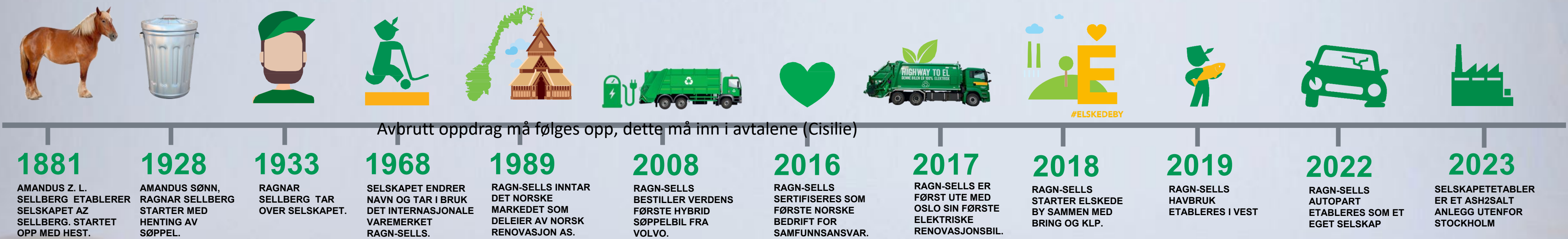
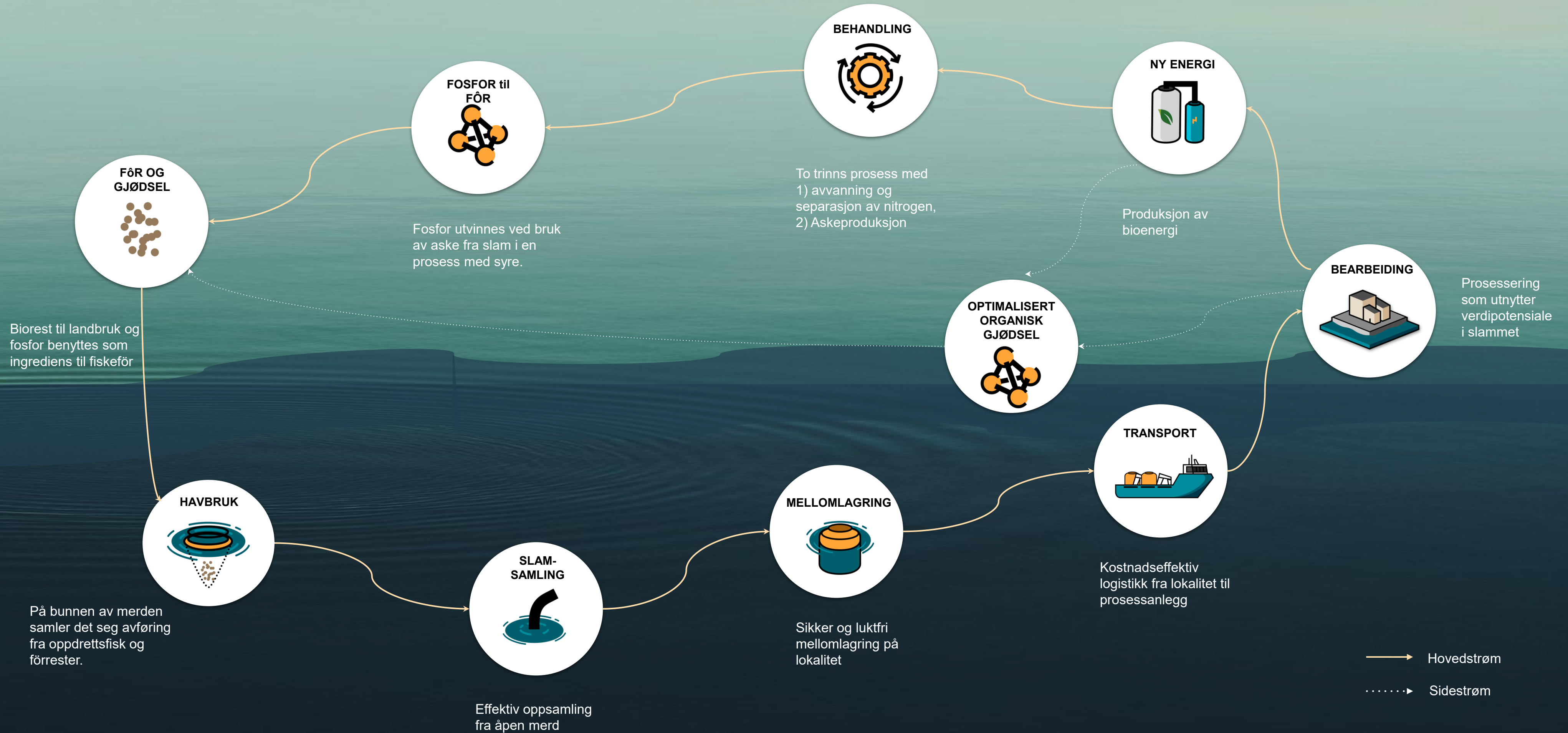


