



# INTPA-NEAR

Environment  
& Climate Week

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Brussels, Belgium





UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION



# Blue Economy in practice: UNIDO SwitchMed circularity pilots in fish processing and aquaculture value chains

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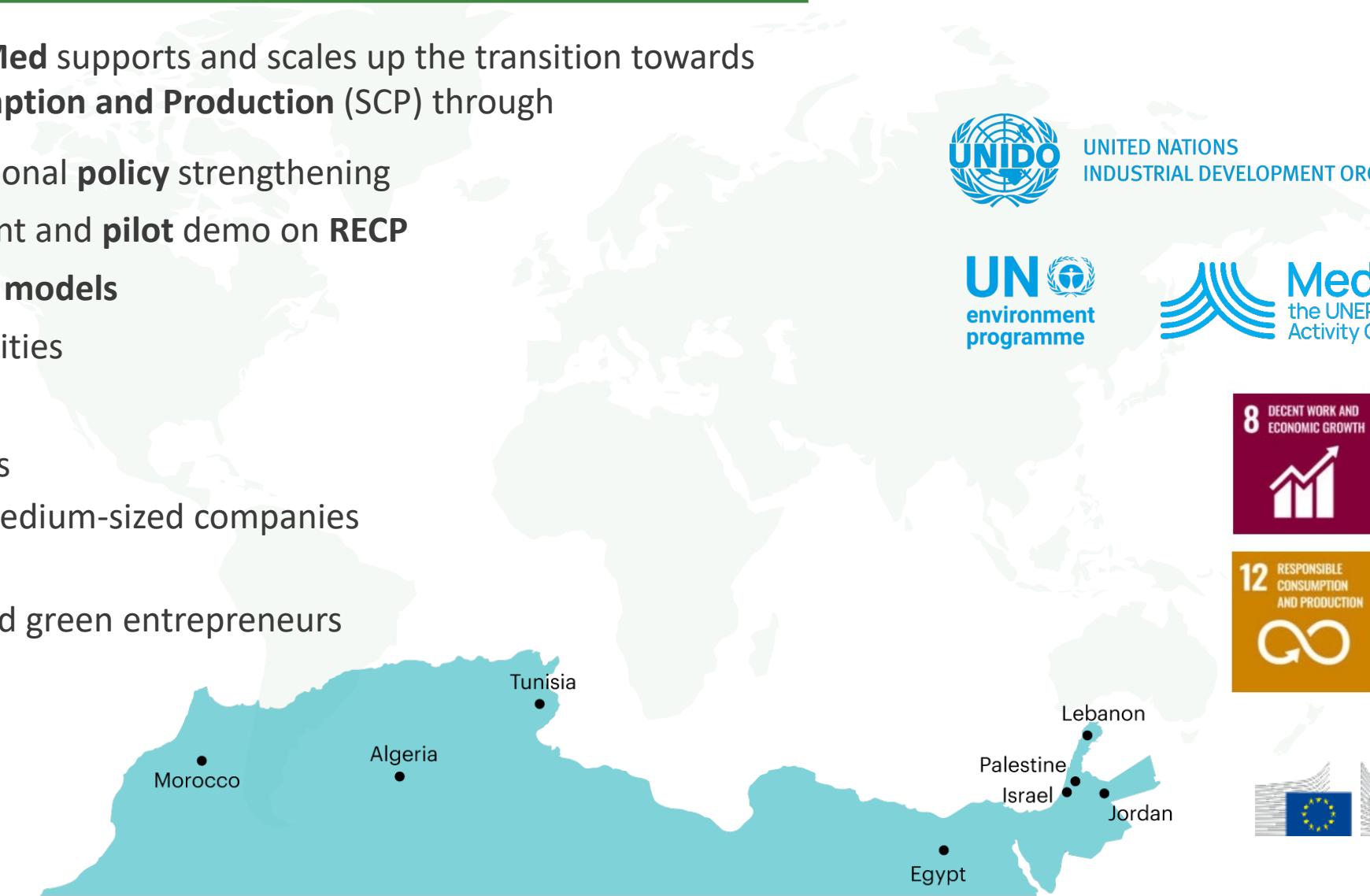
# SwitchMed programme

