

Webinar: Sustainable manure and nutrient management  
- are we on the right track?

# Practices and technologies for sustainable nutrient management

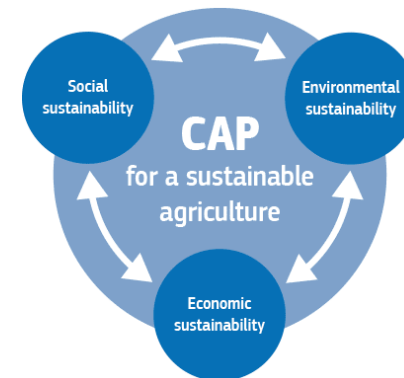
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# The need to recycle nutrients and to reduce nutrient losses noted in the EU

- EU Green Deal
  - Climate neutrality by 2050
  - Promoting resource-efficiency via a transition into clean circular economy
  - Restoring biological diversity and reducing pollution
- EU Common Agricultural Policy and sustainable agriculture
  - Sustainable food system (Farm to Fork)
  - Biodiversity strategy
  - Climate neutrality
  - No emissions (soil, water, air)



# EU Farm to Fork Strategy



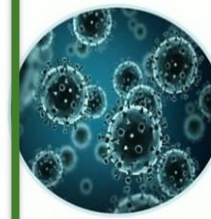
## 2030 Targets for sustainable food production



Reduce by 50% the overall use and risk of **chemical pesticides** and reduce use by 50% of more hazardous **pesticides**



Reduce **nutrient losses** by at least 50% while ensuring no deterioration in soil fertility; this will reduce use of **fertilisers** by at least 20 %



Reduce sales of **antimicrobials** for farmed animals by 50%

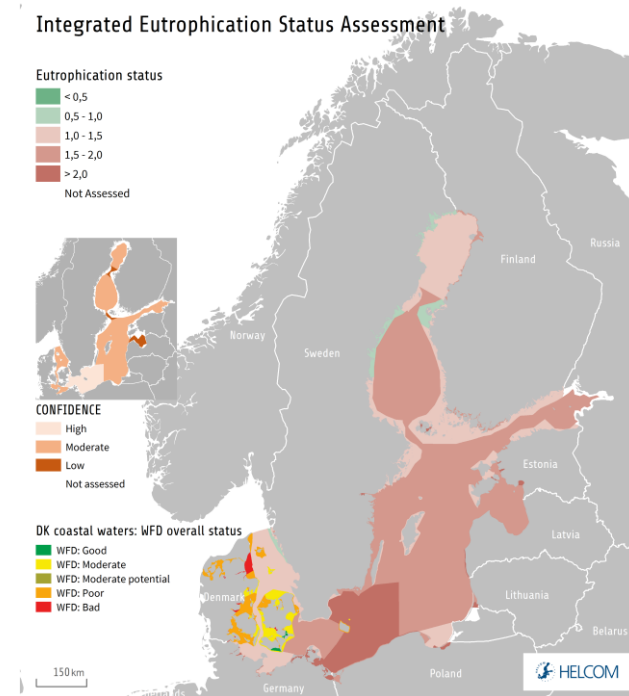


Achieve at least 25% of the EU's agricultural land under **organic farming** and a significant increase in **organic aquaculture**



# The Baltic Sea and nutrients – still a need to cut down losses to the sea

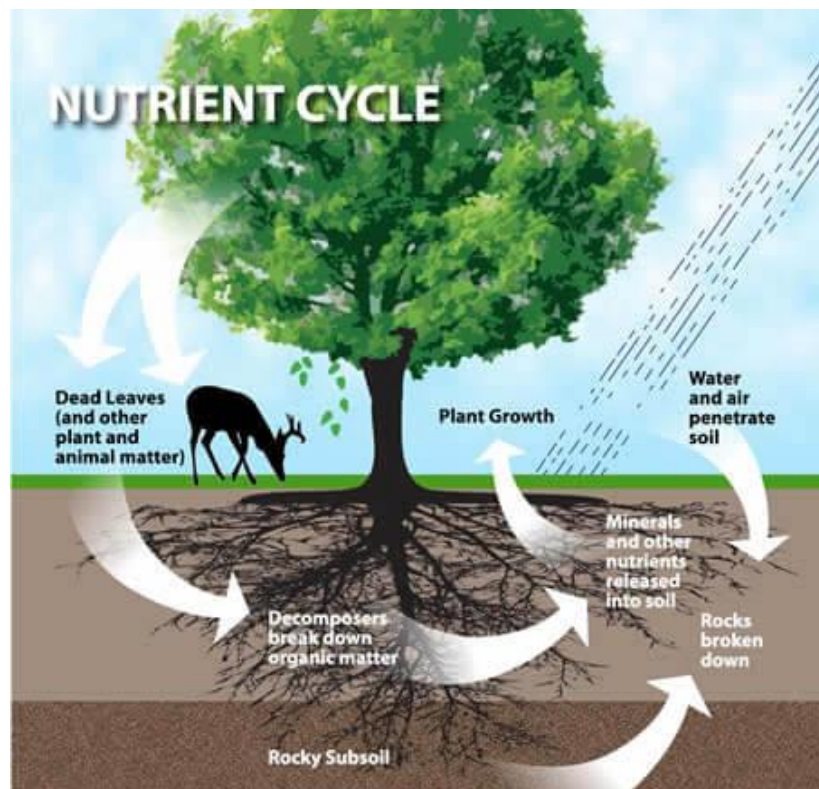
- Eutrophication one of the main challenges of the Baltic Sea
- The impact of agricultural nutrient losses significant and thus measures towards reducing losses and improving nutrient recycling are still needed
- HELCOM Baltic Sea Action Plan being updated right now and many measures address nutrient management
  - Reduction of nutrient input from all human activities, restoration of biodiversity, implementation of nutrient recycling strategy



