

LIVESTOCK

Exploring the sustainability of livestock systems using yeast as a next-generation protein source

Hanne Fjerdingsby Olsen, Margareth Øverland

EAAP 29.8.2019

LIVESTOCK – sustainable livestock production

Project period: 2019-2023

Project 285189 – Norwegian Research Council

Budget: 10.8 MNOK (≈ 1 mill. EUR)

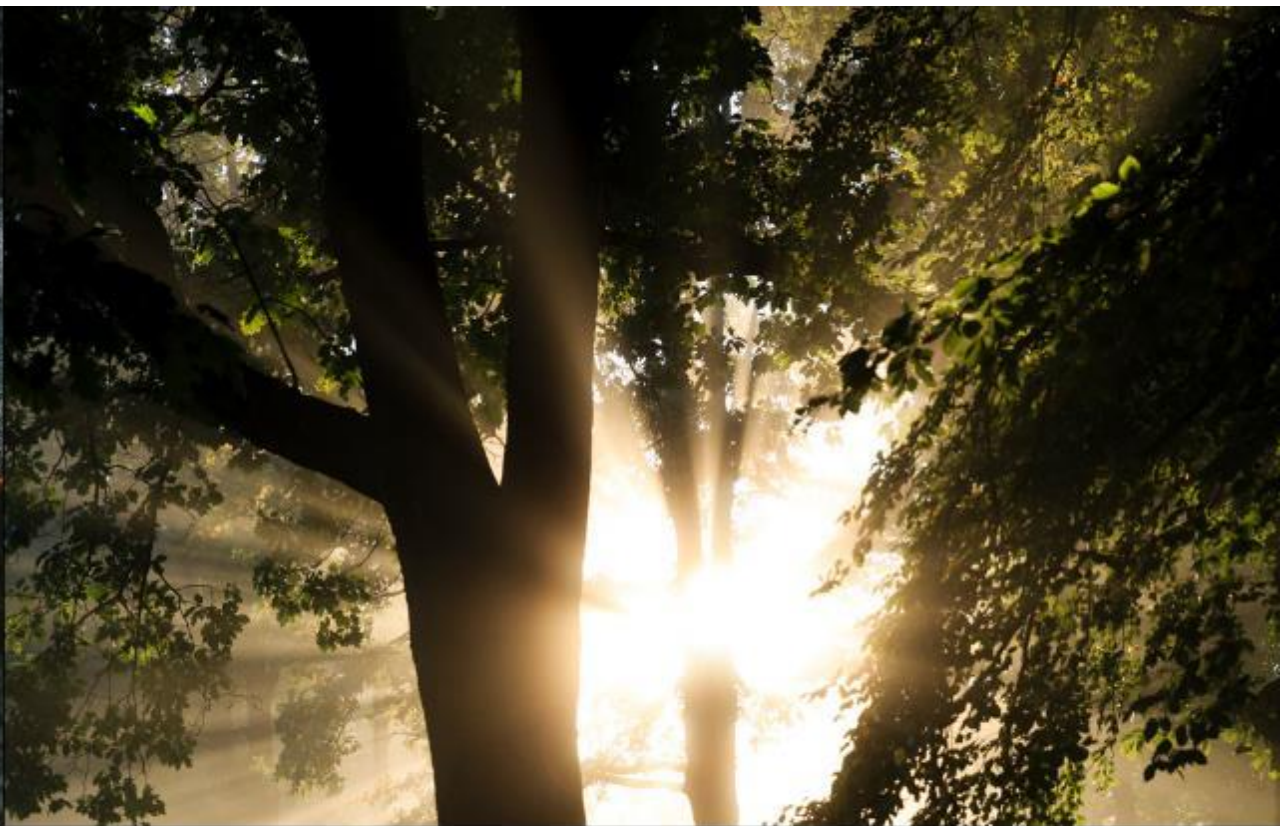


Project partners:



TINE RÅDGIVING





FOODS OF NORWAY aims to feed fish and farm animals using sustainable new ingredients

