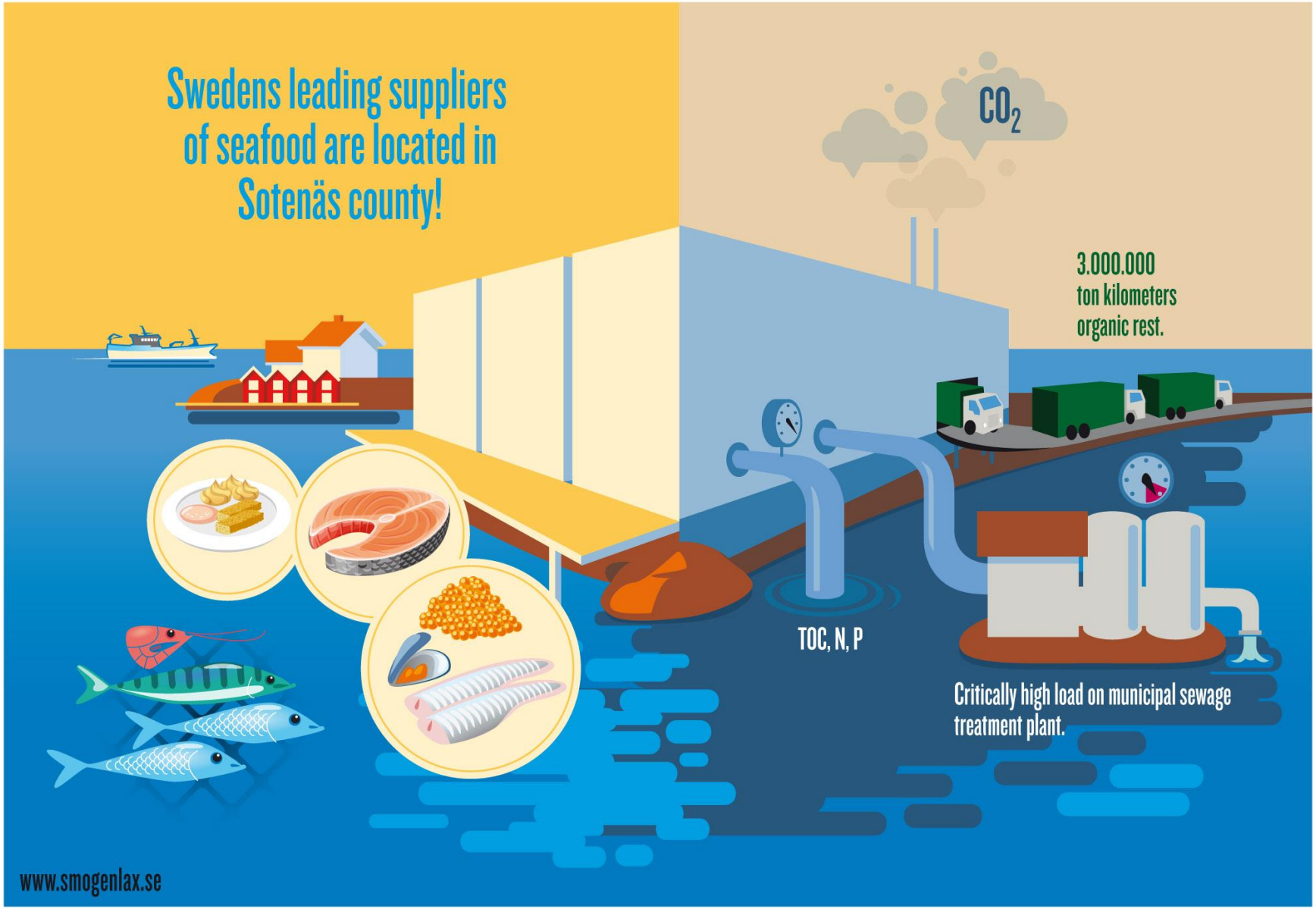
Renahav

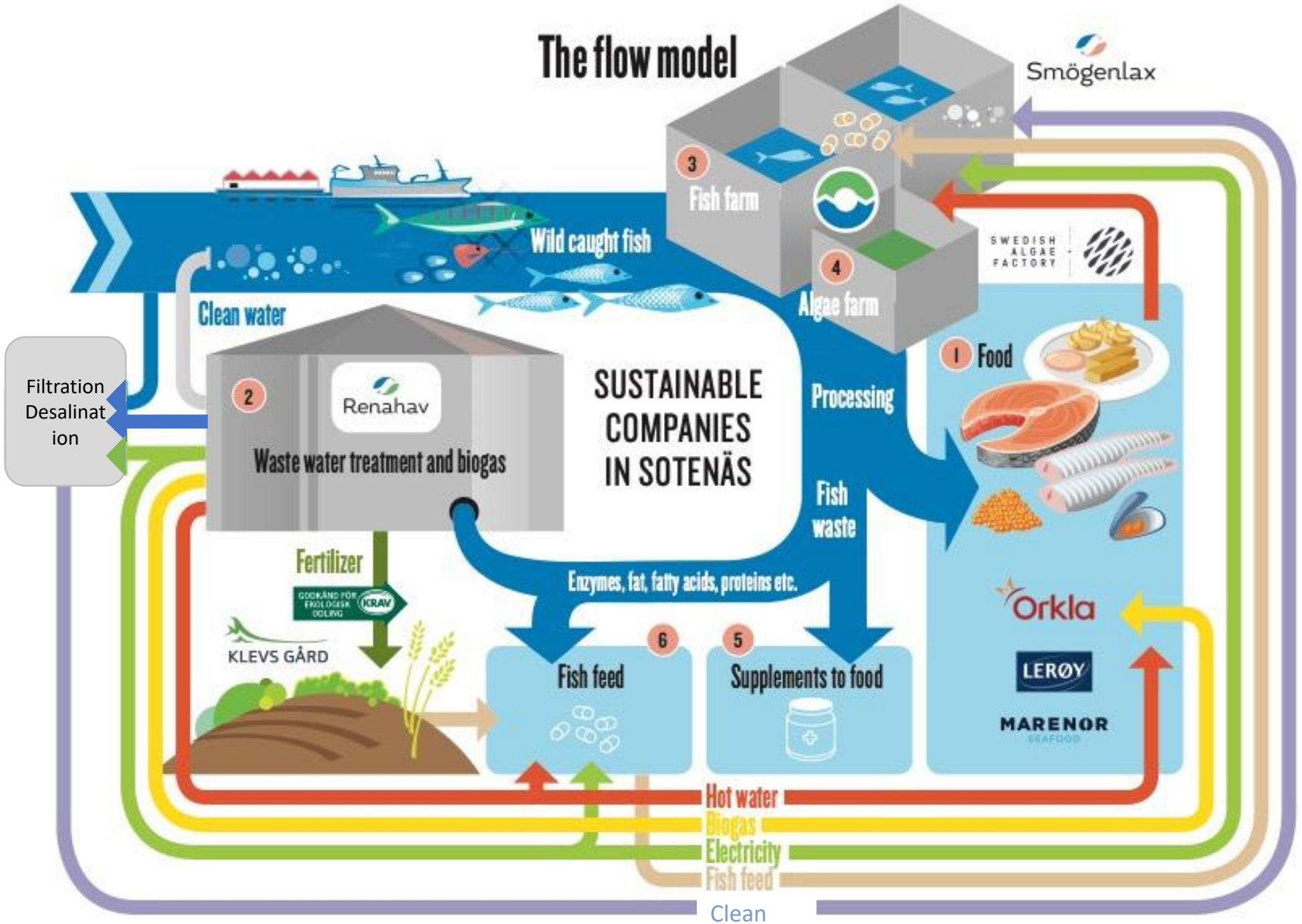
ENERGI OCH VÄXTKRAFT

Energy and Plant Power

2022-10-04

MÄSTER Bengts VÄXTNÄRING


Swedens leading suppliers of seafood are located in Sotenäs county!
CO_2
3.000.000 ton kilometers organic rest.
TOC, N, P
Critically high load on municipal sewage treatment plant.
www.smogenlax.se


The flow model
Smögenlax
3
Fish farm
4
Algae farm
SWEDISH ALGAE FACTORY
Wild caught fish
Clean water
Filtration
Desalination
2
Renahav
Waste water treatment and biogas
SUSTAINABLE COMPANIES IN SOTENÄS
Processing
1
Food
Fish waste
Fertilizer
KRAV
KLEVS GÅRD
Enzymes, fat, fatty acids, proteins etc.
6
Fish feed
5
Supplements to food
Orkla
LERØY
MARENOR
Hot water
Biogas
Electricity
Fish feed
Clean water

