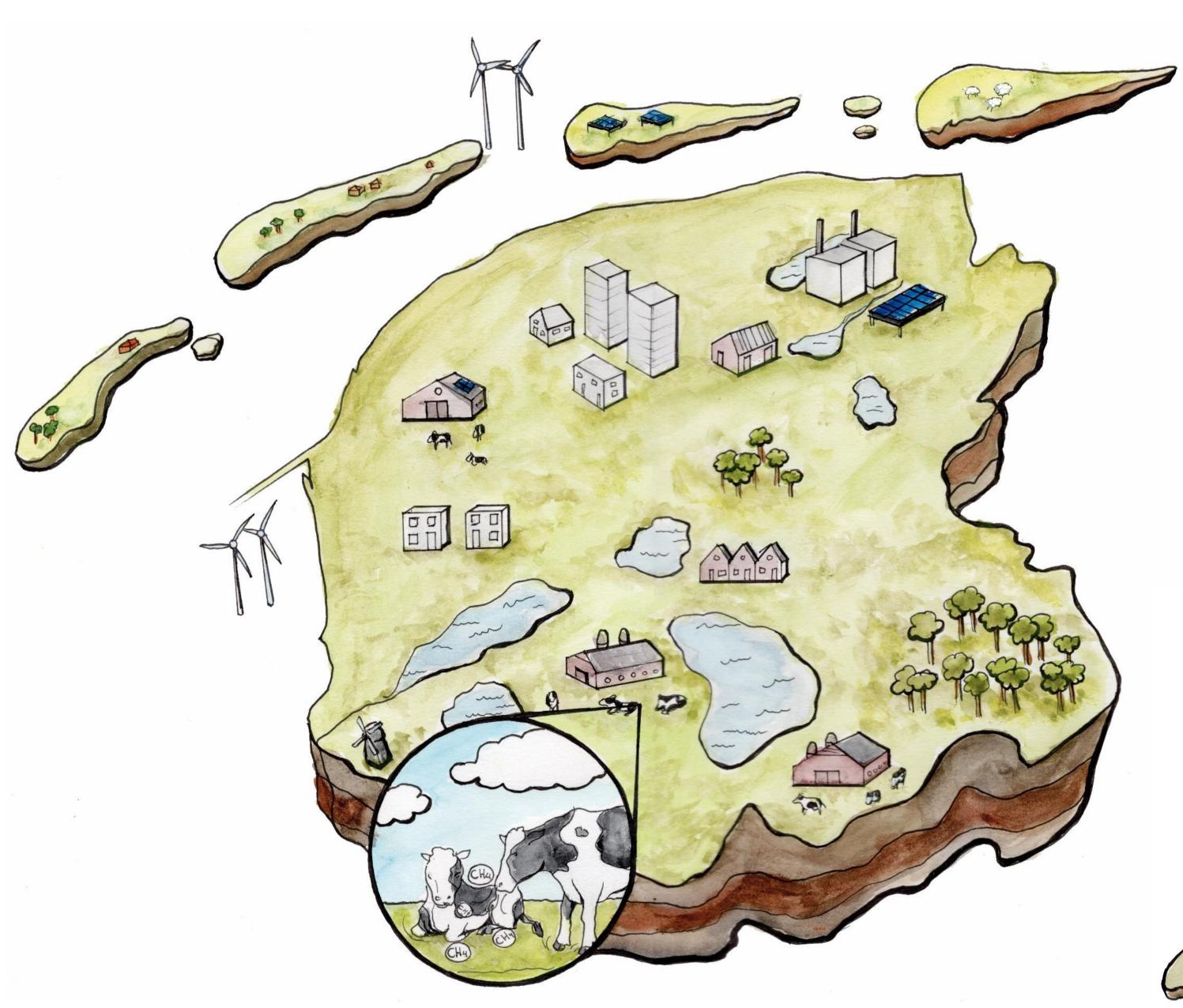
Arjan Zuidema Energy & Environmental Studies

## Fryslân: green-house or green scope

Potential for provincial climate policy



What will Fryslân look like in 2050? Climate policy matters. Nowadays the province is characterized by cows, meadows, lakes and peatland. Agriculture and land use count for 60% of the Frisian emission of greenhouse gasses ( $CO_2$ ,  $CH_4$  and  $N_2O$ ). The share of these sectors in the total Dutch emissions is only 17%. Nevertheless the provincial greenhouse gas policy is limited to energy policy and  $CO_2$  emissions.