Duration: 2015-2024 Finance: € 21.5 Million

Population
growth
+14%



Maintain
self-
sufficiency

Number of
farms
- 19%

Reduce GHG-
emissions
- 40%



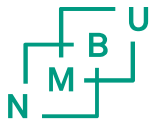
90% imported soy
and rape seed

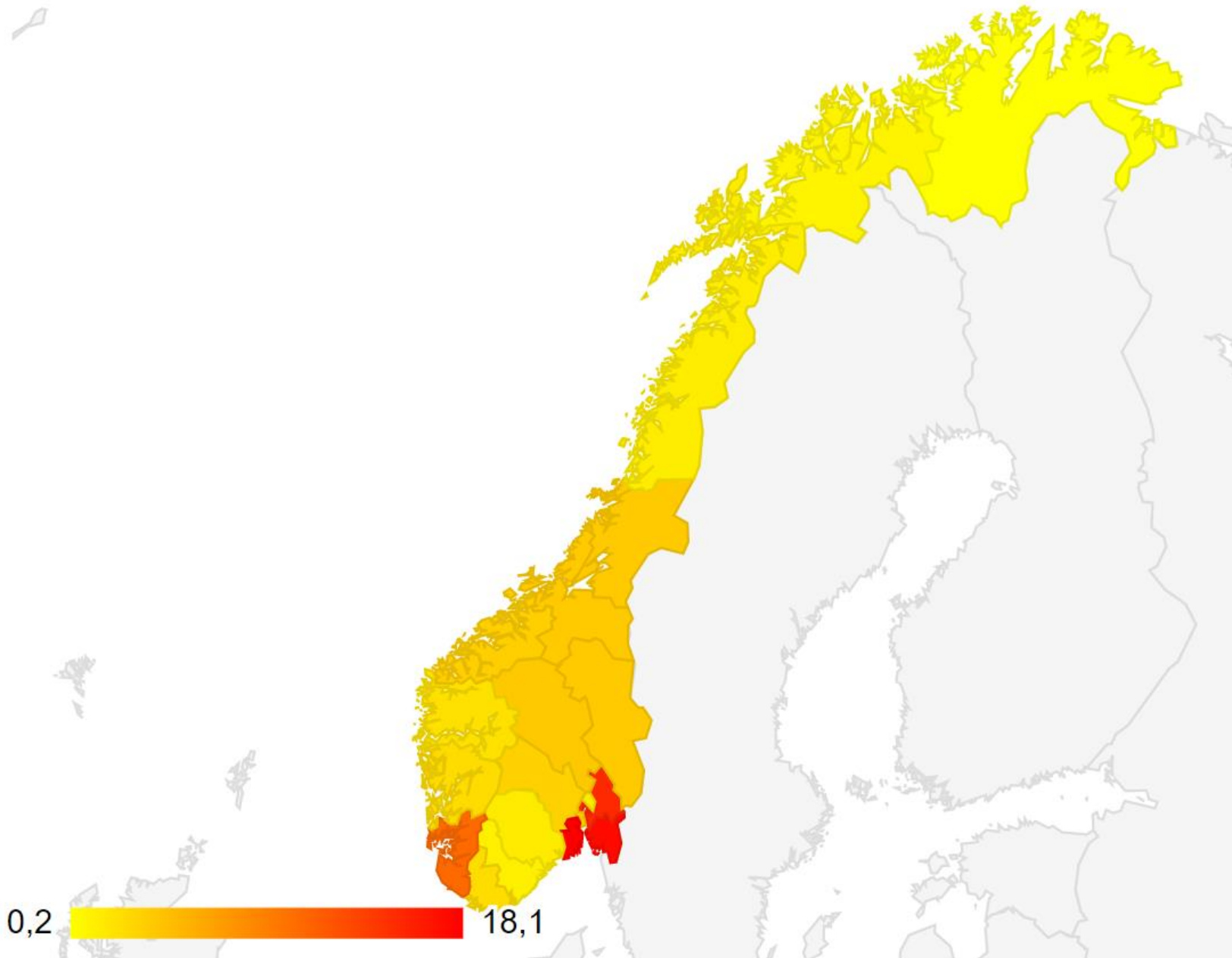


Domestic
protein content
<5%

Legumes

Rape
seed





0,2

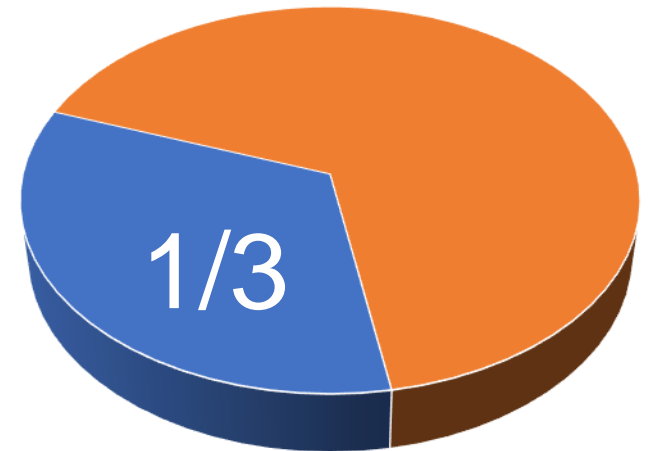
18,1

5

Directory of Agriculture, 2019.