Since 2013, SwitchMed supports and scales up the transition towards **Sustainable Consumption and Production (SCP)** through

- Regional and national **policy** strengthening
- **Skills** development and **pilot** demo on RECP
- Circular **business models**
- **Networking** activities

For

- Policymakers
- Small and medium-sized companies
- Industries
- Start-ups and green entrepreneurs


 UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION

 UN  
environment  
programme

 MedWaves  
the UNEP/MAP Regional  
Activity Centre for SCP

 8  
DECENT WORK AND  
ECONOMIC GROWTH

 9  
INDUSTRY, INNOVATION  
AND INFRASTRUCTURE

 12  
RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION

 17  
PARTNERSHIPS  
FOR THE GOALS

# SwitchMed in numbers

8  
National roadmaps

87+  
million €  
private sector  
investment leveraged

64  
Service providers  
qualified on RECP

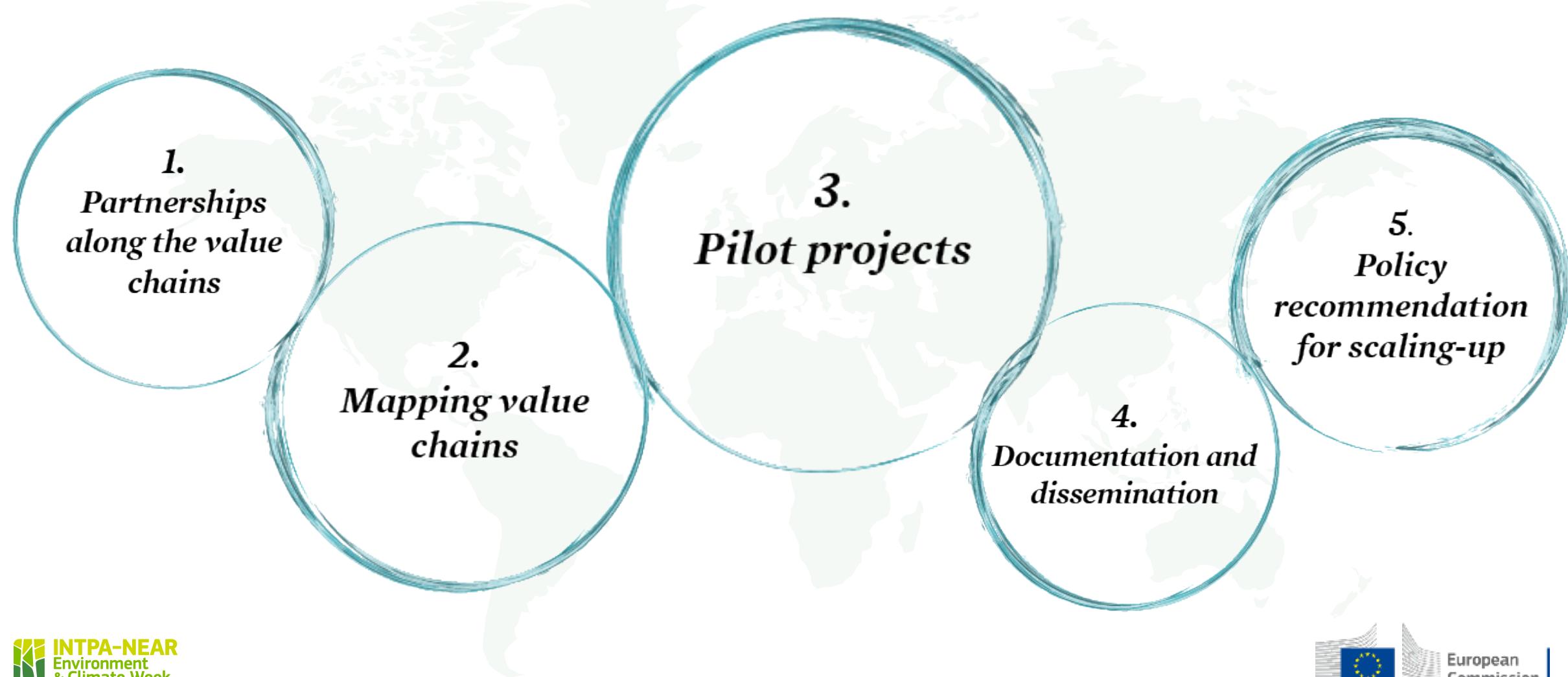
165  
Industry  
demonstrations

+ RECP mainstreaming in academia

Current focus on **value chains**:

- Textiles
- Plastics
- Aquaculture
- Fish processing

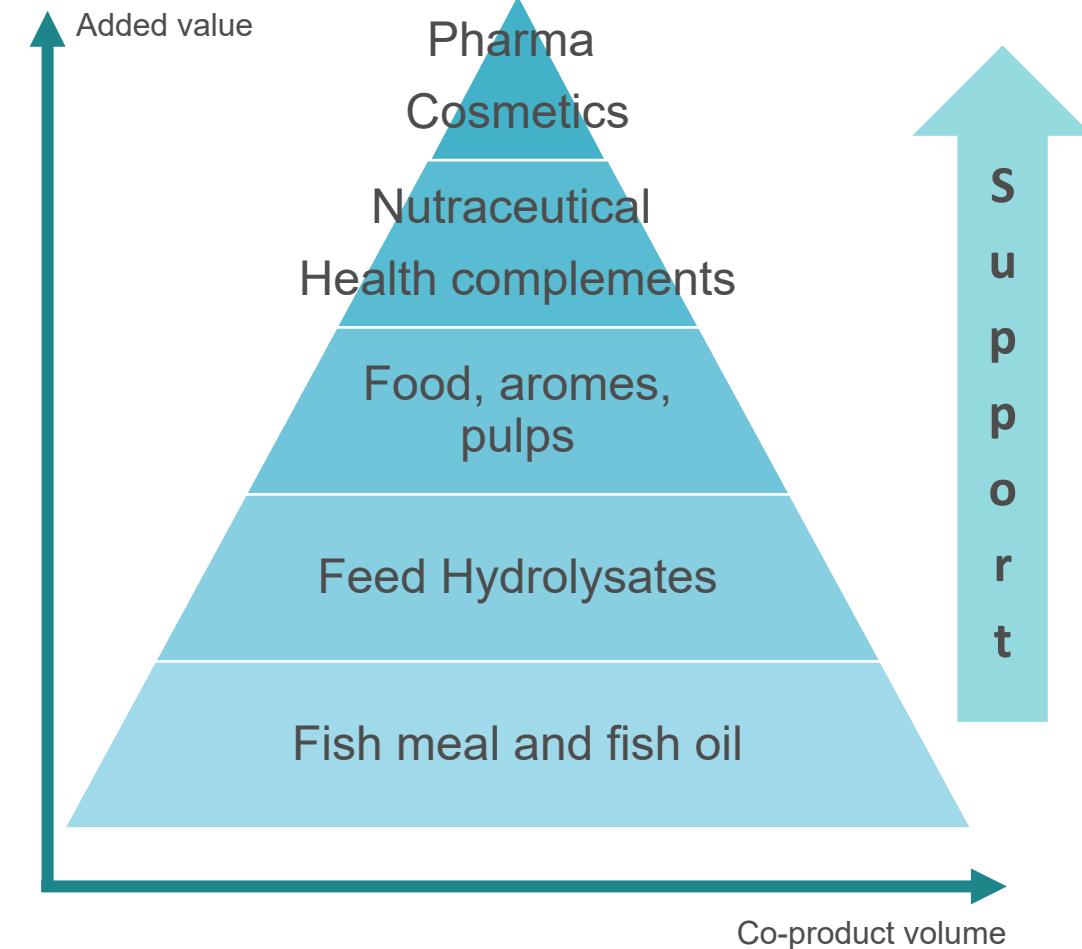
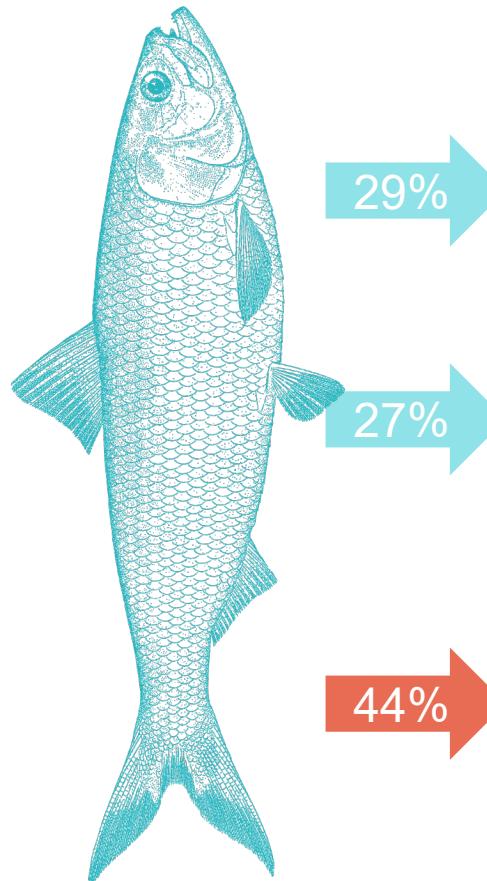
# UNIDO Blue Economy pilot project approach



