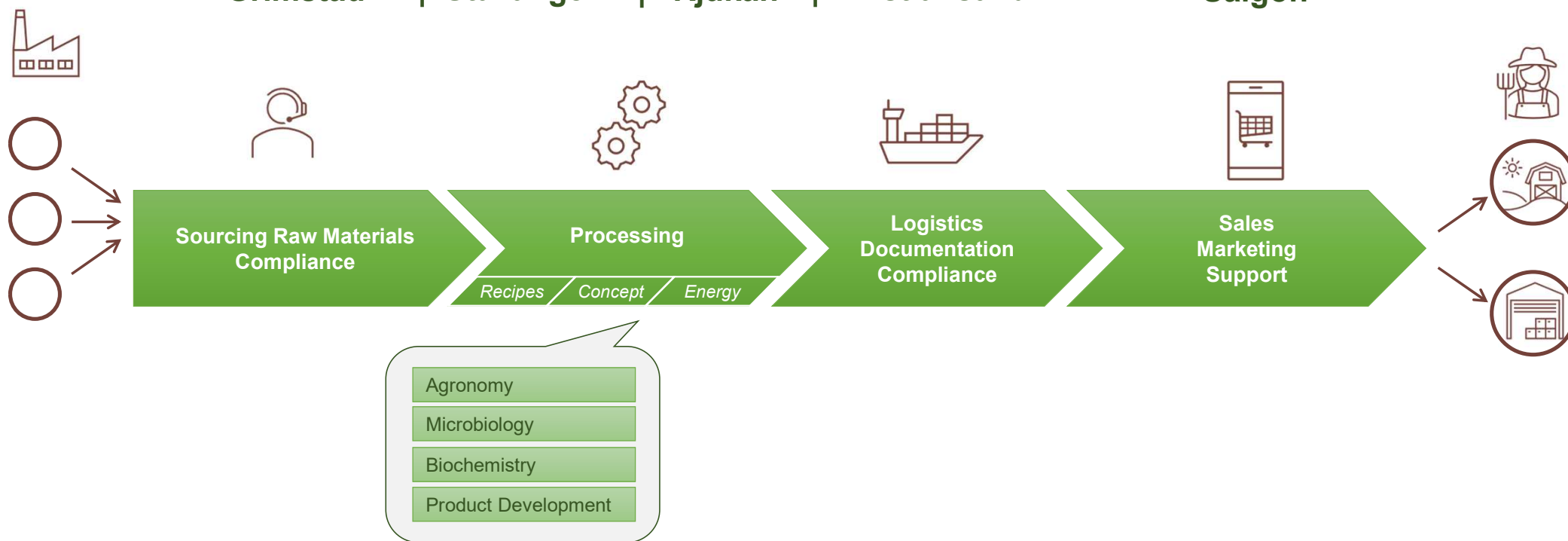
“ Circular economy partner “

“ Organic fertilizer producer “

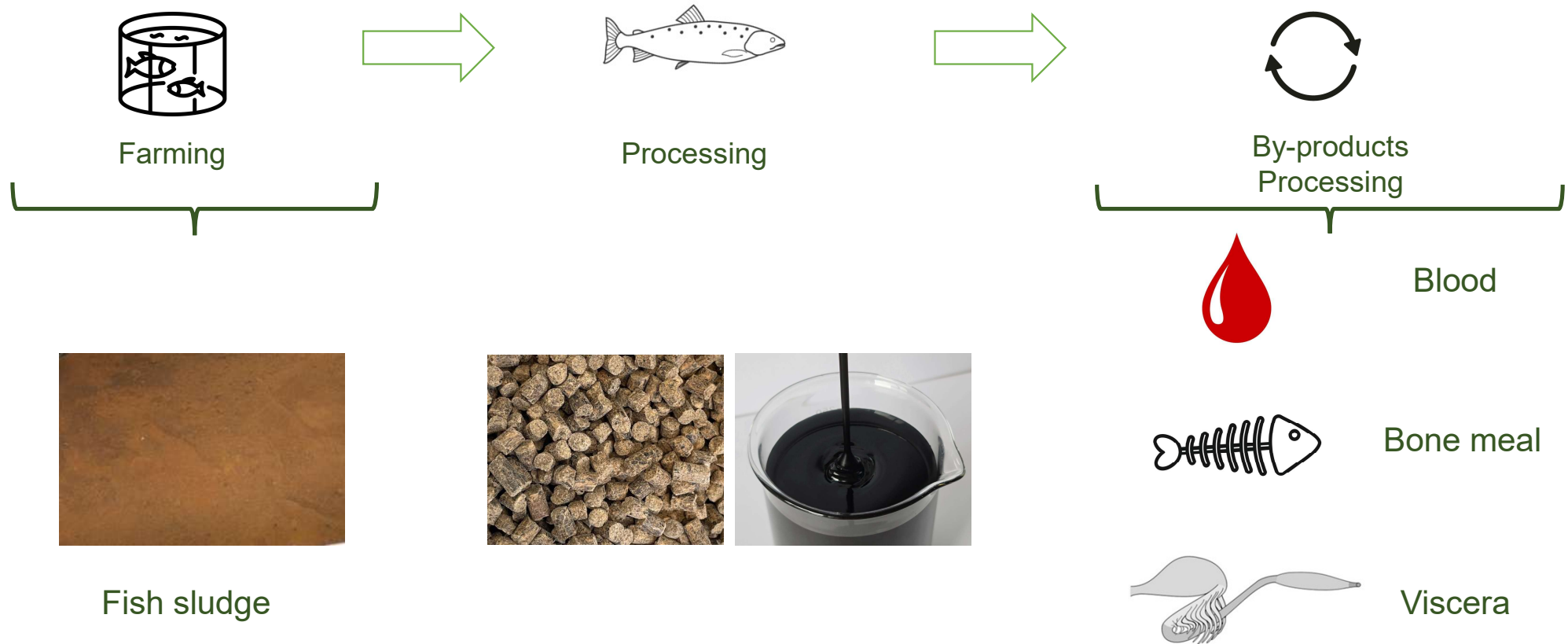


Grimstad | Stavanger | Rjukan | Kristiansand

Saigon



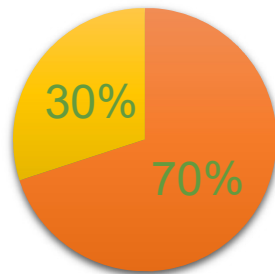
From a fertilizer perspective, what materials are interesting?



