

# Salt marsh management in the trilateral Wadden Sea

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# Trilateral Climate Change Adaptation Strategy (Tønder, 2014)

“The aim of the climate adaptation strategy is enhance and promote policies and measures necessary for increasing the resilience of the Wadden Sea to impacts of climate change.”

**Inhabitants, users  
Coastal protection**

**Natural system,  
ecology, biodiversity**



Photo: Rijkswaterstaat



# Tackling the triple crisis

## Climate change adaptation... ... towards a resilient Wadden Sea

Request the Wadden Sea Board to enhance and facilitate regular professional exchange on coastal flood defence and protection with the responsible authorities, agencies, and research institutions in this field, i. a. to promote the integration of environmentally friendly and Nature-based Solutions, according to the IUCN definition, in coastal flood defence and protection in line with the further implementation of the trilateral Climate Change Adaptation Strategy (2014)

Wilhelmshaven, 30 November 2022



# Manabas Coast objective

*“Setting the stage for wide scale application of NbS by developing an accessible framework, based on pilot examples, to enable integrated policies for the joint delivery of FRM and biodiversity.”*



# The way forward in the triple crisis?

## Nature Based Solutions

- Increase climate resilience
- Enable natural dynamics
- Strengthen biodiversity
- Sustainable
- Reduce human impact/pressures