Smögenlax

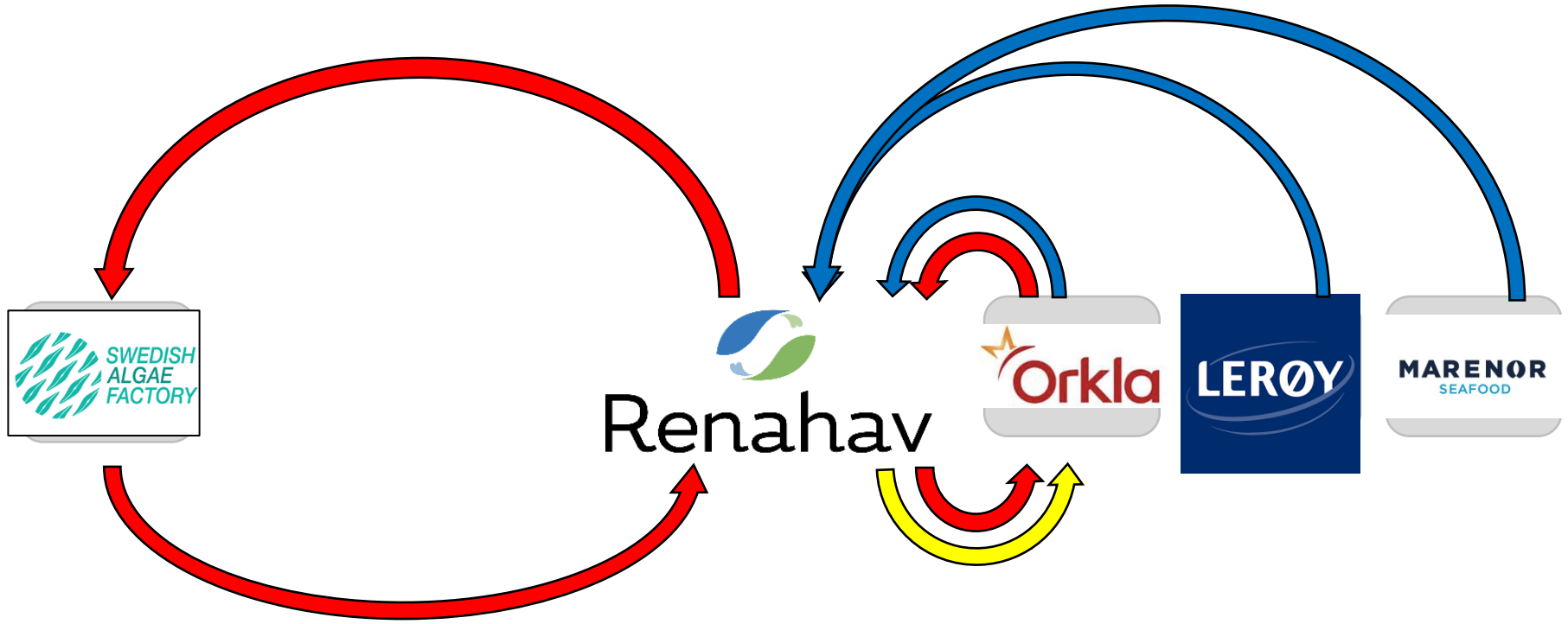
Renahav
ENERGI OCH VÄXTKRAFT

KLEVS GÅRD

RAMBO AB

Building-plans to 2025-01-01

A circular hub is formed