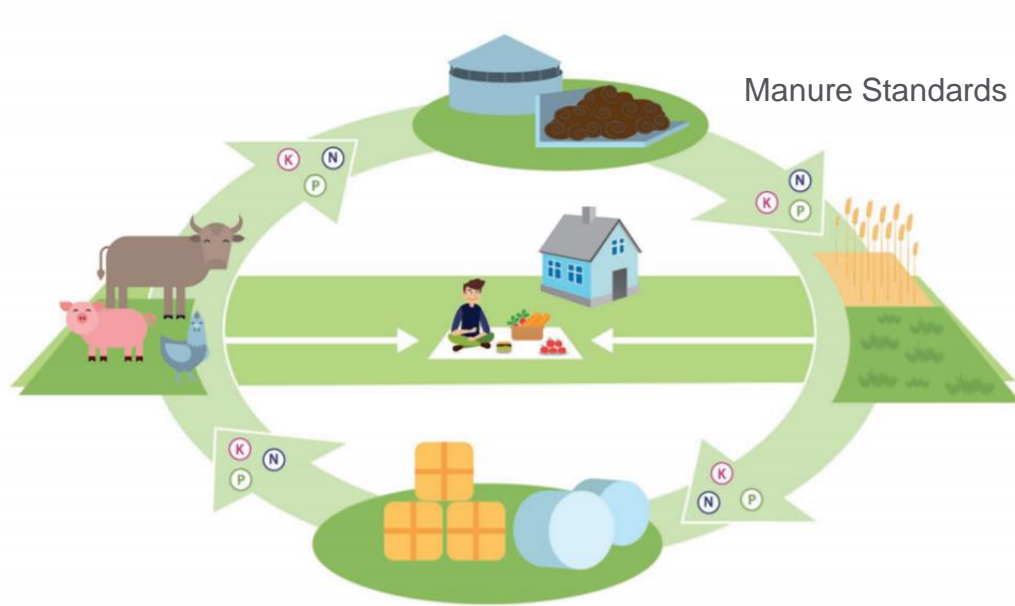
# HELCOM Regional Nutrient Recycling Strategy for the Baltic Sea

- Vision:
  - **Nutrients are managed sustainably in all HELCOM countries, securing the productivity of agriculture and minimizing nutrient loss to the Baltic Sea environment through efficient use of nutrients and cost-effective nutrient recycling.**
- Many objectives and sub-objectives:
  - Baltic Sea region as a model area for nutrient recycling
  - Reducing environmental impacts
  - Safe nutrient recycling
  - Knowledge exchange and awareness raising
  - Creating business opportunities
  - Improving policy coherence
- Current recycling status: varies significantly between countries