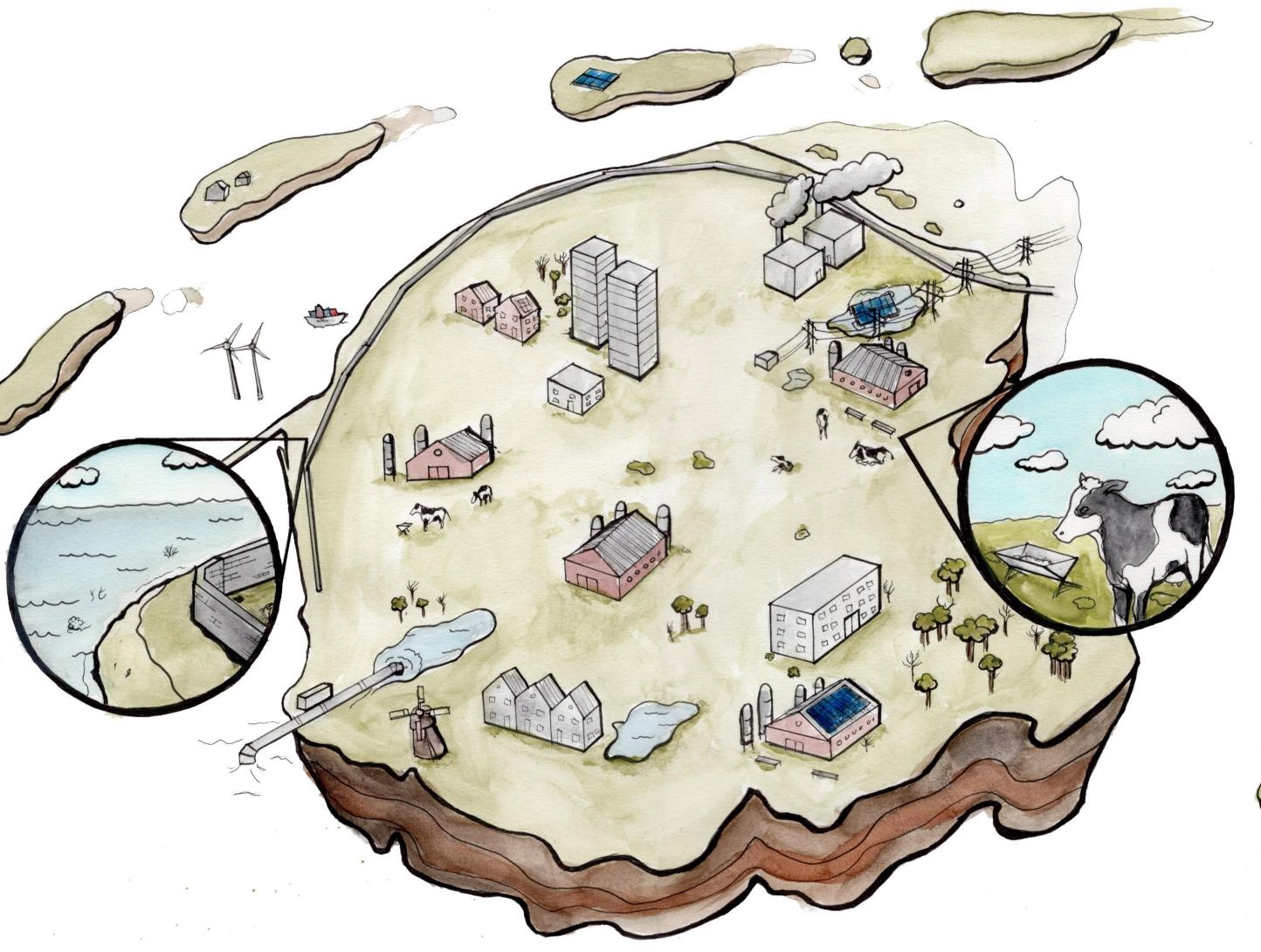
What's the potential for integrated greenhouse gas policy, tailored to Frisian characteristics? That's what Arjan Zuidema (native and master student at EES) investigated for the Frisian Environmental Federation.

There's a lot of data in Arjans report. For a poster however we prefer the visualization (thanks to Leonie Belt). The pictures show the extremes. Both perspectives show tremendous changes in the Frisian appearance.