THE CHALLENGE FOR NORWAY

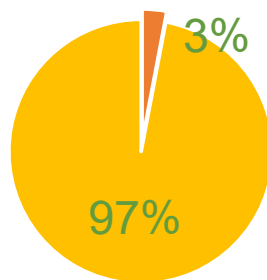
HIGH AMOUNT OF ORGANIC WASTE >><< NOT ENOUGH AGRICULTURE LAND

Food supply in Norway

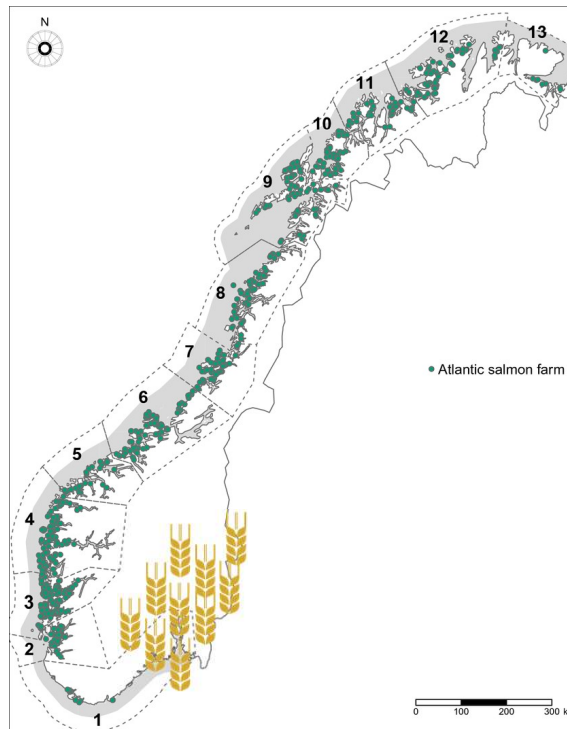


■ Imported ■ Local

Land area

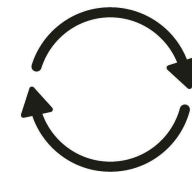


■ Farm land ■ Non-agriculture



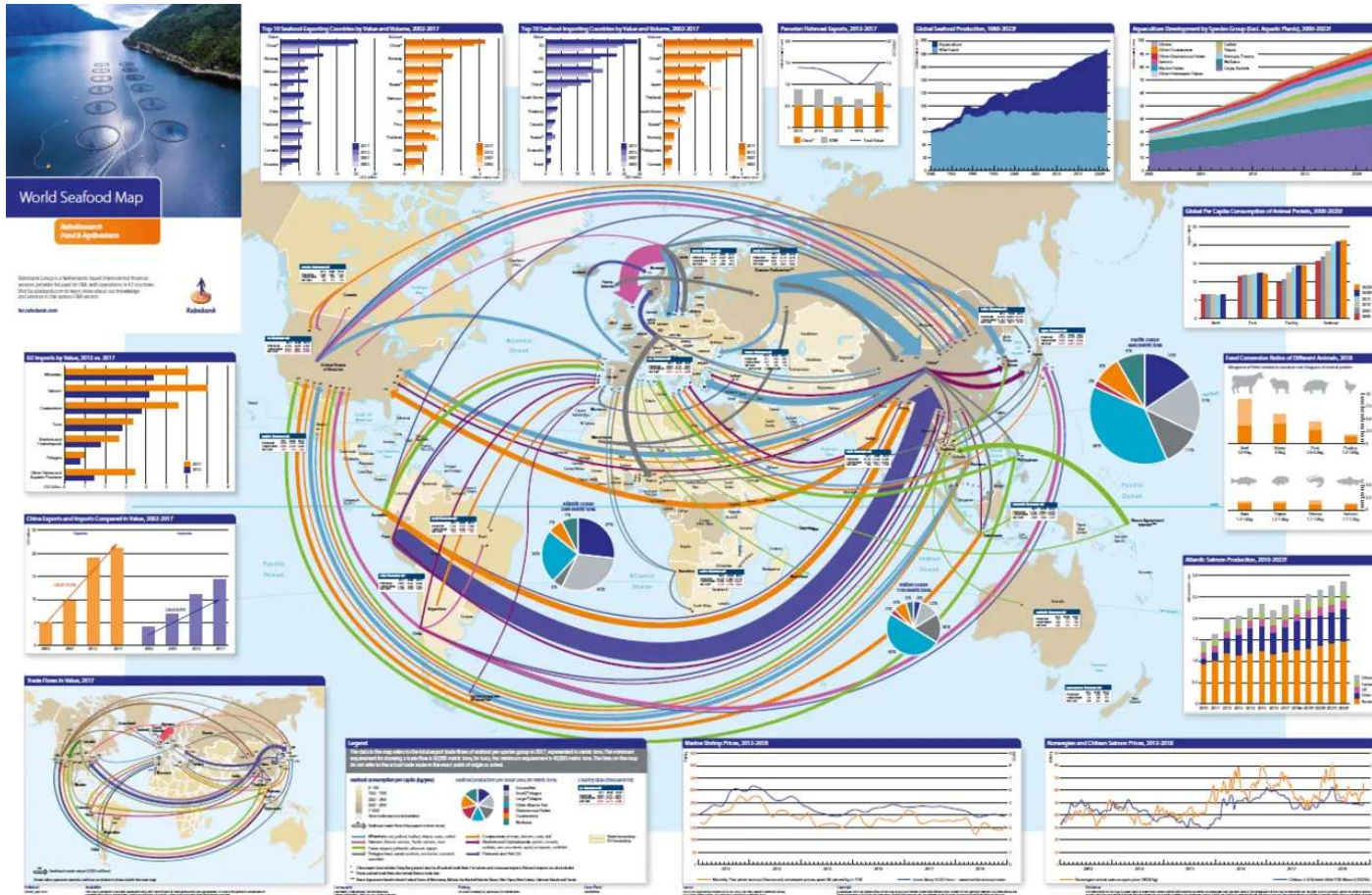
Norway fish farms vs agriculture land

1 – 1.5 million tons
Fish sludge
(2050)

