

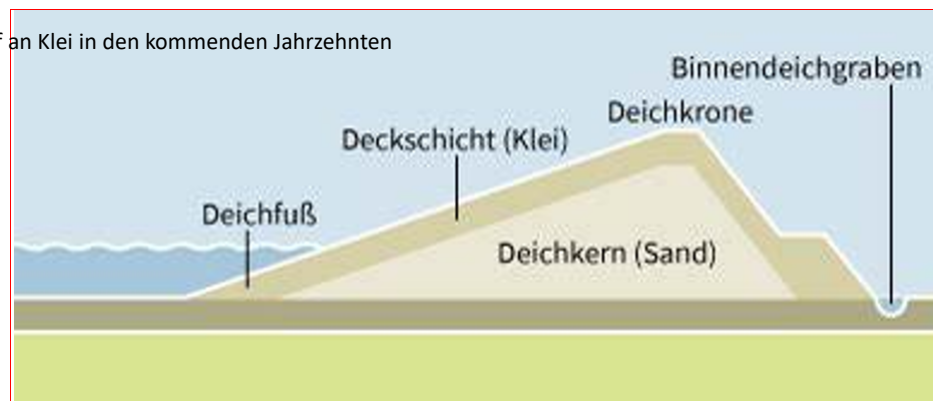
## Integrated after-use approaches of former clay mining areas - inland aquaculture

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Klei stellt einen elementaren Bestandteil des Küstenschutzes  
dar  
erheblichen Bedarf an Klei in den kommenden Jahrzehnten



im Binnenland werden landwirtschaftlich wertvolle Marschböden abgebaut und gehen als Süßwasserflächen der landwirtschaftlichen Nutzung verloren



## Concept ‚WaddenSea 2.0‘

Idea to develop a sustainable aquaponics-based utilisation concept for former clay mining areas and to test it at suitable sites.

The concept is based on a concept of marine pond cultures ("Zeeuwse Tong") developed in the Netherlands.

With an adapted methodological approach, the biological and economic aspects of the Dutch project identified as weaknesses are to be remedied in order to arrive at an economically viable subsequent use of clay extraction areas for agriculture.

## advantages of Zeeuwse tong project (from 2007 – 2013)

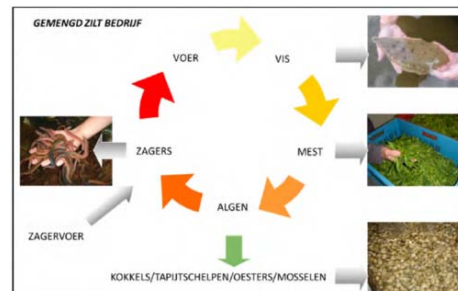
- soles grew extremely well on ragworm *Nereis virens* (Zagers)
- both soles *Solea solea* and ragworm are high value products with local acceptability
- sustainable, extensive production



## disadvantages of Zeeuwse tong project (from 2007 – 2013)

Bottlenecks of Zeeuwse tong project (from 2008-

- too complicated (to many products)
- use of *Nereis virens* (Zagers) too expensive as food source for sole (approx. 5,- € per kg, corresponding to 20,- € feed costs alone for the production of 1 kg sole)
- High costs for ground work



## Concept ‚WaddenSea 2.0‘

- same fish but different worm (reduce costs)
- different system design (reduce costs)
- already reduced costs due to available ponds (clay mining areas) (reduce costs)



Some ideas are already put forward in my PhD Thesis available online at.....

<https://edepot.wur.nl/362434>

Thank you for your attention

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