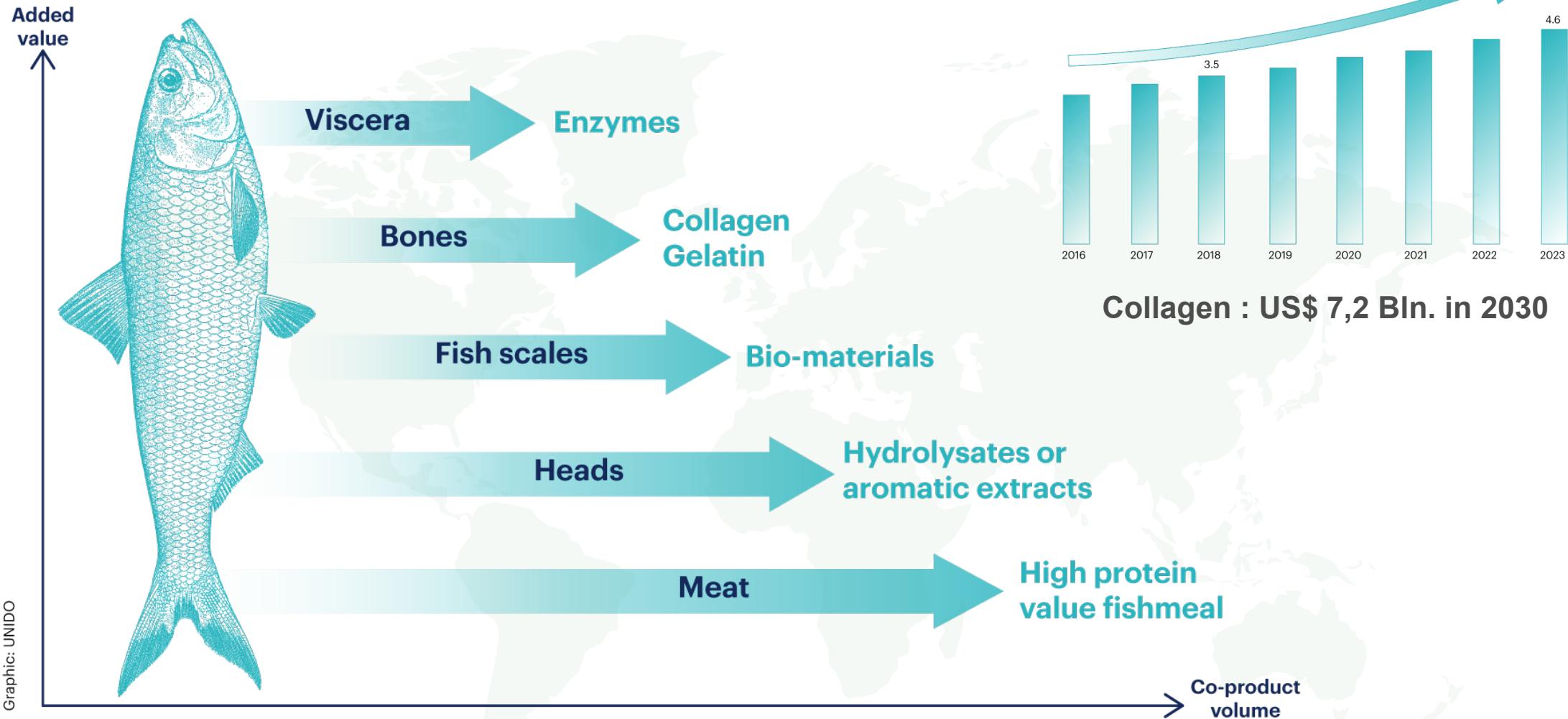
# Fish processing in Morocco

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# Fish now and then



# Potential for eco-innovative products with added