Source: Seddon et.al., 2021

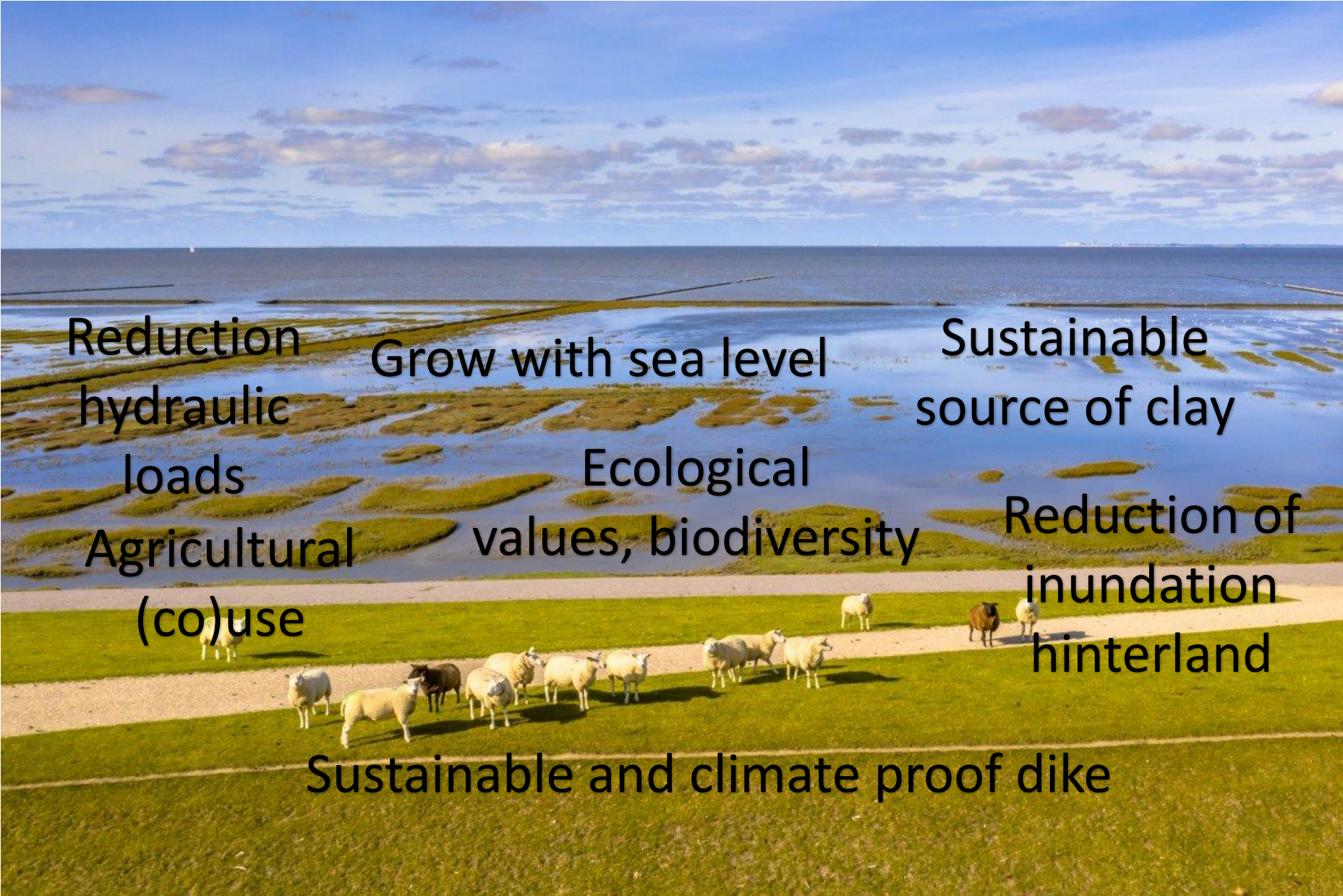
Photo: Rijkswaterstaat



# Dike and salt marsh:

A resilient, sustainable, climate proof (natural growing) coastal zone

Win-win?



Reduction hydraulic loads

Grow with sea level

Sustainable source of clay

Agricultural (co)use

Ecological values, biodiversity

Reduction of inundation hinterland

Sustainable and climate proof dike



# Natural dynamics

By nature, the Wadden Sea is a robust and adaptive system. The hydro-morphological system is able to respond and adjust to (gradual) changes, if natural dynamic processes can take place.

Photo: Rijkswaterstaat



# Managed marsh







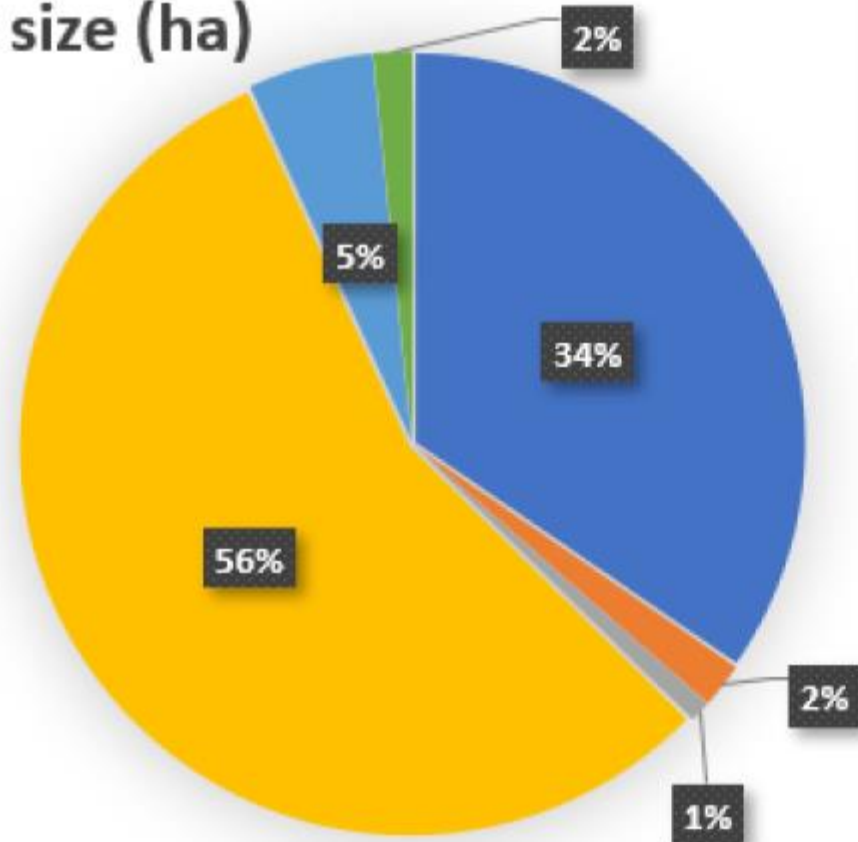
Natural, passive management



Cultural, active management



## Salt marsh type by size (ha)



- Barrier-connected saltmarsh
- Chenier-connected saltmarsh
- Estuary
- Foreland-type saltmarsh
- Hallig-saltmarsh
- Combination of types/Other



# Trilateral overview

- Snapshot
- Goals and functions
- Organisation of management
- Ecological quality
- Integration of coastal defence (Nature Based Solutions)