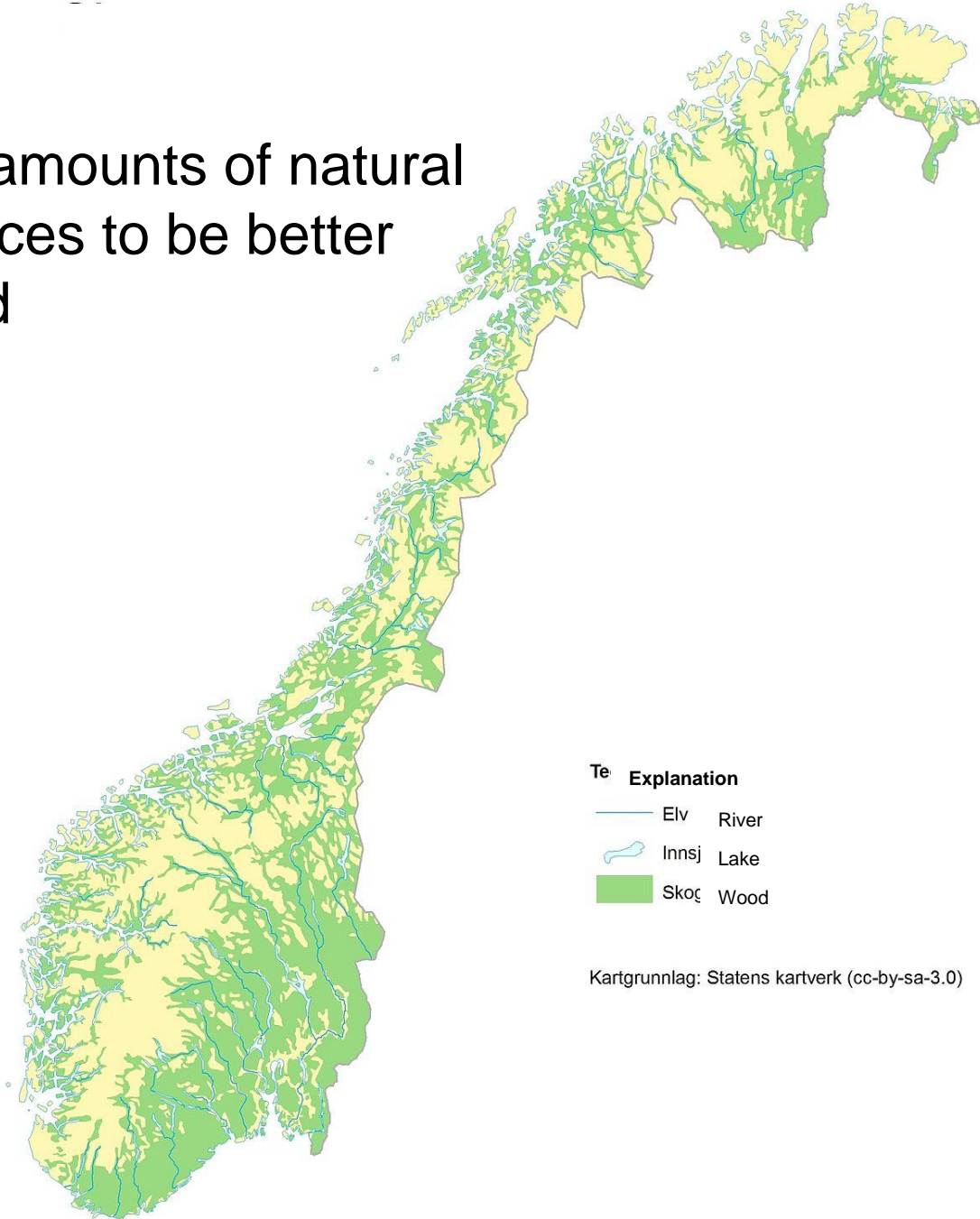
The share of farmed land of total area within each county.