value



# Aquaculture in Tunisia

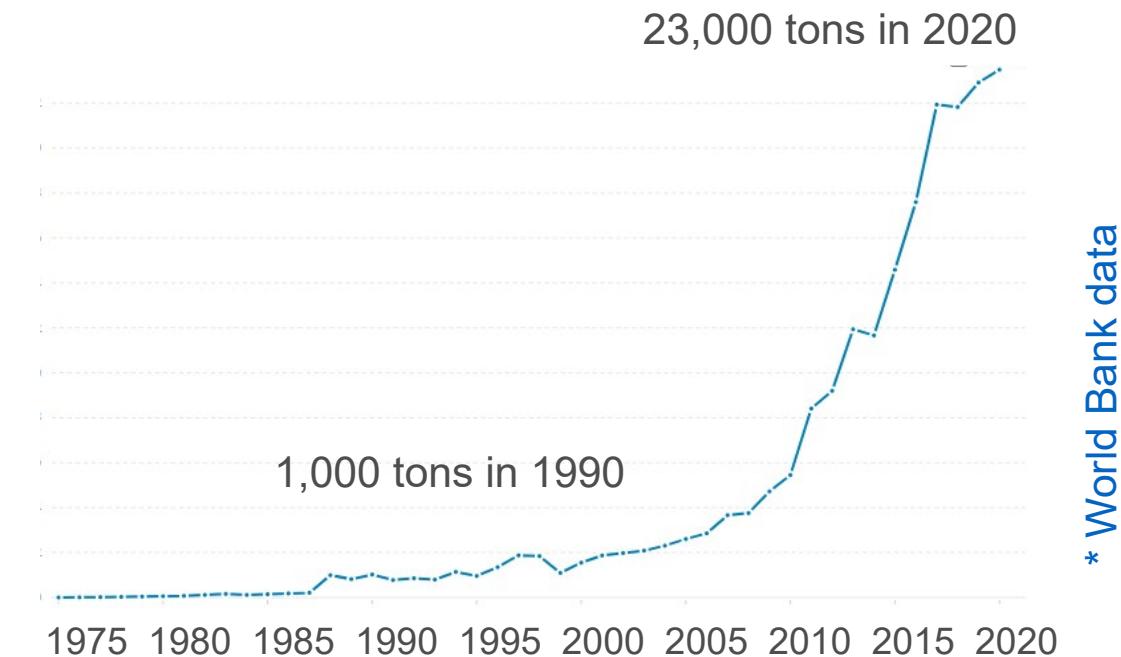
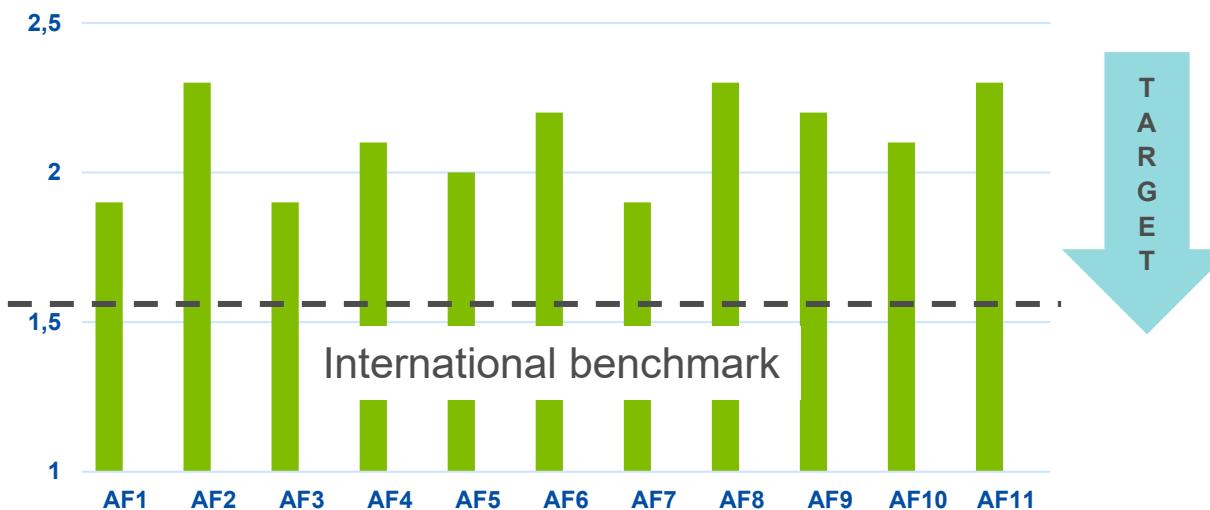
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# Aquaculture key parameter