# Nutrient recycling – as the nature intended it



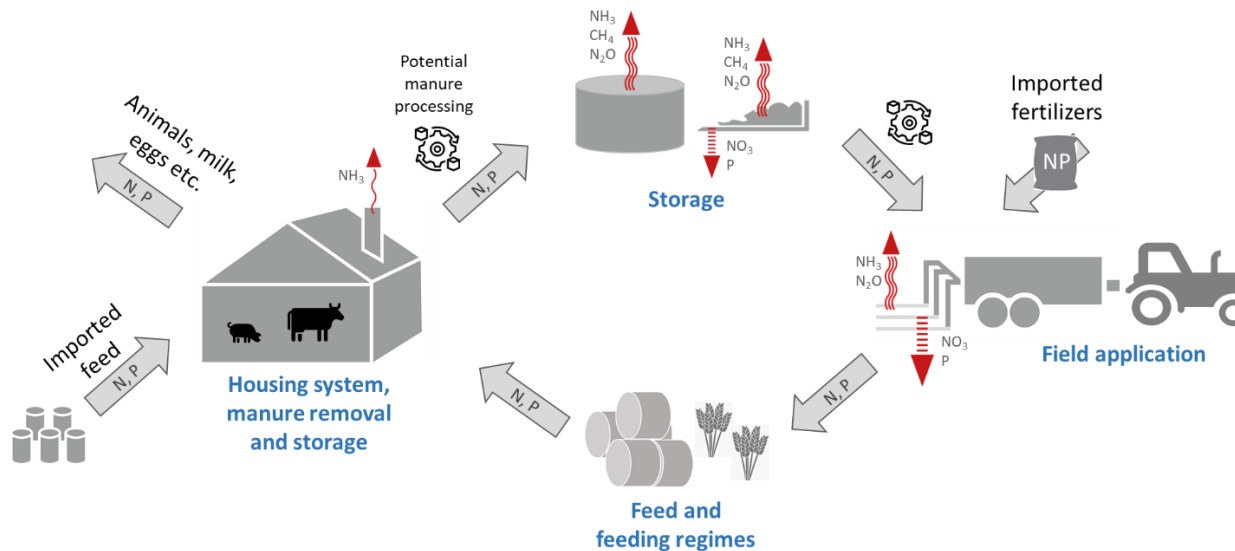
<https://www.pmfias.com/>



Dependence on mineral fertilizer products must be reduced with a return towards nutrient and carbon recycling

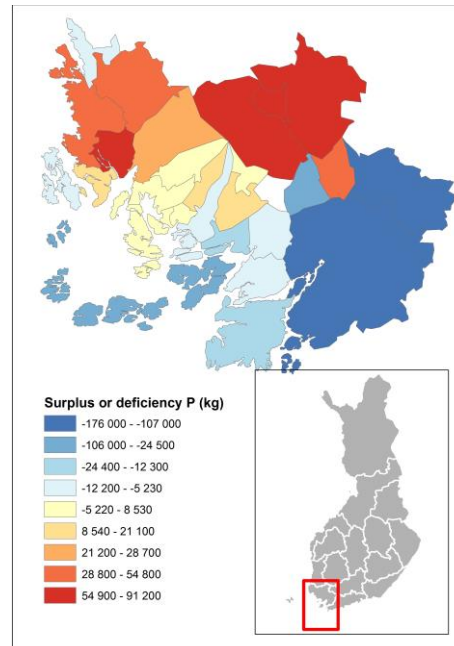
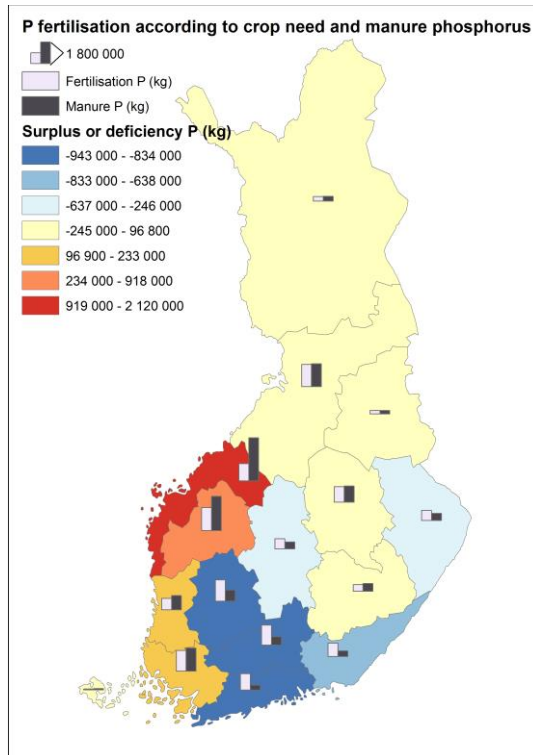
# A system level change required - FARM

- Animal farms should make better use of the manure via using best available techniques and practices in animal rearing, manure management and manure fertilizer use
- Potential farm-level manure surplus should be redistributed to other farms in need of nutrients



# A system level change required - REGION

- Regions with dense livestock production and often also oversupply of manure nutrients should process part of the manure so that it can be reallocated to regions in deficit of nutrients