This is built together



Organic rest, process wastewater

Biogas

Bio fertilizer, KRAV

Hot water

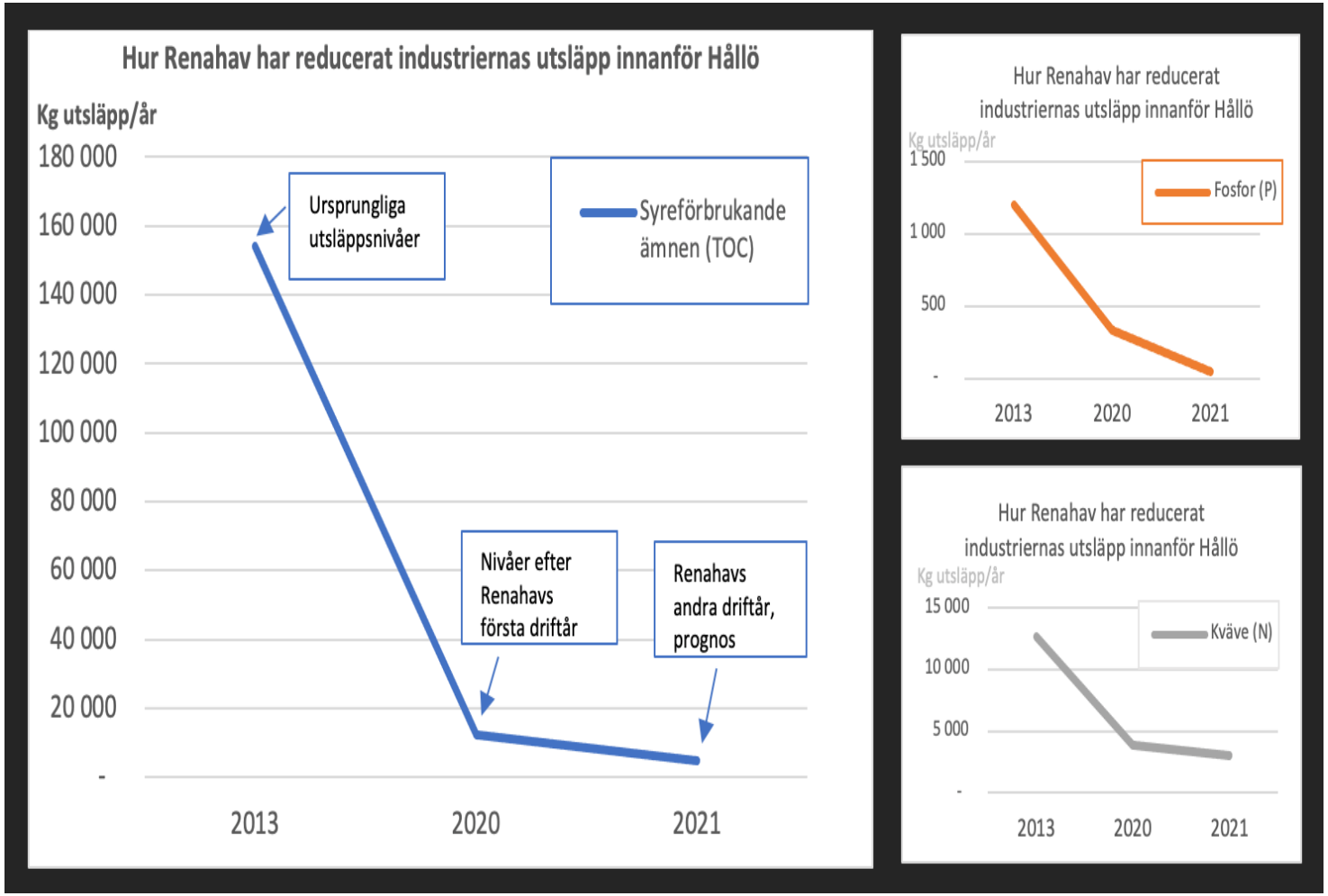
Electricit
y

Clean water

