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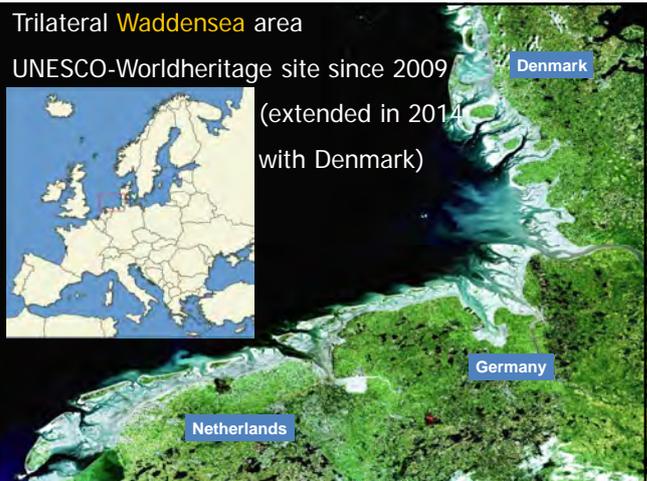
Sustainable Regional Development in the Trilateral World Heritage Wadden Sea Region

Summer School Sustainable Landscapes,
 Willem Jacob, Ameland, August 31, 2022

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Trilateral **Waddensea** area
 UNESCO-Worldheritage site since 2009
 (extended in 2014 with Denmark)

Denmark
 Germany
 Netherlands

2



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4



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Wadden UNESCO World Heritage

Unique nature wetland area in a region where **people** live with their own identity and language who need jobs and income



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Wadden Sea Region: 25 inhabited Frisian Islands

- The area counts 25 inhabited islands and several smaller vegetated islands and barren high sands in three countries.
- The total area of the islands is about 2.000 km² and the Wadden Sea itself covers about 8.000 km² over 500 km.
- The mainland is one of the oldest and most complex cultural landscapes in Europe and has been inhabited for more than 5.000 years.
- At present, 1 million inhabitants live on islands and administrative regions directly bordering the Wadden Sea. An estimated 3.5 million inhabitants live in the 17,500 km² of land with severe flooding risks, i.e. at less than 5 m above or even below mean sea-level in this region.

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The World Heritage List is the most prestigious List of cultural and natural monuments world wide

2014 entire Wadden Sea on the World Heritage List with the extension of the Danish part (Dutch island excluded!)

An exceptional opportunity to reinforce conservation and management and advance sustainable regional development with the stakeholders

WADDEN SEA WORLD HERITAGE 25

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The Wadden Sea Region

covers an area, which encompasses the coastal zones, the Wadden Sea with its islands and sands and the relevant parts of the **Exclusive Economic Zones (EEZ)** of Denmark, Germany and the Netherlands. (WSF/CWSS). **Important for rights for fisheries, fossile fuel extractions and windfarms.**

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Nature Conservation and Human Interaction in the Wadden area since many centuries

- Towards safety and protection of flooding: building dikes
- From reclaiming land to nature protection
- From nature protection to shared use
- From regional to national to trilateral management
- The Wadden system needs to be managed so that both the ecosystem and the social system can develop in a sustainable way. This in itself is a real challenge.
- **Proper management can only be applied if there is sufficient ecological and social background information and knowledge to manage this integral system**
- → establishment Waddenacademie + monitoring

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Vierde symposium Waddenacademie

te houden op 24 juni 2019
in het Biologisch Centrum van de Rijksuniversiteit Groningen, Rijksweg 30, 9713 NN HAREN

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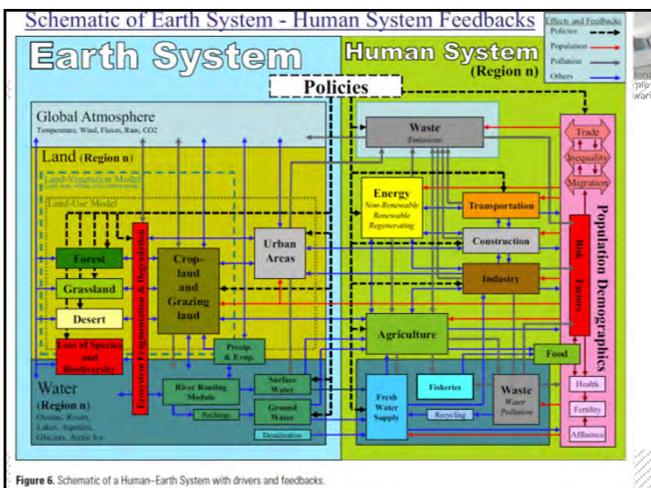
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Goals of Trilateral Integrated Coastal Zone Management (ICZM) by Wadden Sea Forum