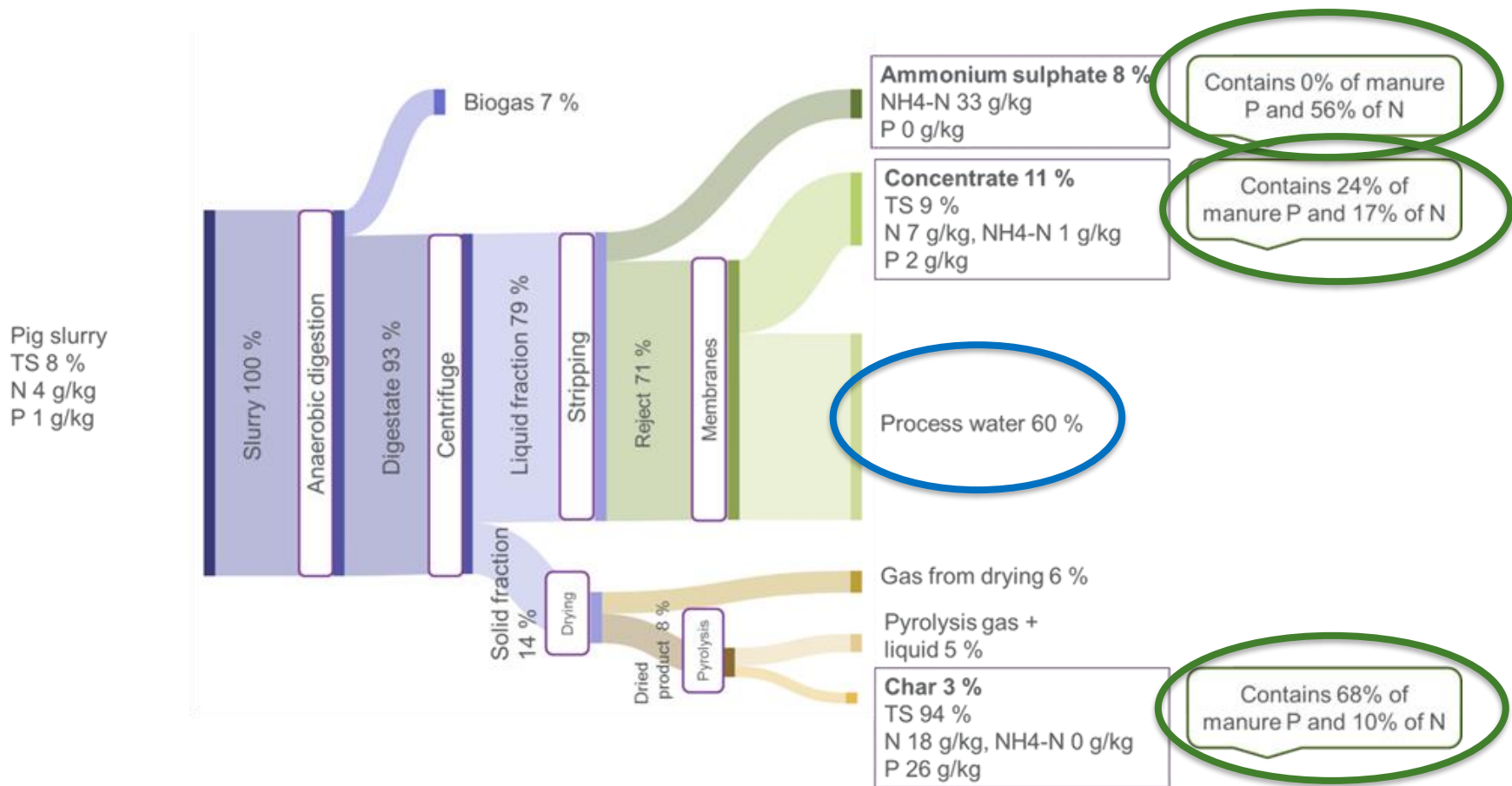


Luostarinen ym. 2019a.  
<http://urn.fi/URN:ISBN:978-952-453-941-8>

Luostarinen ym. 2019b.  
<http://urn.fi/URN:ISBN:978-952-326-777-0>




# Example of manure processing – mass balance



# SuMaNu reports for more information

[www.balticsumanu.eu](http://www.balticsumanu.eu)

**RISE** AGRICULTURE AND FOOD





**SuMaNu**

Technologies and management practices for sustainable manure use in the Baltic Sea Region


Erik Singhøj, Marek Krzyżoforski, Katrin Kuka, Sari Luostarinen, Zanda Melnalksne, Kristina Mjöfors, Kaisa Riiko, Kalvi Tamm, Kari Ylivainio, Minna Sarvi

RISE Report 2020:77



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**Manure processing as a pathway to enhanced nutrient recycling**

Report of **SuMaNu** platform

Sari Luostarinen, Elinä Tammio, Johanna Laakso, Minna Sarvi, Kari Ylivainio, Kaisa Riiko, Katrin Kuka, Eike Bloem and Erik Singhøj



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# Conclusions

- Solutions to better recycling of nutrients and carbon are needed around the world
- Transnational regulation, action plans and strategies can and should push improved nutrient management forward as an integral part of a sustainable food system and efficient circular economy
- National regulation, strategies and actions should be targeted to those measures that are country-specifically the most effective

**Forerunners could set an example and show what is meant in practise. Who wants to take the lead?**

# Thank you!

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