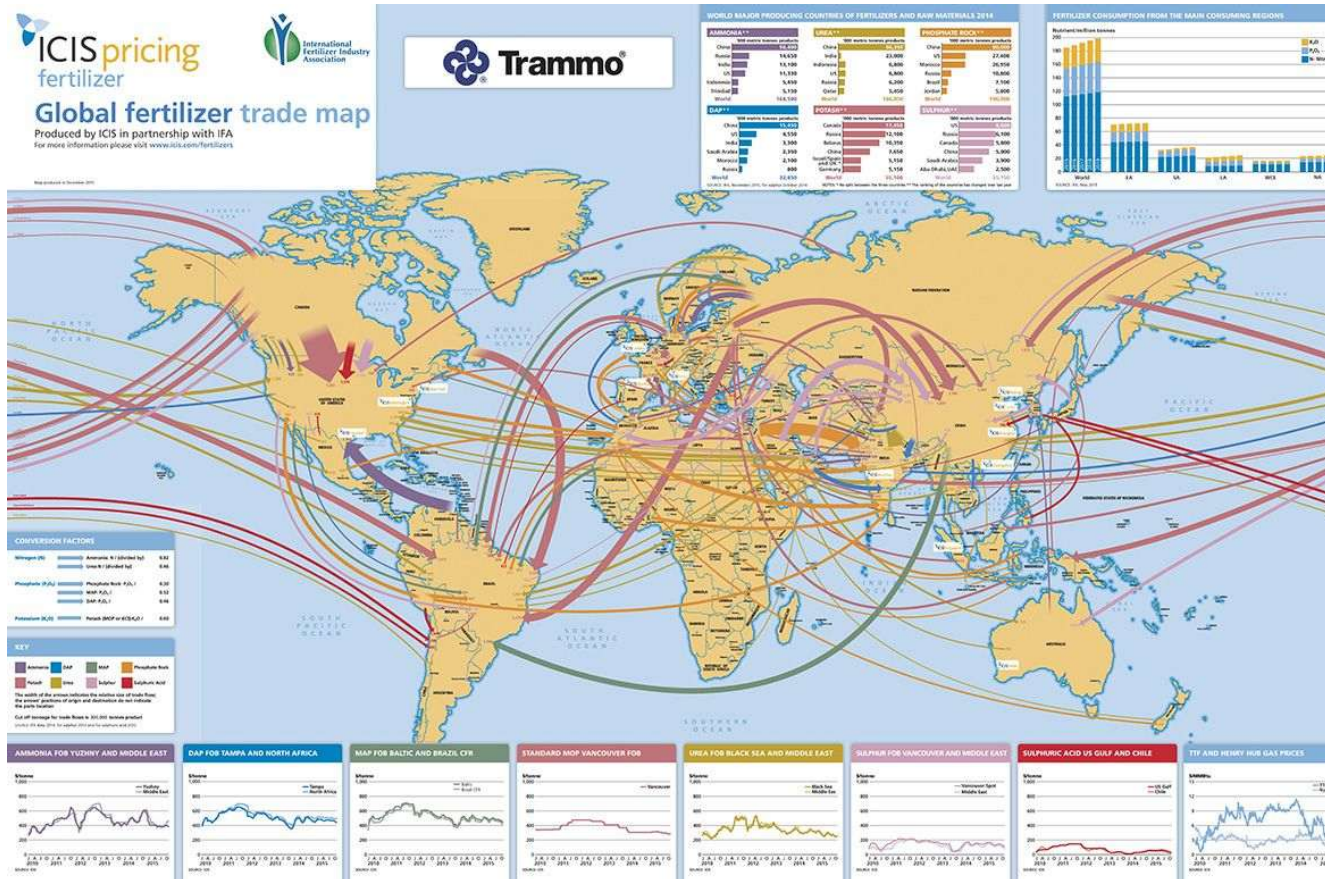


We need to circulate back to
the areas where the food is
produced

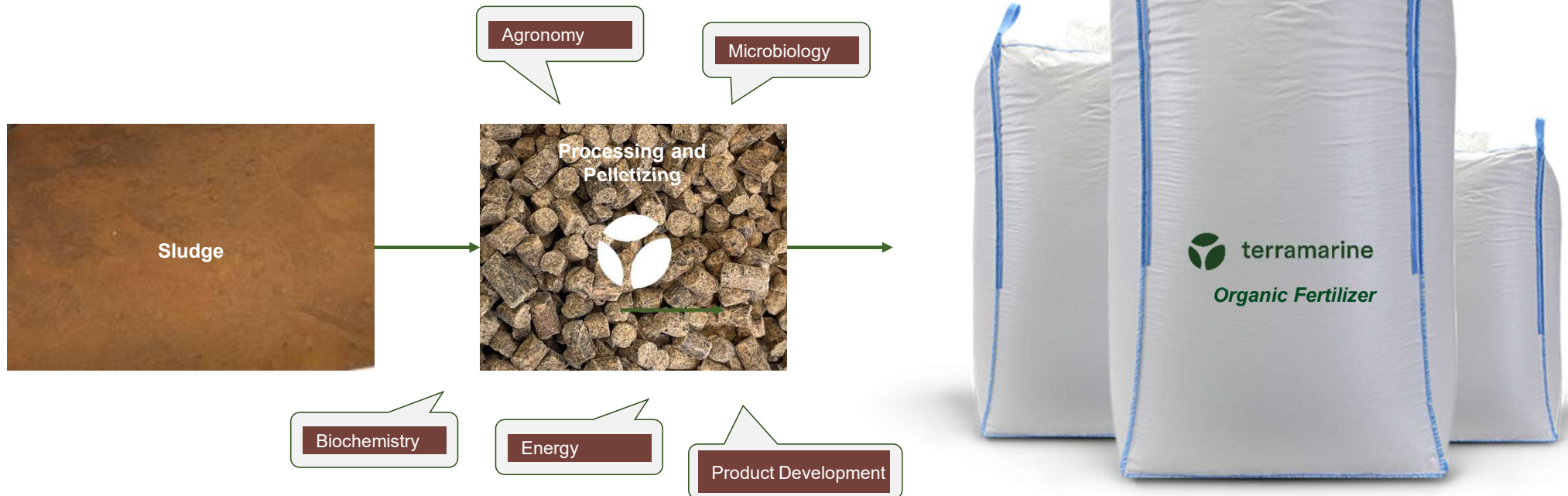
