



**switchasia**  
GRANTS PROGRAMME



# NURTURING GREEN AQUACULTURE *in Myanmar*

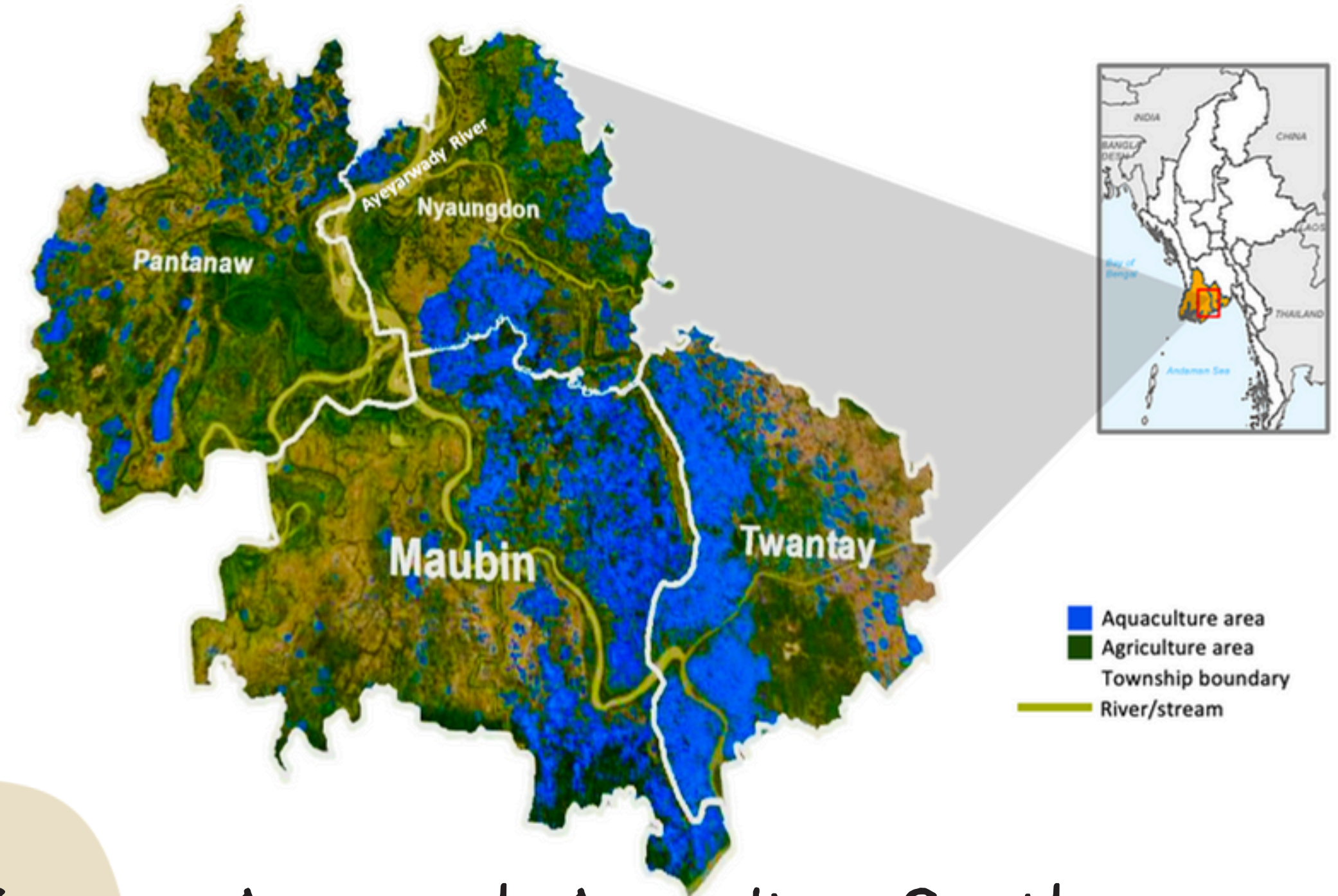




# Nurturing Green Aquaculture in Myanmar

To improve resource efficiency and reduce environmental degradation in Myanmar's aquaculture industry, while ensuring improved economic returns in the value chain

Jan 2022 – Dec 2024



Yangon – Ayeyarwady Aquaculture Corridor:  
Home to aprox. 60% of Myanmar's farmed fish prod.