Feed > 60% overall costs

Feed Conversion Ratio (FCR) is key

- **Excess:** environmental impact and economic losses
- **Underfeeding:** performance impact
- FCR is **dynamic**



**Tunisian strategy:**  
56,000 tons by 2030

# Innovation piloting

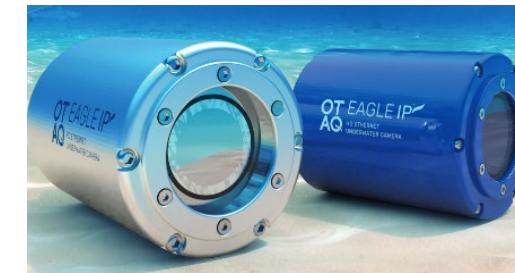
## CURRENT FEEDING



## TARGET

- Technology transfer
- Digitalization
- Upskilling
- Youth employment

## SMART TECHNOLOGIES



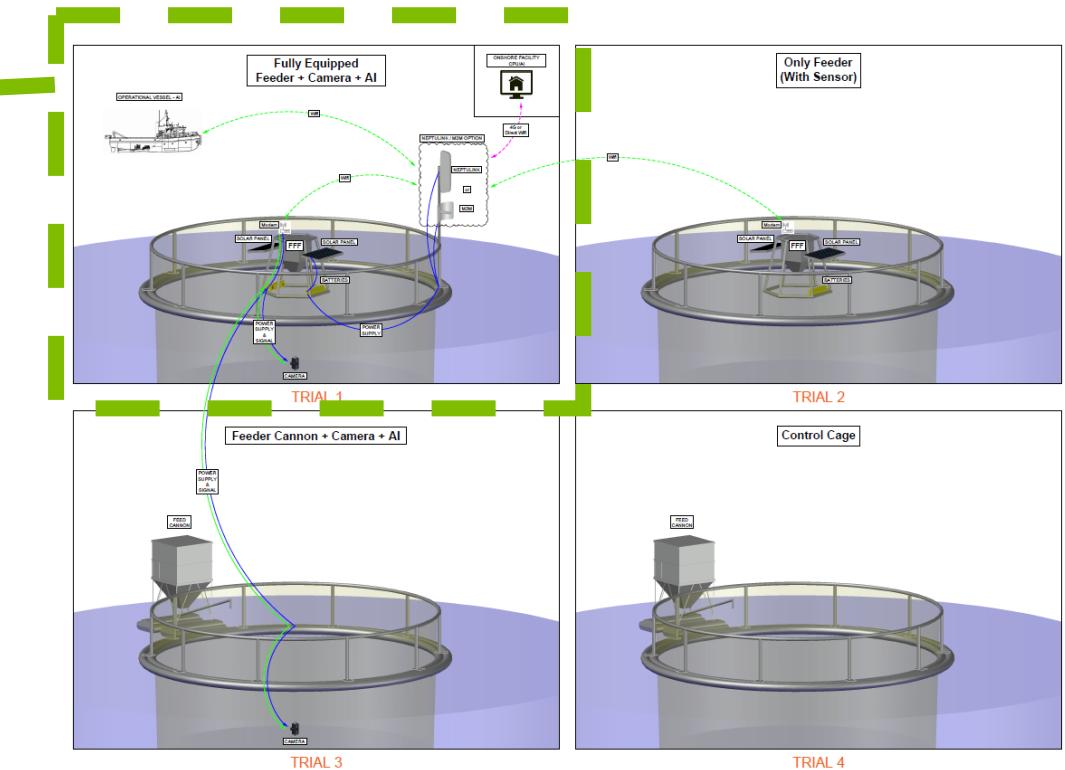
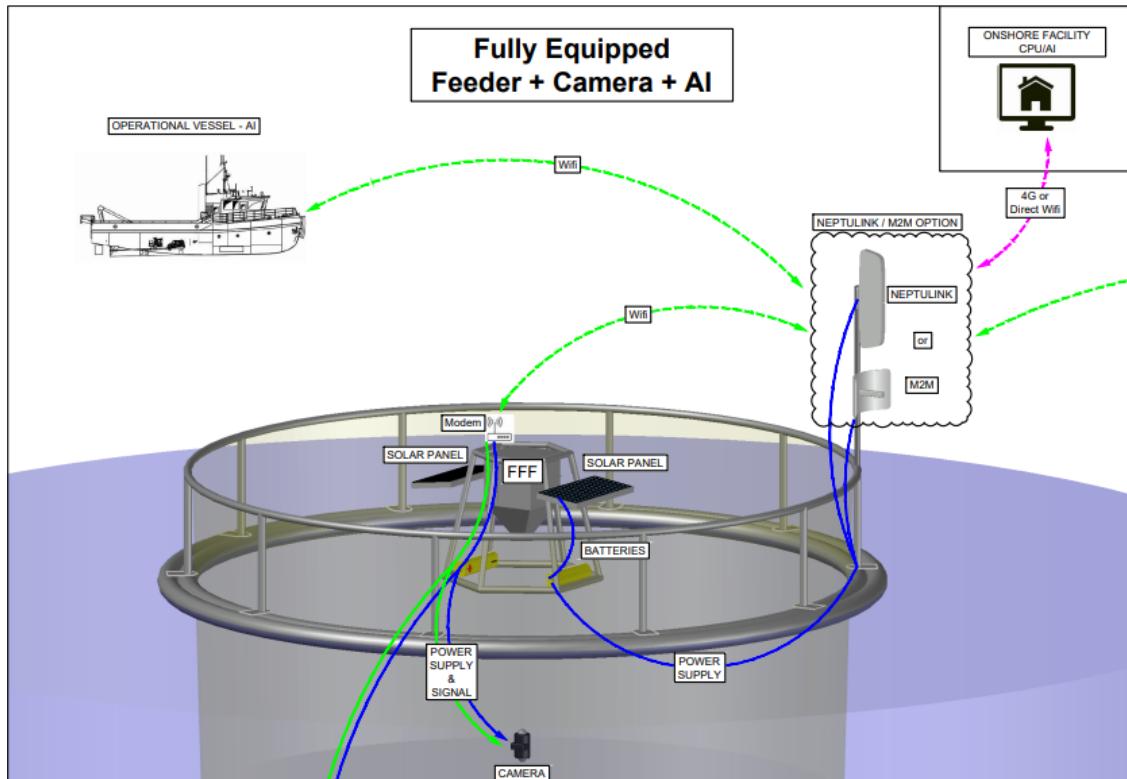
Homogeneous  
distribution systems