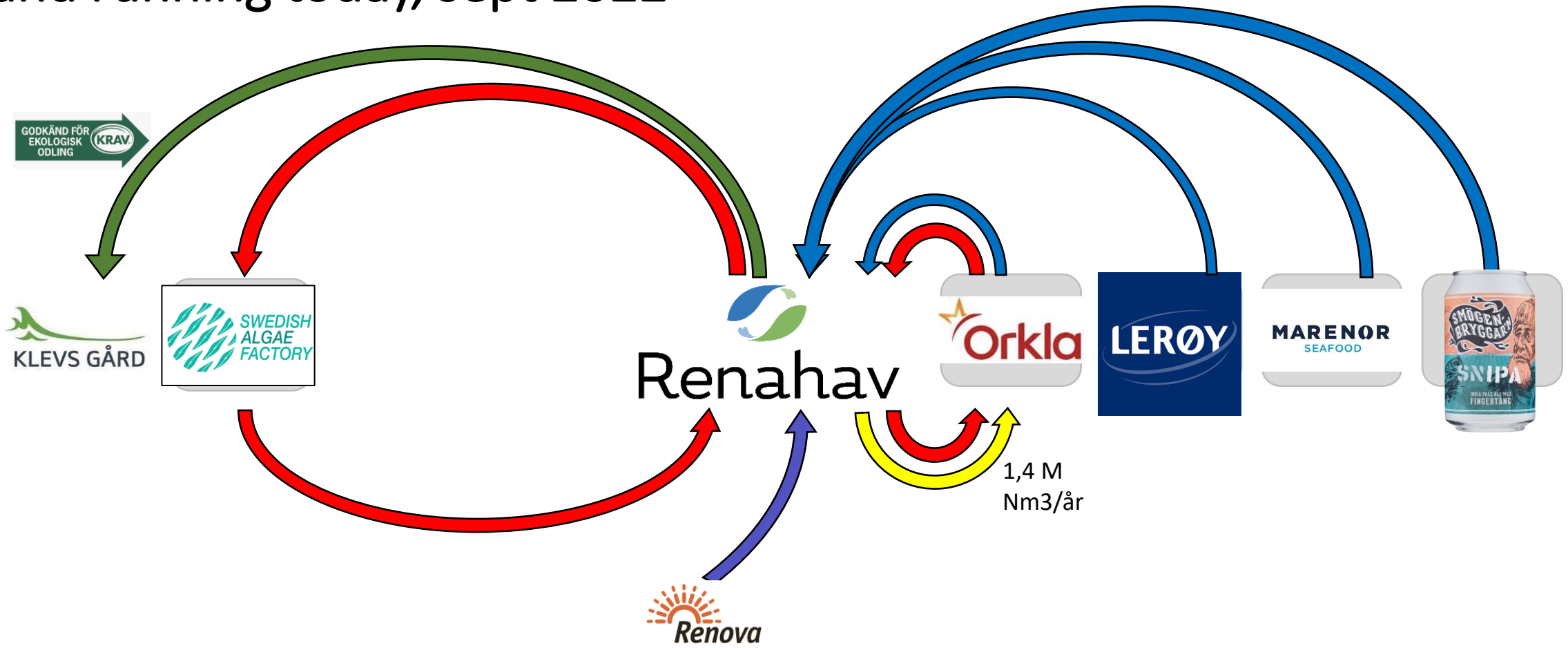
Lax- och algvatten

Fish feed

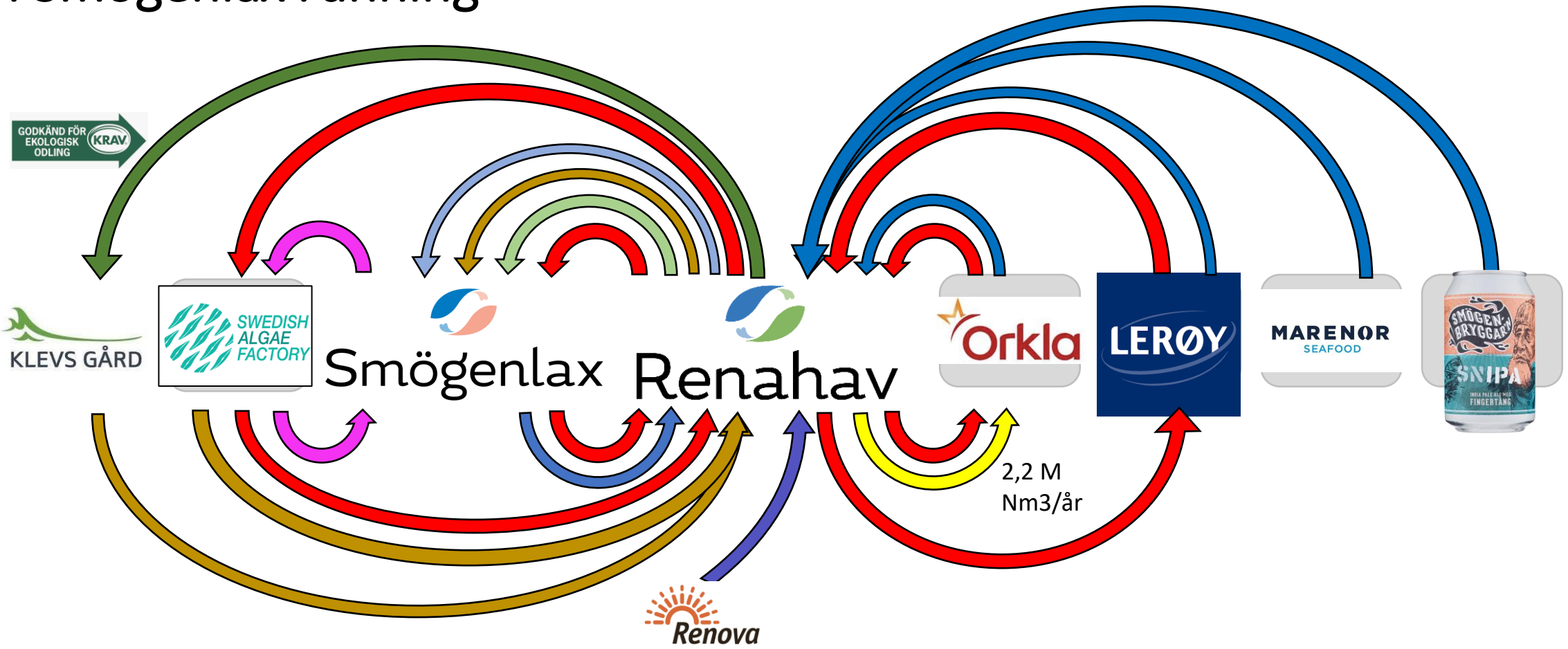
Real environmental benefit from Renahav to water