3%



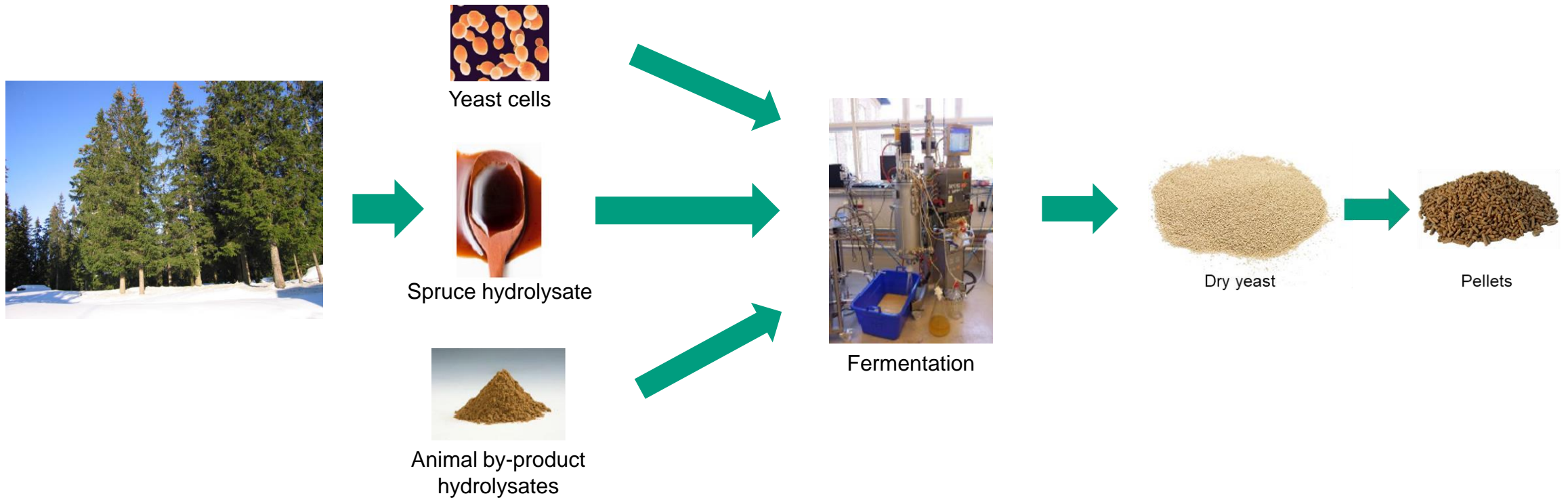
■ Grain for human consumption ■ Other

Huge amounts of natural resources to be better utilized



Kartgrunnlag: Statens kartverk (cc-by-sa-3.0)

Yeast - a next-generation protein source



What do we know?