Seafood is a global commodity



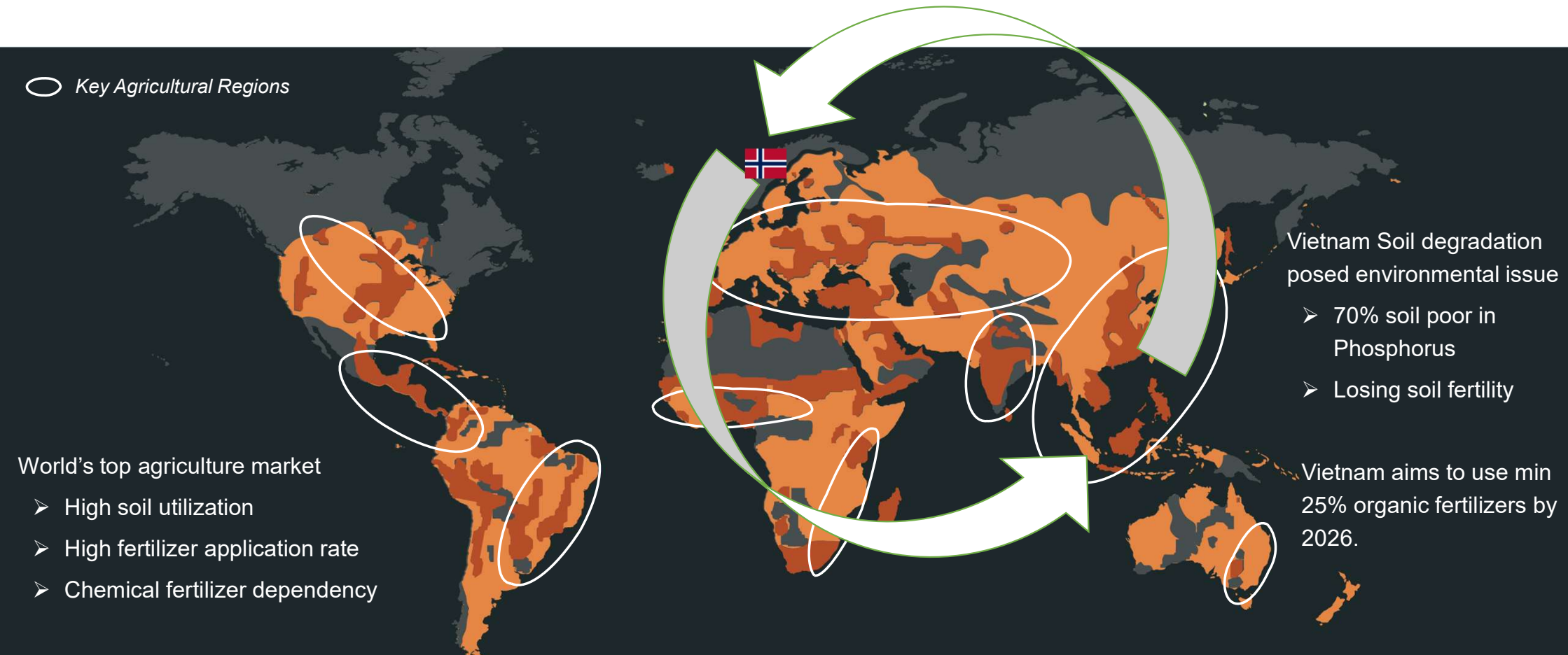
(Chemical) fertilizer is a global commodity