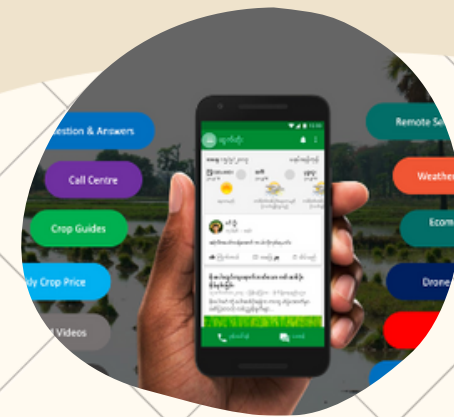


# Supporting aquaculture MSMEs to adopt more resource- efficient and greener production practices



## Testing & Demonstrating 'Green Practices'

Working with 250 champion  
MSMEs to initiate scale &  
reach a tipping point



## Digitizing Green Aquaculture Extension

Partnering with a mobile-  
based ag apps to reach more  
MSMEs



## Developing 'Green Loans' to enable scalability

Supporting Financial  
Institutions to develop green  
loans for MSMEs



## Establishing Evidence- based Bankable Biz Cases

Evidence Gathering &  
Sharing through Meso-  
level Organizations

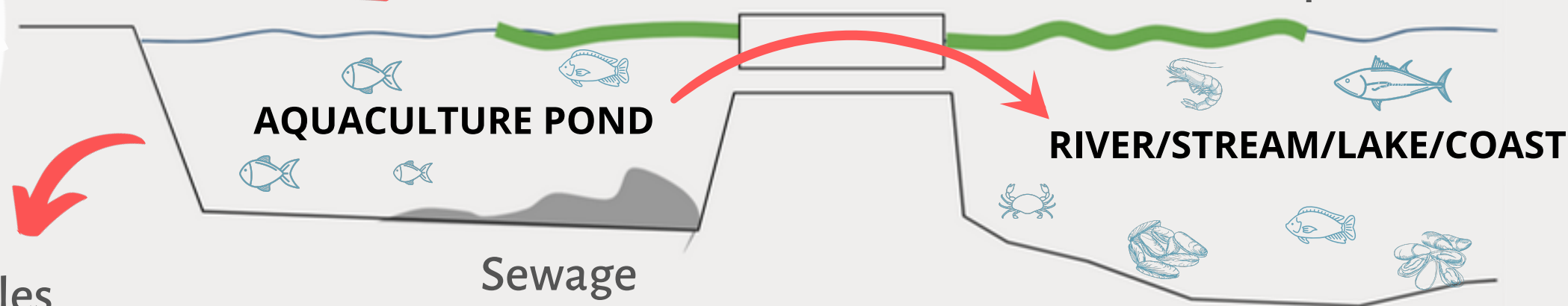
Clearance of  
vegetations for  
aquaculture



+ Feeds  
+ Fertilizers  
+ Antibiotics, hormones

→ High eFCR (economic feed conversion ratio)

+ Parasites & pathogens  
+ Chemical substances/compounds  
+ Exotic invasive species