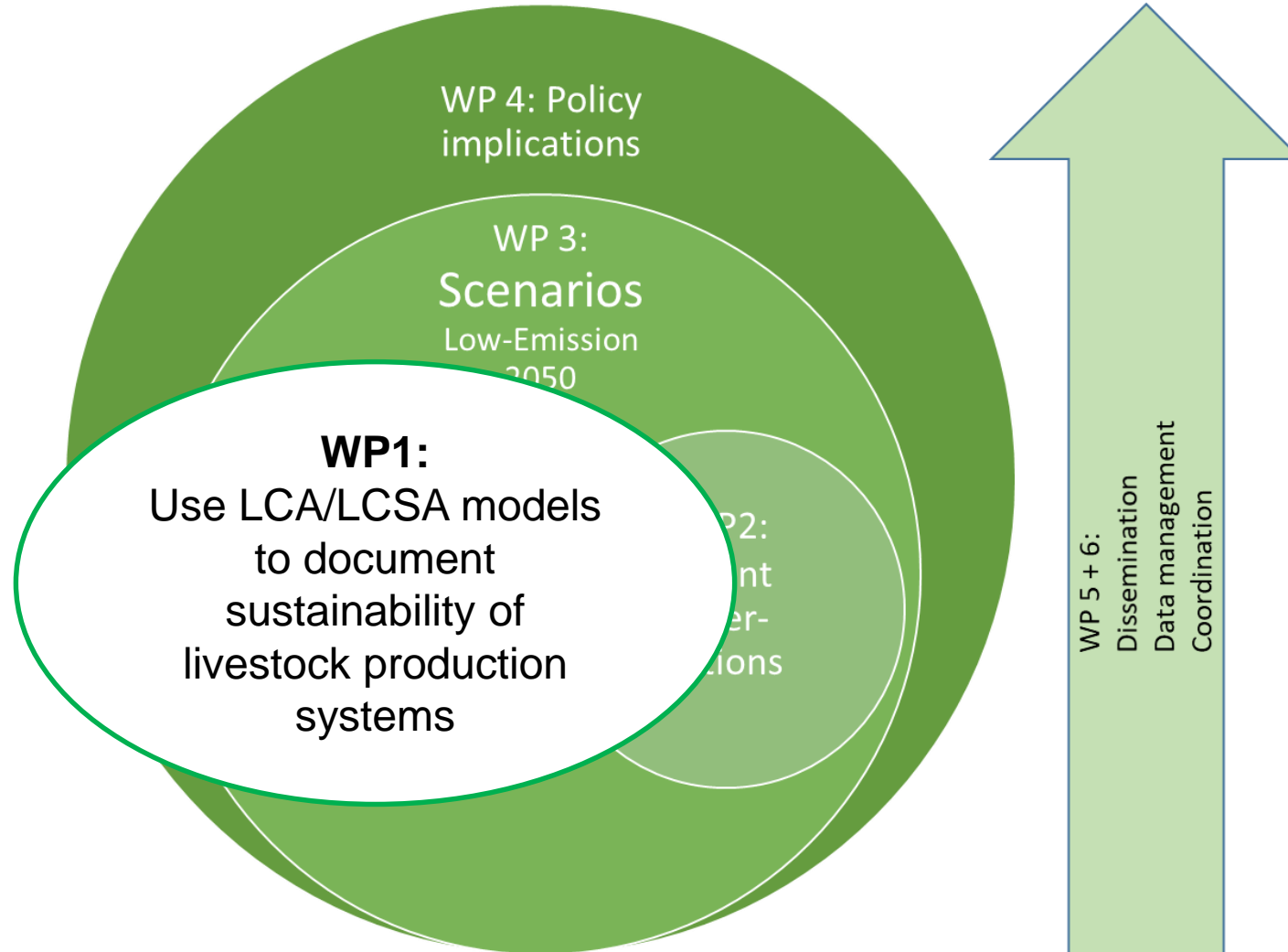
- Yeast as an alternative protein source can be produced from trees as a feedstock for 2nd generation sugars
- Pigs, dairy cows and Atlantic salmon perform well on yeast-based diets
- The yeast has positive effect on animal health