## Salt marsh Management in the Trilateral Wadden Sea



Commissioned by

MANABAS  
COAST

Interreg  
North Sea

Co-funded by  
the European Union



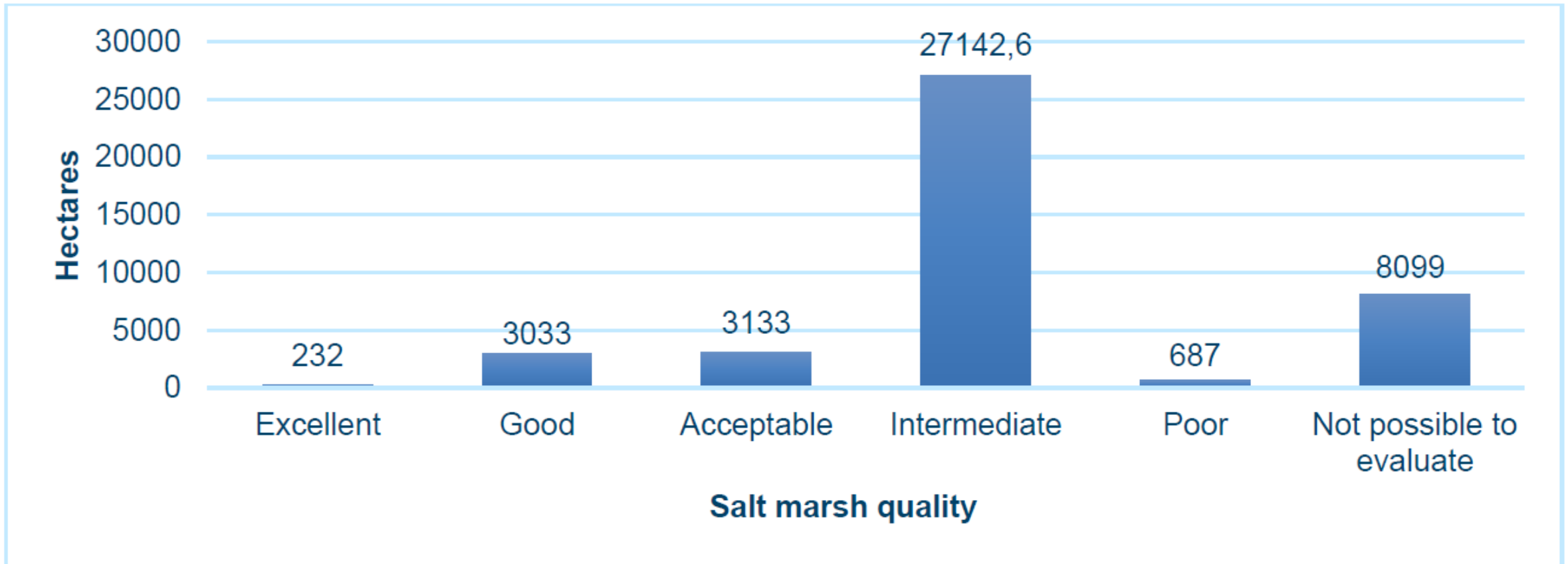


## Management type

Ecologically active	<p>Active management to improve the ecological function of the saltmarsh, to increase biodiversity or to decrease disturbing factors</p> <ul style="list-style-type: none"><li>- <i>e.g. mowing, soil removal on anthropogenically overformed salt marshes, grazing with ecological purpose</i></li></ul>
Ecologically passive	<p>Passive management, little to no intervention takes place on the saltmarsh, the ecosystem functions on minimal human intervention</p> <ul style="list-style-type: none"><li>- <i>Without grazing or with grazing (only in Schleswig-Holstein)</i></li></ul>
Coastal Defence	<p>The saltmarsh is managed as part of the coastal defence, interventions are made to ensure the saltmarsh remains relevant for coastal defence</p> <ul style="list-style-type: none"><li>- <i>Active: the saltmarsh contributes to coastal protection and is actively managed as part of the coastal defence</i></li><li>- <i>Passive: the saltmarsh contributes to coastal protection, but is not an integrated part of the coastal defence</i></li></ul>
Livestock Grazing	<p>The saltmarsh is used to raise and farm livestock, with no specific ecological purpose</p>
Other	<p>Any other form of purpose for which the saltmarsh is used</p>



# Ecological quality





# Some questions to think & talk about today

- When and why should we do interventions in “natural” dynamics?
- Does increasing sea level rise and climate change change the perspective on this?
- Allowing for more dynamics and changes, but maintaining functions (flood safety, habitats), how to do combine this? Is more active management needed to ensure coastal safety?
- What is needed to further mainstream salt marshes as part of coastal protection solutions? Can this also help reaching ecological goals?



# THERE IS A PLACE – WHERE HEAVEN AND EARTH SHARE THE SAME STAGE



Photo: Derf Westerskamp