Fish farm organic waste fertilizer should become a
commodity
that can be **traded** globally too



Why export? → Global soil degradation, the need for recirculating the nutrition

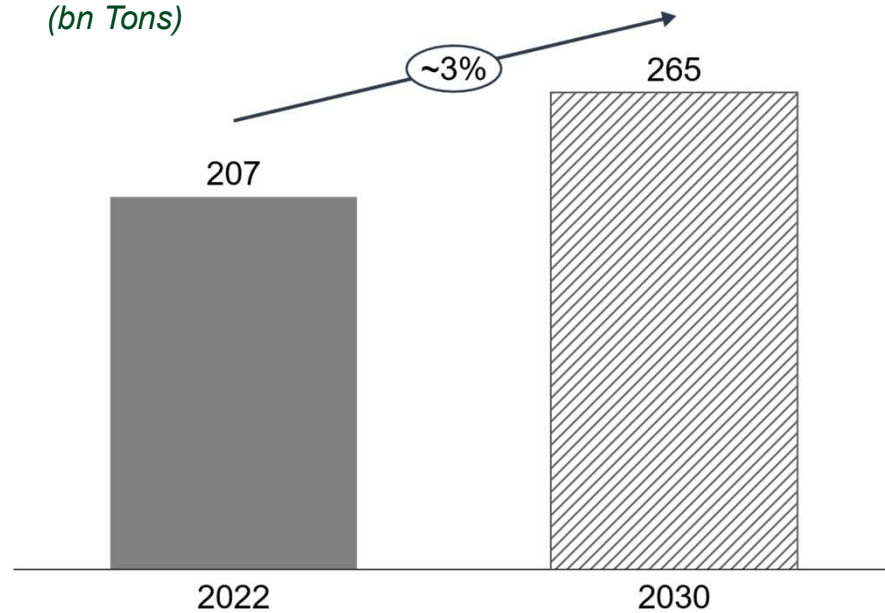


Source: Land Degradation and Challenges of Food Security, 2019 – Review of European Studies

Organic fertilizer market expected to grow twice as fast as the overall fertilizer market...

Global total fertilizer market is estimated to grow by 3% p.a....

(bn Tons)



CAGR

statista

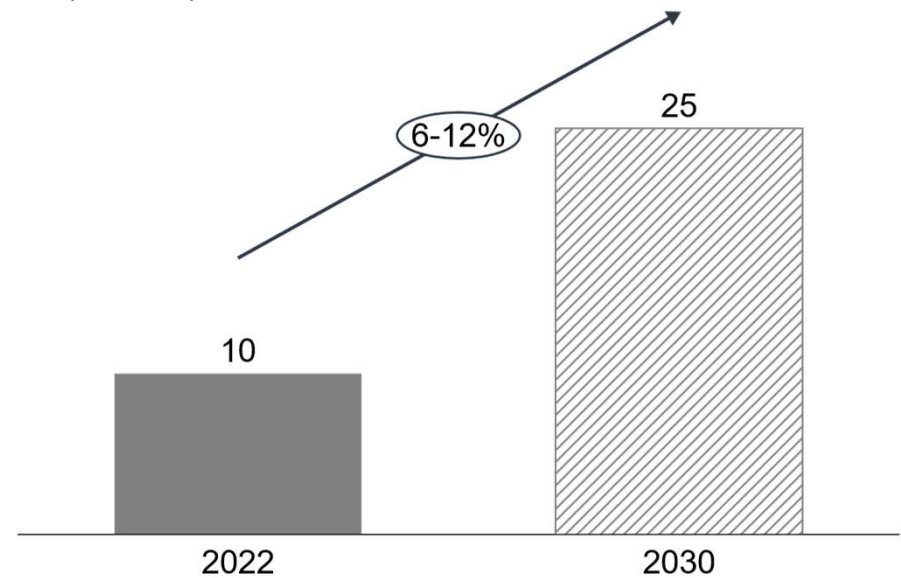
3.5%

PRECEDENCE

3.3%

... while organic fertilizer is expected to grow by 6-12% p.a. increasing market share from 5% to 6-11% by 2030