FRA HEST OG KJERRE TIL GRØNN INDUSTRI



Avbrutt oppdrag må følges opp, dette må inn i avtalene (Cisilie)

FEED2FEED



AQUAPHOENIX

– demonstrere fullskala oppsamling og sirkulær verdiskaping av slam fra fiskeoppdrett

Coordinator: NORCE

Duration: Jan 2025 –December 2028

Budget: €9,000,000 (NOK 120,000,000)

Budget to Norway: €7,801,000 (NOK 103,000,000)

Internasjonalt konsortium hvor forskning, næring, forvaltning og kunnskapsformidling mobiliserer



NORCE - Norwegian Research Centre
Norwegian Institute of Marine Research
 Natural Resources Institute Finland
 Royal Netherlands Institute for Sea Research
 European Aquaculture Technology and Innovation Platform
 Seascope Belgium

Norway
 Norway
 Finland
 Netherlands
 Belgium
 Belgium

Forskning
 & formidling



FRAMO
LiftUP
Ragn-Sells Havbruk
Aquapro
 Biokraft International AB
 EasyMining Services Sweden AB

Norway
 Norway
 Norway
 Norway
 Sweden
 Sweden

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Lingalaks
Eide Fjordbruk

Norway
 Norway

Oppdrettsaktører
 i Hardanger og Åland



Ålands fiskodlarförening R.F.
 Brändö Lax AB
 Storfjärdens fisk AB

Finland
 Finland
 Finland



Vestland County Council

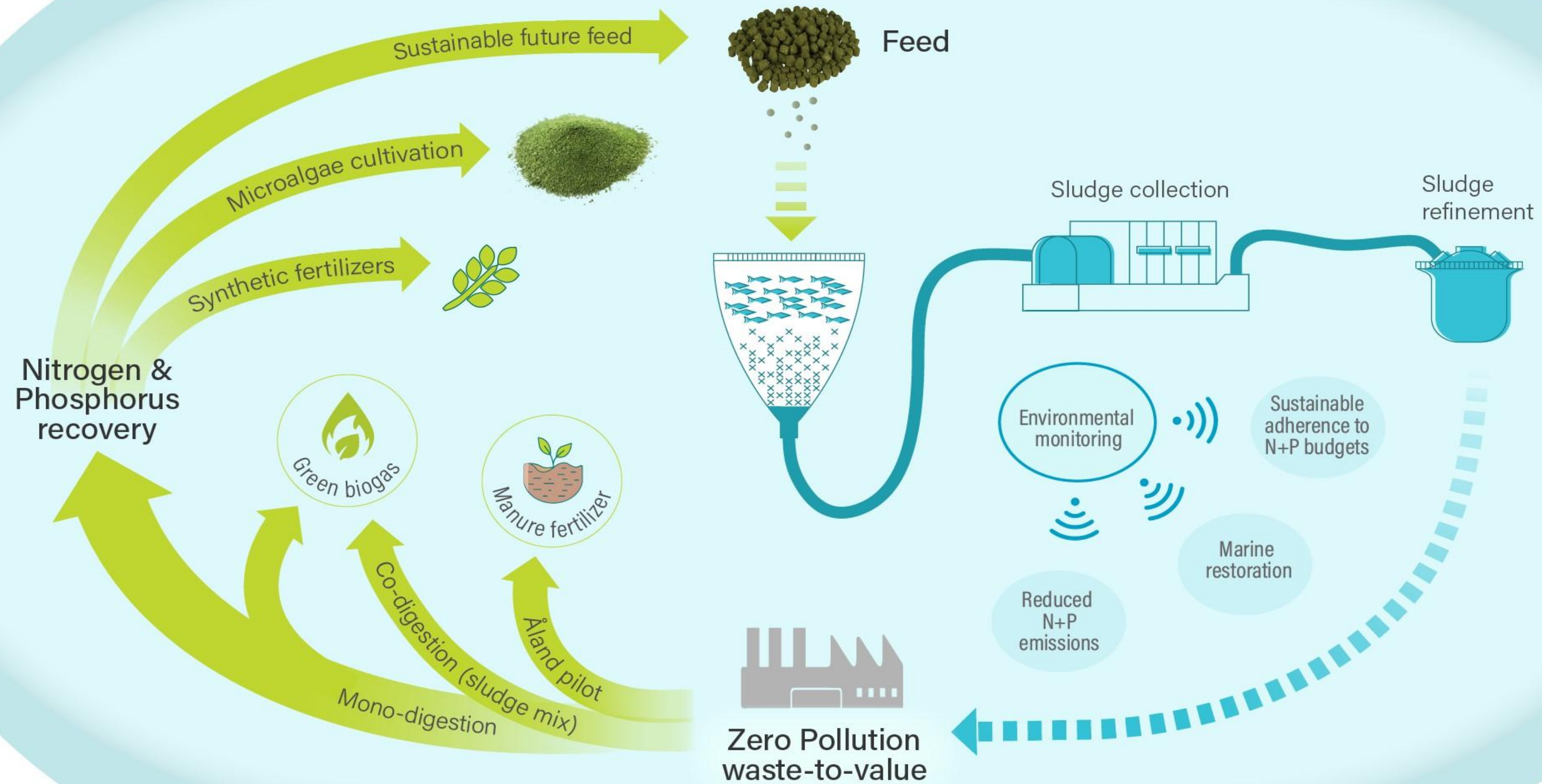
Norway

Regional forvaltning
 i Norge og Finland





Innovation enabled by novel governance and policy



SludgeCollect and circular pathways for a Zero Pollution Europe

SIRKULÆR HUB FOR HÅNDTERING AV MARINE RESTRÅSTOFF



THE VALUE POTENTIAL

TWO PATHWAYS TO CAPTURING VALUE FROM AQUACULTURE SLUDGE

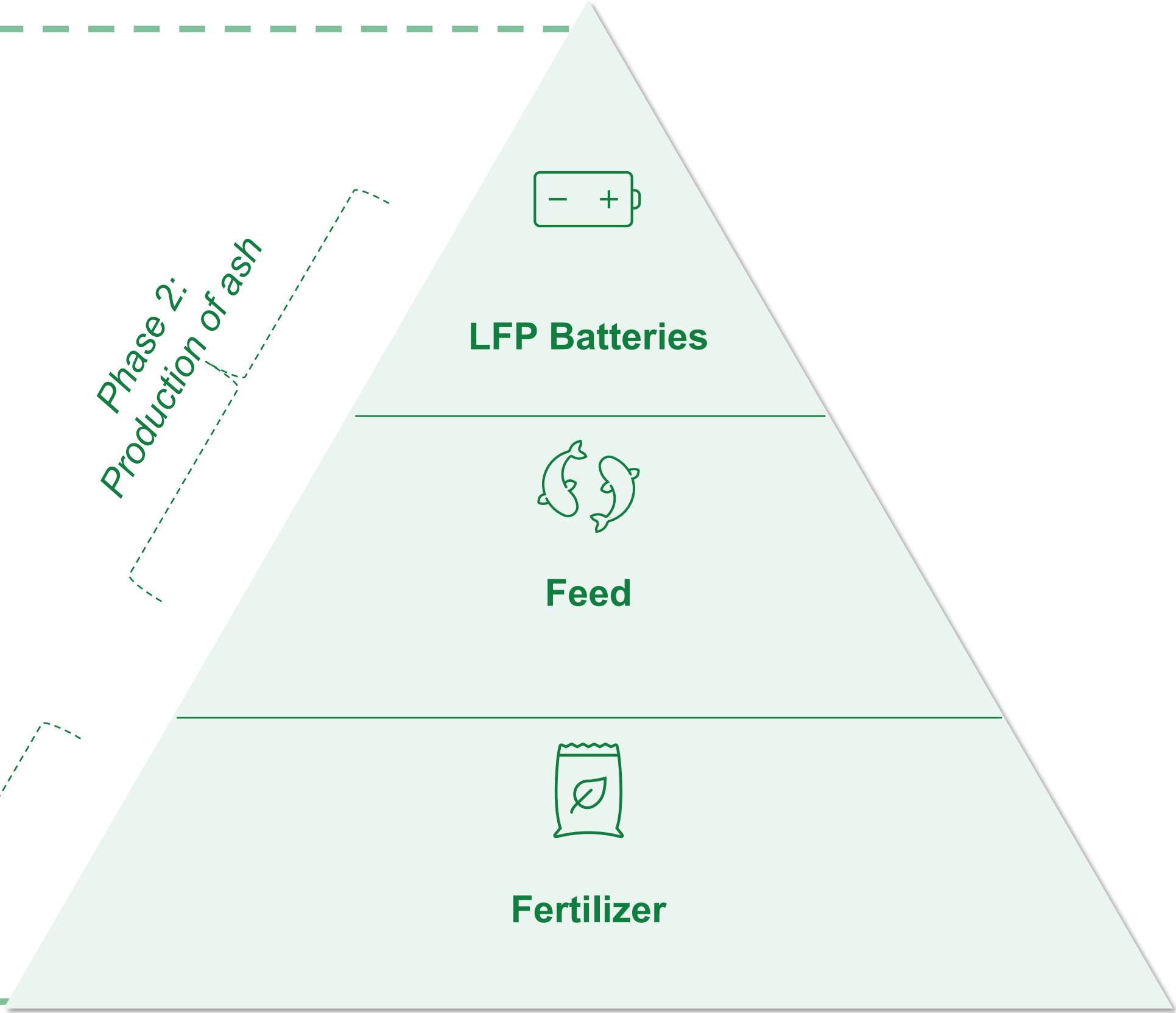
Mid to long term. It is not reliant on regulations to change. Additional R&D is required.

Mid to long term. Changes in legislation are necessary. There is interest and potential for partnerships from fish feed farmers.

The option that is simplest and most straightforward.

Phase 1
Production of
organic fertilizer

Phase 2:
Production of ash



THE 6 YEAR GAMEPLAN SUGGESTS THAT WE NEED TO FOCUS ON A STEPWISE INCREASE IN TRL



	2025	2026	2027	2028	2029	2030	2031	2032
Collection	TRL = 8-9							
N-recovery	TRL = 3	TRL = 7-8	TRL = 9					
Biogas*	TRL = 3-4		TRL = 7	TRL = 8-9				
Incineration	TRL = 3-4	TRL = 7- 8	TRL = 9					
P-extraction	TRL = 3-4	TRL = 5		TRL = 7-8		TRL = 8-9		

Feed2Feed
next steps



- 1
EU-funding
- 2
Full-scale pilot
biogas
- 3
First P-module
- 4
Several P-modules

Technology readiness levels
TRL 1 – 3 = Basic research
TRL 4 – 5 = Applied research
TRL 6 – 8 = Development
TRL 9 = Implementation

*from aquaculture sludge – sea based

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