## **Green-house**

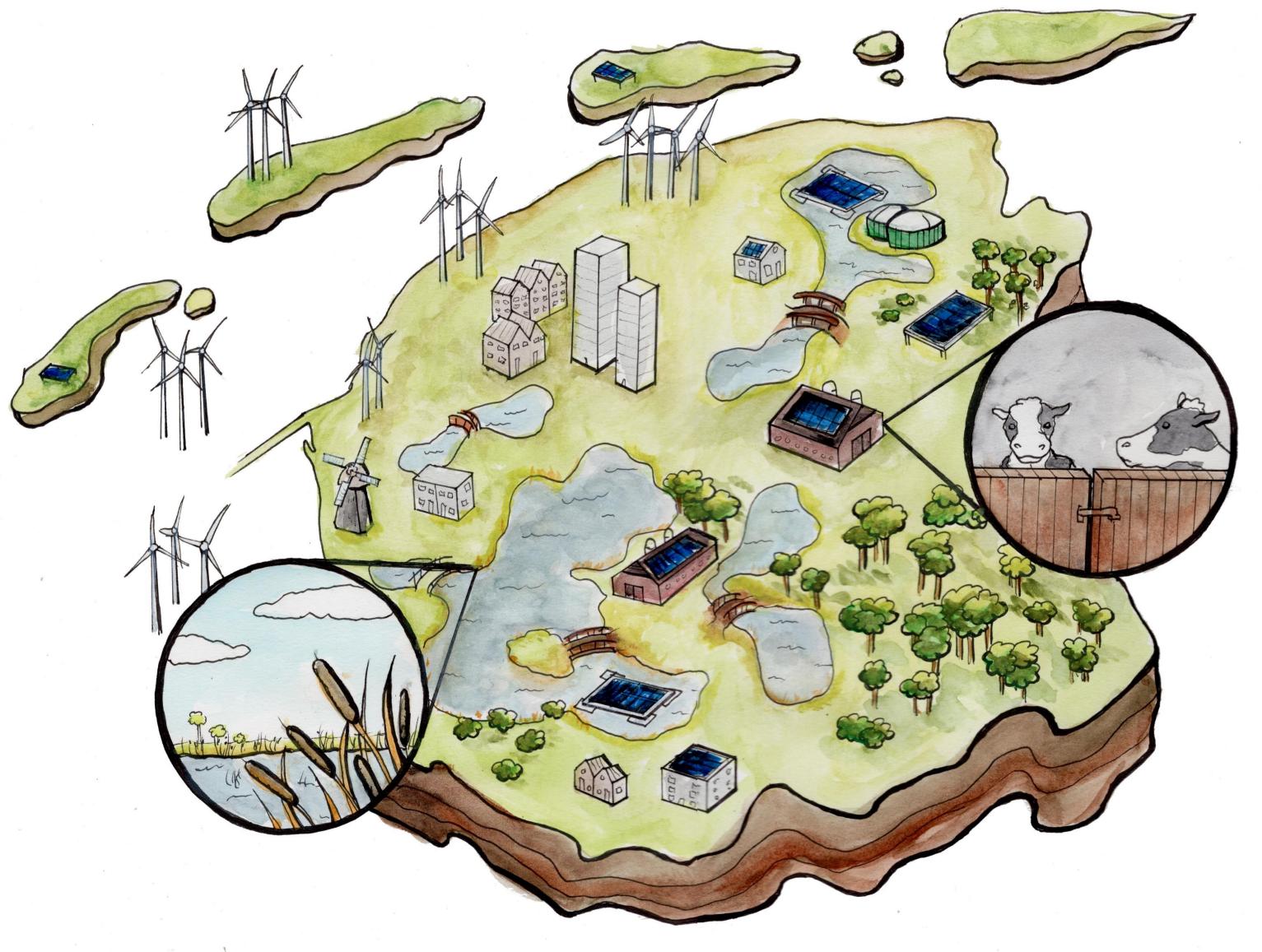
When greenhouse gas policy is absent, the province will be confronted with rising sea levels (represented by land loss and rigid dykes). Oxidation of peatland will result in loss of nature area.

Desiccation will lead to loss of lake area, while salinization will threaten the agriculture. Fossil fuels are still in the lead in energy supply.



## Green scope

On the opposite, greenhouse gas policy can be maximized to 95% emission reduction in 2050. Fryslân is energy neutral (the actual policy), supplied by wind, solar and/or biomass. Even more, methane emissions by cows and manure are diminished by reducing livestock and grassland area. Stables are provided with methane filter technology. Rewetting of the peatland area prevents oxidation and nature loss. Forestry and biomass cultivation (cattails) captures carbon dioxide.





www.rug.nl/society-business/science-shops/ science-shop-fse@rug.nl Illustrations: Leonie Belt