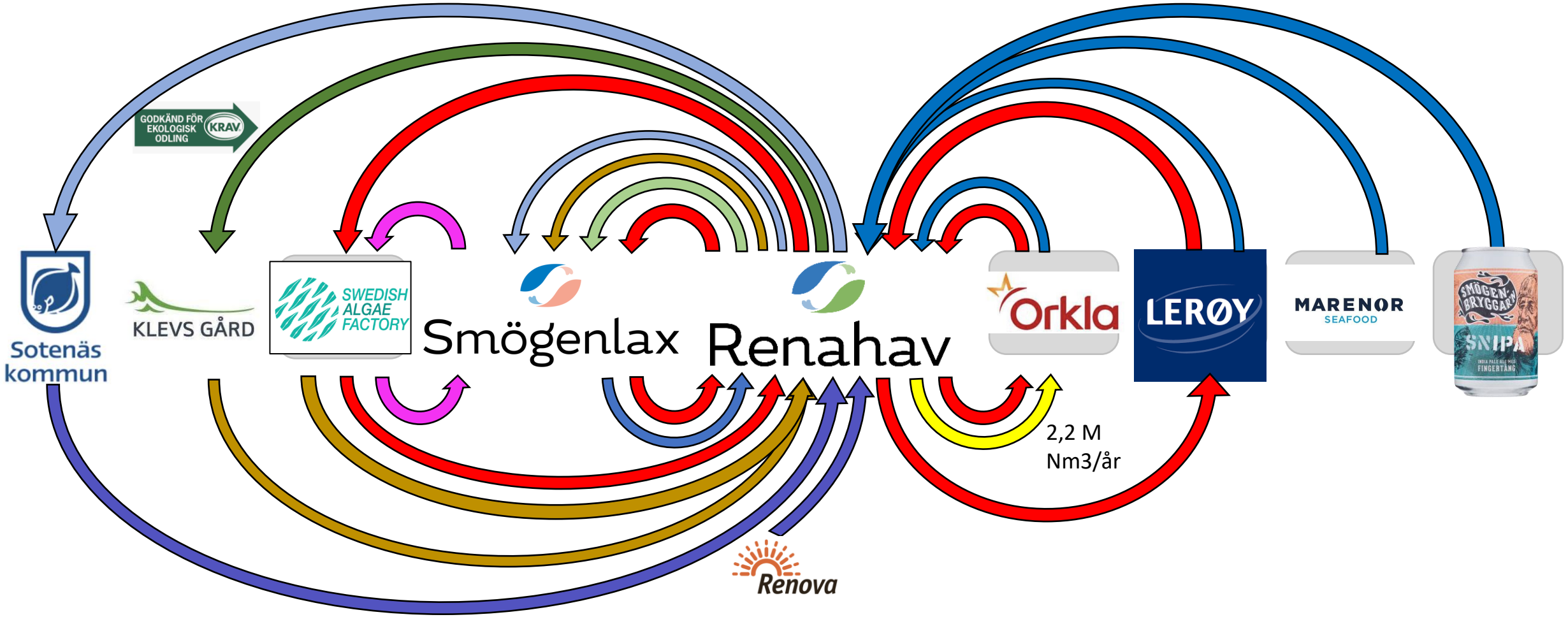
A circular hub is formed
Up and running today, sept 2022