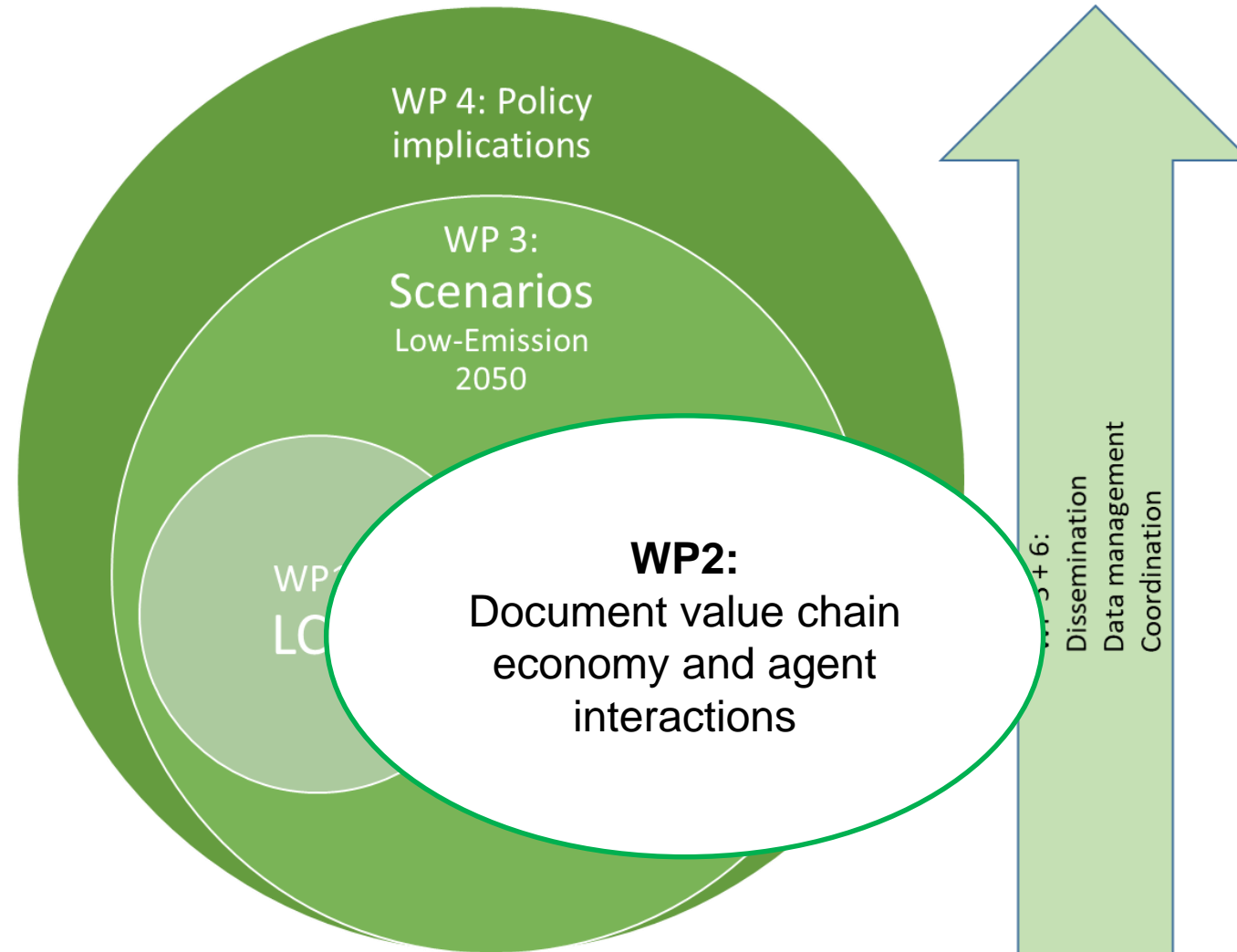
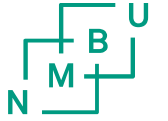


SUSTAINABLE?