Food miles

Sewage

+ Nitrate + Ammonium + Organic waste

+ Toxins + Algae blooms + Nutrients + Bacteria decomposition

→ + Anoxic conditions

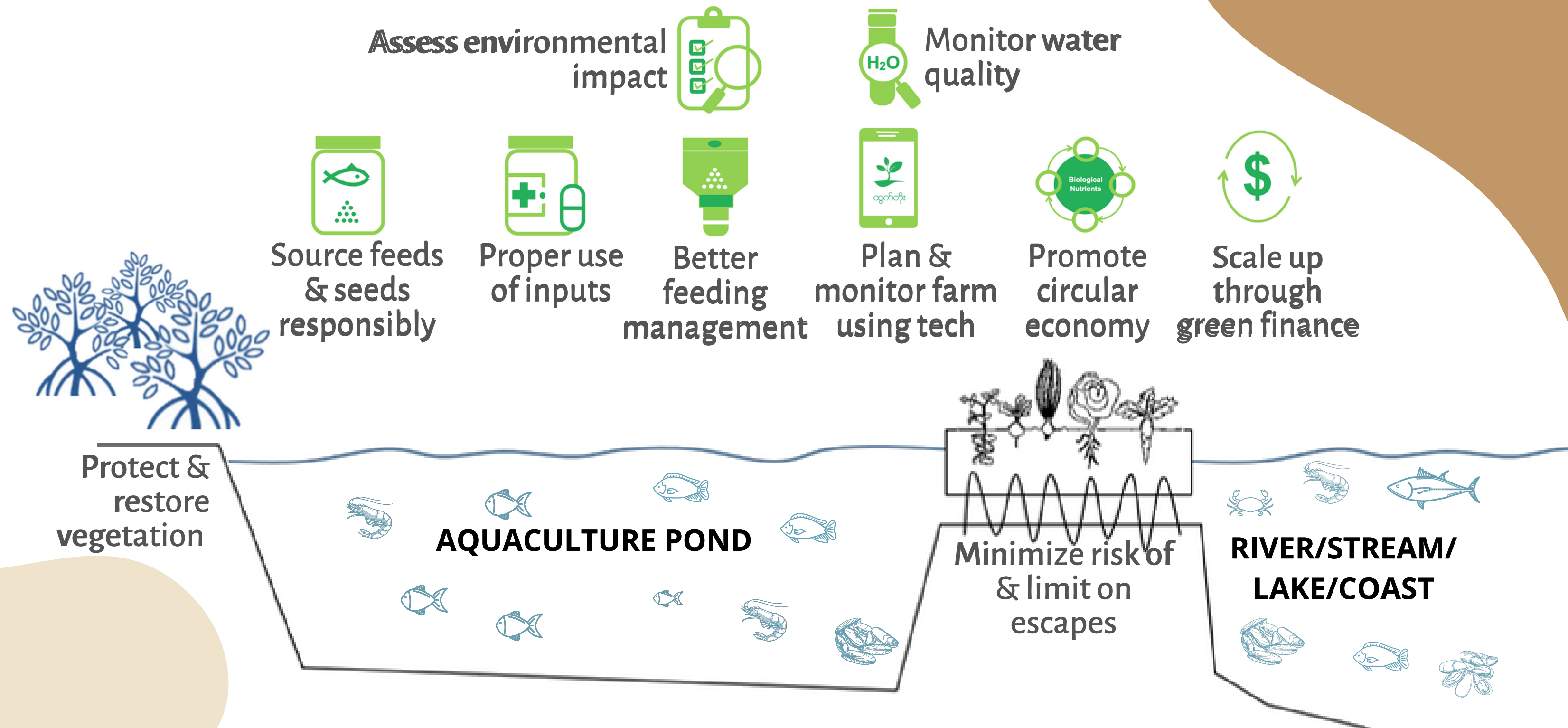


## Negative Consequences:

Biodiversity losses | Disruption of ecosystem processes | Water contamination  
Pollutants entering food chains | Low aquaculture productivity | Greenhouse gas emissions

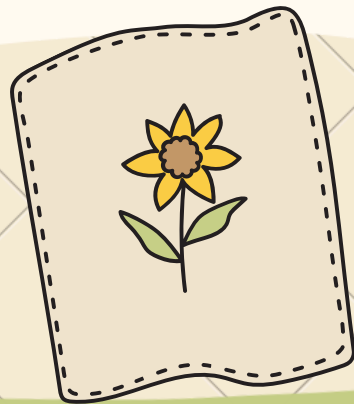


# Addressing the link between Myanmar's aquaculture sector and high levels of water pollution and other environmental issues



# Promoting Circular Bio-Economy

Aims at producing renewable biological resources, facilitating a conversion of these resources and waste streams into value added products



## Establishing Measurement Framework

M&E indicators, data collection methodology and tools



## Promoting Circularity in Aquaculture Production

Support both **Circularity** and **Zero-Waste** pathways



## Documenting & Sharing Lessons

Within the current challenging operational context



# Establishing M&E Framework

Feed formulations  
& feed ingredients

Measurable under a  
Circular & Zero-  
Waste Perspective

Resource  
efficiency of  
feeding

Circularity of  
waste

To establish indicators,  
methodology & tools to measure  
circularity in aquaculture

To be able to evaluate  
circularity performance of  
aquaculture production systems  
for evidence-based



# Promoting Circularity in Aquaculture Production

Improved feed  
formulations



Commercial  
aquafeed production

Home-made aquafeed production

Circularity  
of feed  
ingredients



'Green Water' for  
micro/small operators

Natural feed (plankton—  
mostly microalgae)



Reduce the use of 'linear'  
ingredients in feed  
production

Replacement of soybean  
meal with alternative  
protein feed ingredients



# Promoting Circularity in Aquaculture Production

Resource  
efficiency of  
feeding



Promote 'smart-feeding'  
tech for medium/large  
operators

Monitor FCR & make improvement  
to minimize nutrient excretion

Circularity of  
waste



Integrated systems to closing the loop









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