A circular hub is formed and grows …….
With Smögenlax running



A circular hub is formed and grows…..
Additional projects are under way



A circular hub is formed and grows…….

Next flow ??

Reserve fresh water from desalination??

Organic rest, process wastewater

Biogas

Bio fertilizer, KRAV

Hot water

Electricit y

Clean water

Lax- och algvatten

Fish feed

- Another projects
- Plant for pelagic fish
- Fish feed plant from residuals from the fish industry and local farming from Klevs Gård

More Energy Production

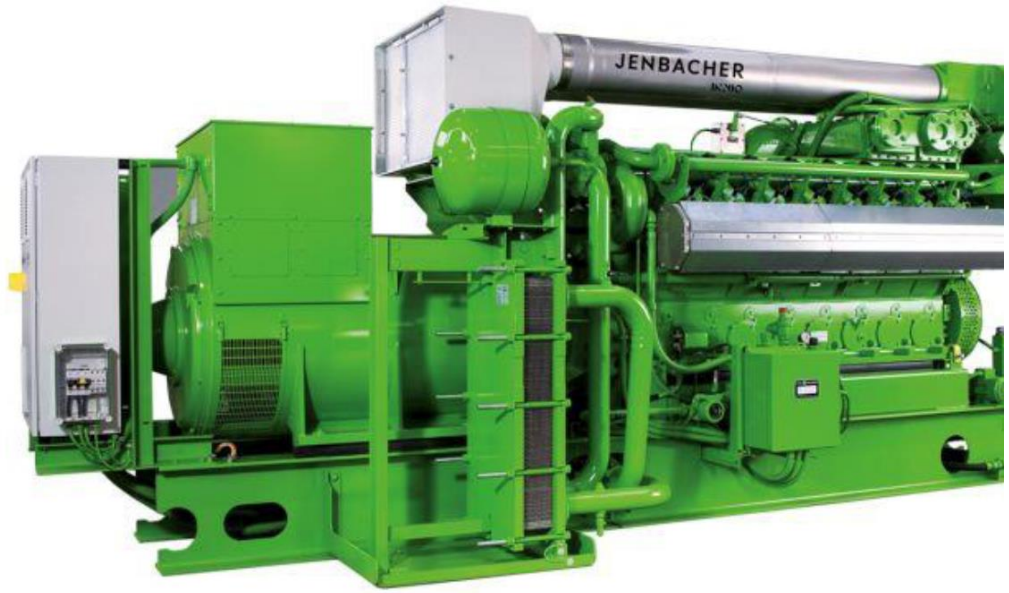
- Today a gas engine with 330 kW capacity. Total with a new engine 1 MW.

- Total capacity:

approx. 8 GWh electricity, 9 GWh hotwater and 10 GWH gas

This compassion can be mixed if other product mix is chosen.

Rena Hav 2



Electrical output	703	kW el.
Thermal output	738	kW

Emission values

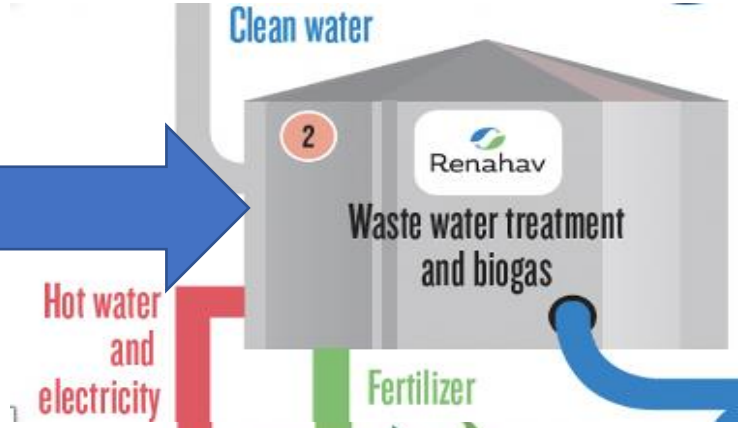
NOx < 500 mg/Nm³ (5% O2) | < 190 mg/Nm³ (15% O2)