Underwater camera

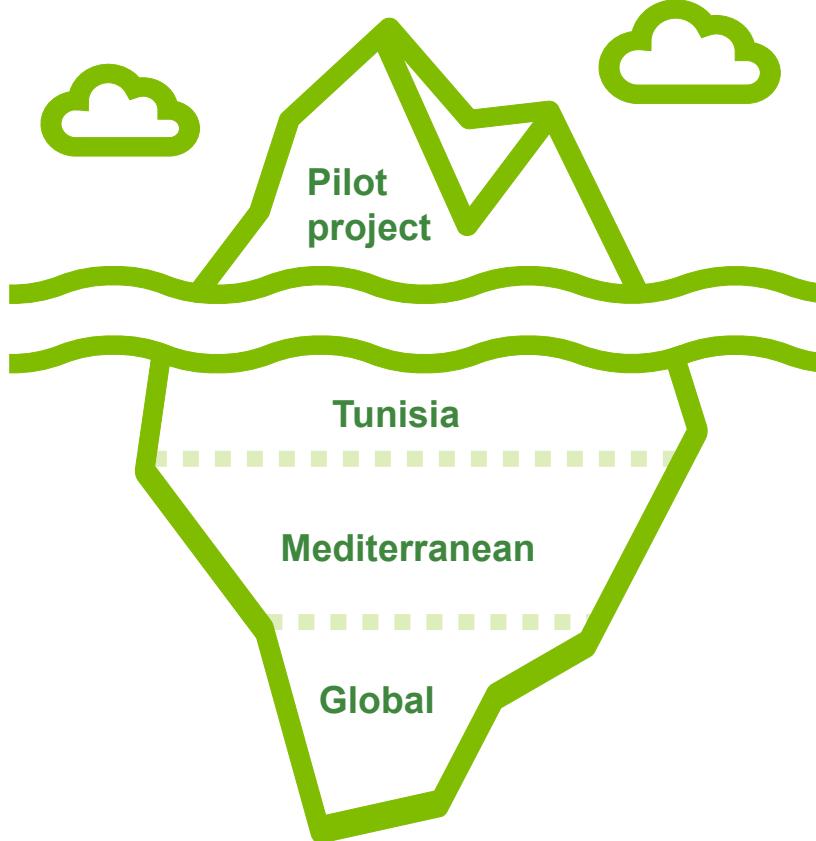
Artificial Intelligence

# Innovation optimization

## Pilot project: Fully integrated SMART Aquaculture system



# Scale up potential



National level: x25 per cycle (approx. 1 year)

If FCR reduces from 2.1 to 1.8:

- Environment
  - 500+ tons Nitrogen avoided
  - 70+ tons Phosphorus avoided
- Economics
  - 7,500 tons of fish feed unwasted
  - EUR 10 Mio saved

+ CO<sub>2</sub> avoided along supply chain



# SwitchMed and the Blue Economy

Building a solid community of stakeholders to support consumption and production of sustainable products and services of the Blue Economy



[Morocco](#)



[Tunisia](#)



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