(bn Tons)



CAGR

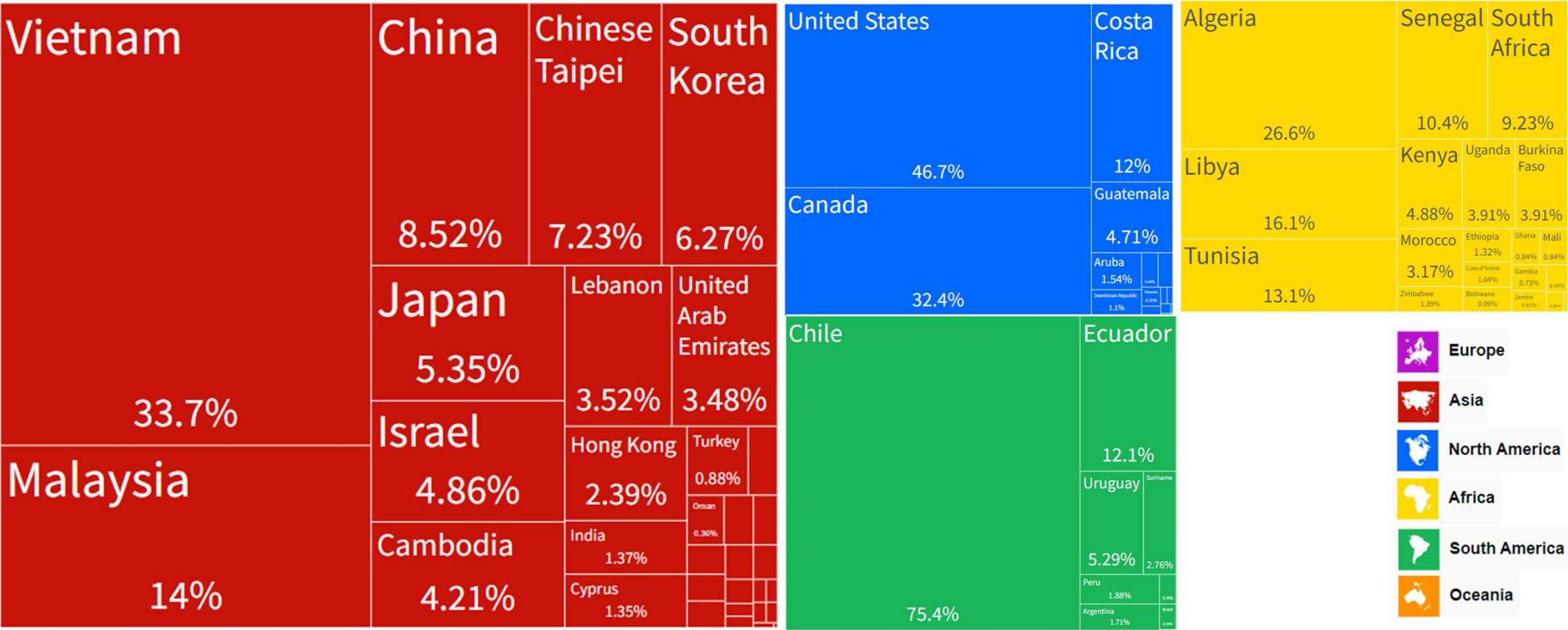
Allied Market Research

6.1%

INSIGHT ANALYTICAL

12.3%

Organic fertilizer export destinations from Netherlands...



Example: fertilizer production in Norway



Examples: downstream fertilizer sales activities in Vietnam



Lengthy field trials and
product licensing process.



Aqua-Ice 2025: From Waste to Value: Transforming fish
farming sludge into export-ready fertilizer



ICELANDIC SALMON FARMING CONTEXT

Iceland is now facing the same challenges we began addressing more than 10 years ago in Norway, when we first started exporting to Southeast Asia.

Key factors for success include access to markets, combined with expertise in agronomy and product development.

We aim to contribute our knowledge and solutions to the emerging market from land-based farming in Iceland, which is expected to grow significantly in the coming years.

terramarine.no



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