Local Slurry-plant

RAMBO Food waste

”Slurry plant”

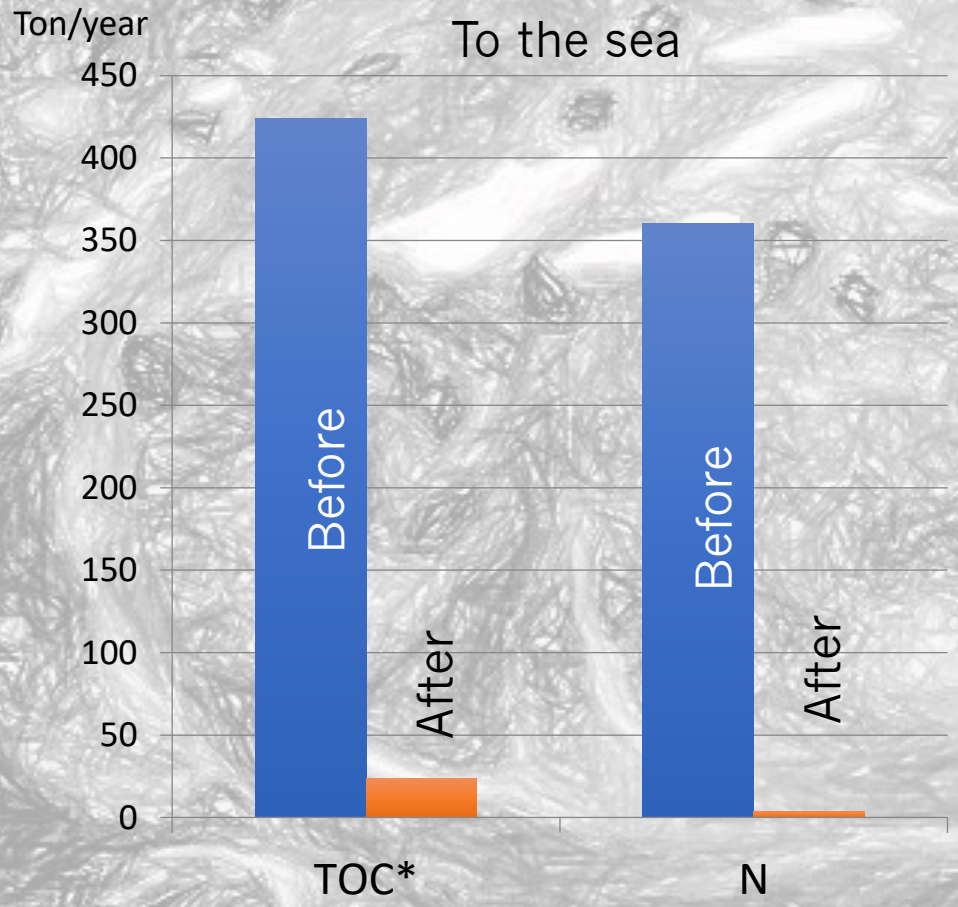
Biogas och Fertilizer



Food waste from industries and restaurants

GODKÄND FÖR EKOLOGISK ODLING KRAV

Environmental benefits, Rena Hav + SmögenLax



To atmosphere

CO_2
Reduction
20 000 ton*

*Approximerat

Smögenlax

Why is this important for the fish industry??

LERØY

Orkla

Smögenlax

MARENOR SEAFOOD

Marketing and sales

- Sustainability
- Cost advantages
- More sales oppertunities

Environment

- Great environmental benefits
- Both to air and water
- Fullfill EU-regulations

Cost advantages

- Energy
- Sludge
- Organic residues
- Feed from organic residues and local farming

KLIMAT KLIVET
Lokala klimatinvesteringar. Mätbara resultat.

KLEVS GÅRD

Organic rest, process wastewater

Biogas

Bio fertilizer, KRAV

Hot water

Electricity

Clean water

Lax- och algvatten

Fish feed

Thank you!

Bengt Gunnarsson

Do not forget to buy