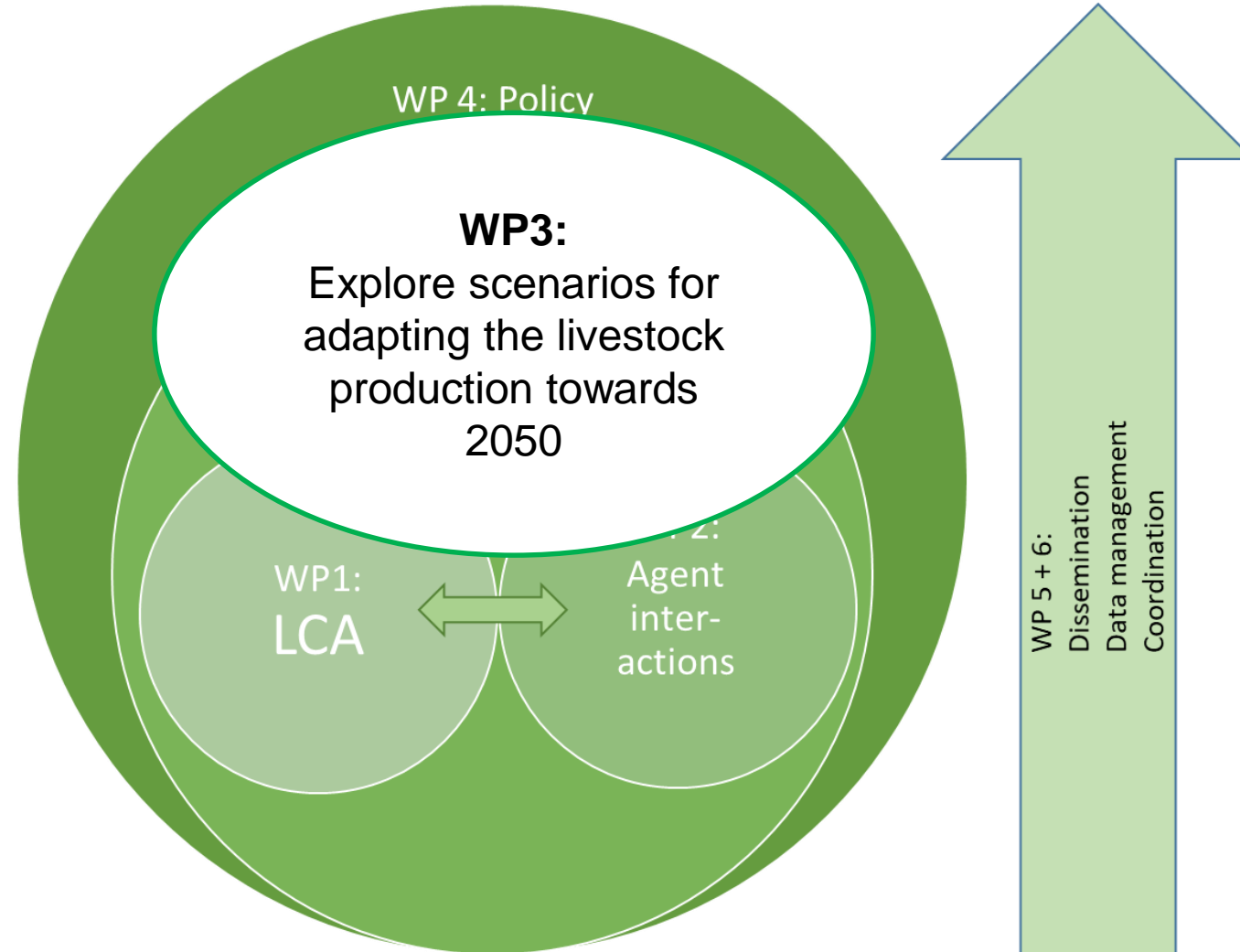
LIVESTOCK: Work packages



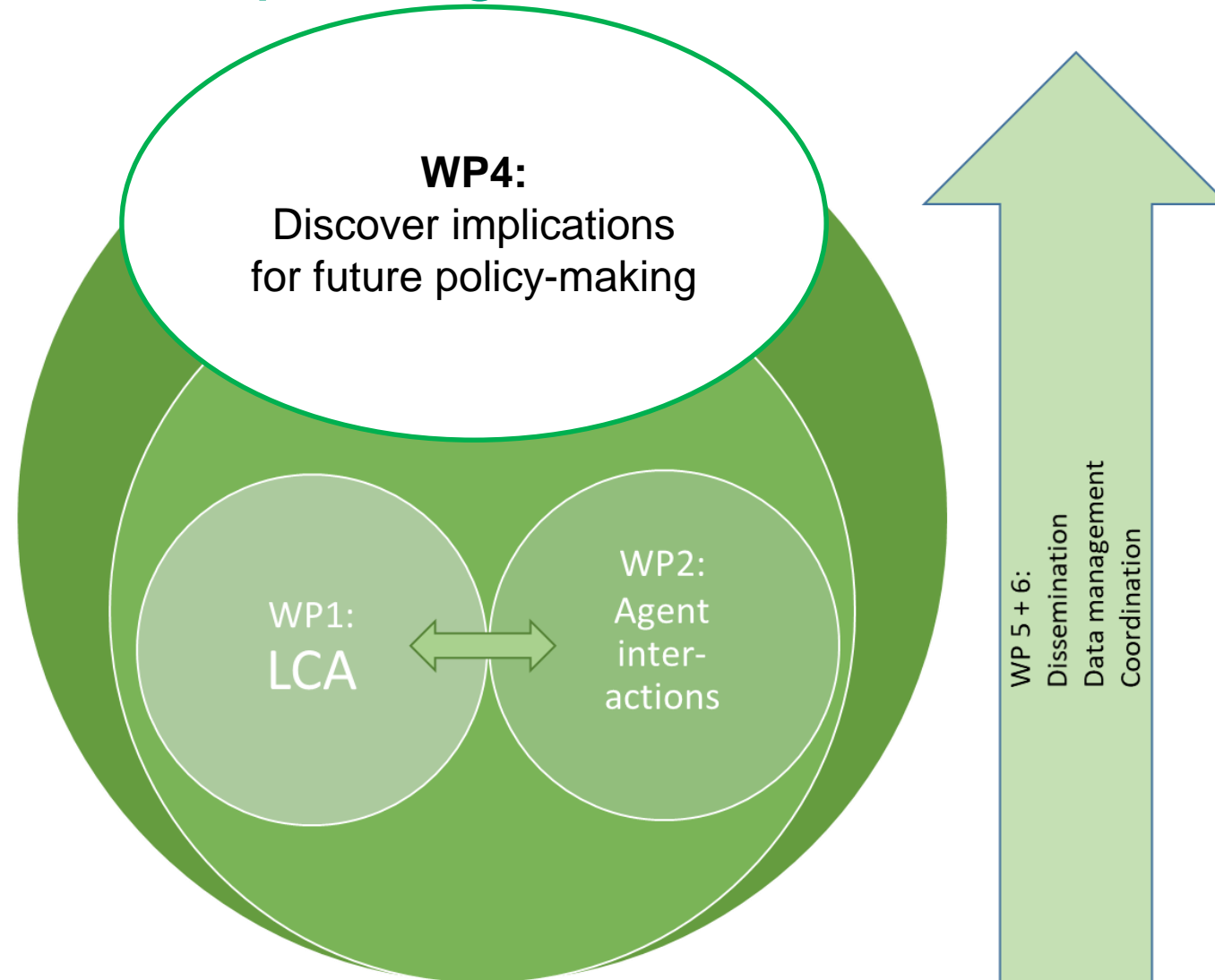
LIVESTOCK: work packages



LIVESTOCK: work packages



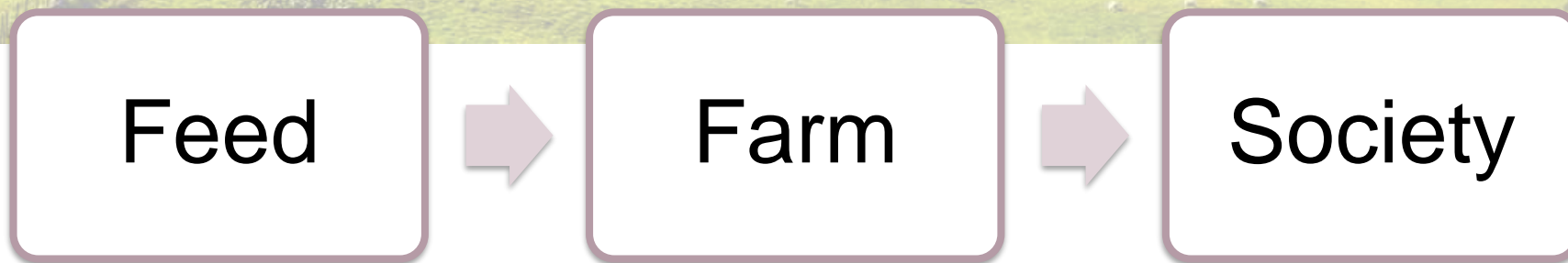
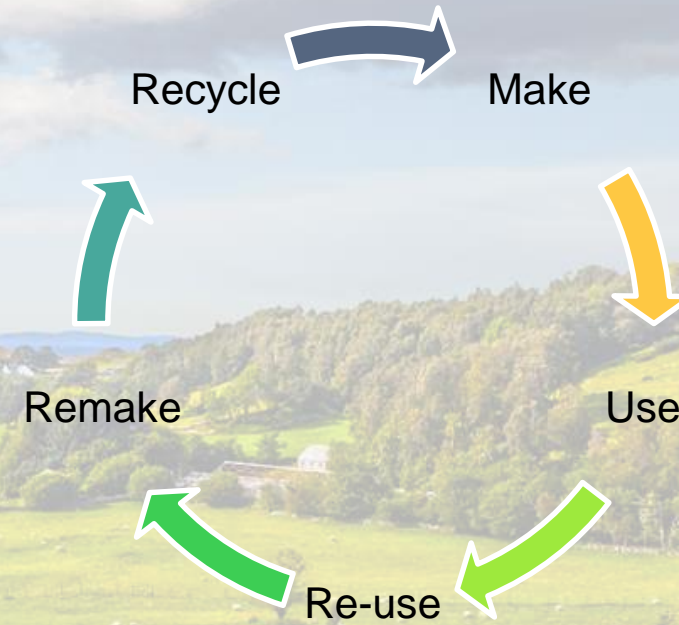
LIVESTOCK: work packages



So what's next?

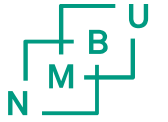


- Goal and scope definition
- Overview available data
- Establish models
 - Include biodiversity
- Yeast production – a submodel



FOODS OF NORWAY

sfi Centre for
Research-based
Innovation
The Research Council of Norway



Industrial partners



Supporting partners



New partner



Academic partners and collaborators