- A **balanced population structure** with a healthy share of young and elderly people, with indigenous young people choosing to stay in the region and population decline being averted.
- **Almost full employment** for which a wide diversity of jobs is needed.
- With regard to welfare WSR residents should have an adequate income, good living conditions and high life expectancy. Social equality and work-life balance should ensure satisfaction among the population.
- **This requires balanced economic development that provides future prospects for people living and working but should also generate surpluses for environmental protection measures.**
- The economy in the WSR should be made resilient for economic recessions and international competition by means of strategies for innovation and entrepreneurship.
- → **Needed: knowledge and monitoring**

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Trilateral Research Agenda

for the Wadden Sea Region and its World Heritage Site

Trilateral Research Agenda is approved by the Trilateral Government Conference in May 2018 in Leeuwarden
→ next step is implementation by a Program Committee that is established by the Trilateral Wadden Sea Board and will lead to a first call for projects by the end of 2022.

3. Challenges and opportunities	8
3.1 The Wadden Sea Region as living lab for human-nature interactions	9
3.2 The Wadden Sea Region coping with climate change and relative sea level rise	10
3.3 The Wadden Sea Region towards a sustainable maritime region	12

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Resilience of regions

Social resilience
Bearable Equitable

Environmental resilience
Viable

Economic resilience
Sustainable

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Options for economic development and jobs

- Economic activities with **locational advantages** in the Wadden area, but also **interaction Economy-Ecology**: (i) agriculture and fishing, (ii) extraction of energy (oil, gas, wind), (iii) harbours and (iv) tourism and related personal and business services.
- Innovations: production of salt-tolerant potatoes and other crops that will grow in a salt environment
- Promote more localized value chains, e.g. for shrimp fishing: innovative mechanical shrimp peeling machines instead of peeling in Maroc (3.000km away) because of cheap labour → higher prices for better product with less catch
- Attraction of **footloose economic activities and people with zero effect on the ecosystem**: designers, journalists, scientists, writers, artist can do their business everywhere but like the quiet and healthy environment of the Wadden region. They live and do their business in redundant farms, churches and industrial buildings. COVID19 → more working from home!
Crucial: fast ICT-Broadband access

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Extraction of natural gas on sea and land

Gas station Ameland →

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Extraction of natural gas on sea and land at the edge of the Waddensea: new plans for 2023 approved in 2021!

→ Lots of critics on social media, referring to among others the recent IPCC-report about climate change

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Cables for transport of electricity from windparks on the Nordsea to the mainland cross the Unesco Worldheritage Waddensea

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IN HET NIEUWS 3

Kabel dwars door Waddennatuur

Geen kabels zonder schade aan het wad

'Het is of een beschermd natuurgebied, of er wordt ontwikkeld'

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Containerramp MSC ZOE

Waddendrama

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Pulskor vs Boomkor in shrimpfishing

foto © Bert Koning

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Salination & Agriculture

Zilt Proefbedrijf
Testend om Teelst

Proefperceel 240 x 42 m (1 hectare)
7 concentrates, 8 replica's
56 vakken in twee rijen van 28
1 vak is 8 bij 20 meter

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Wadden Sea World Heritage – Perspectives for socio-economic development → tourism

Source: Rebanks 2010: World Heritage Status. Is there opportunity for economic gain?

Analysis of 878 World Heritage Sites

- WHS = Socio-economic driver: 20 Sites
- WHS = Preservation with socio-economic aspirations: 60 Sites
- WHS = Primarily about heritage with some economic linkages: 200 Sites
- WHS = Primarily about preservation of heritage: 600 Sites

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Coastal zone areas are attractive for tourism → high density of tourist accommodations

Map 13.3: Density of tourist accommodations in hotels, campsites and other tourist accommodations in EU coastal regions, for NUTS 3 regions, 2010 (7)

Legend: Density per km²

- 0-17
- 18-24
- 25-31
- 32-38
- 39-45
- 46-52
- 53-59
- 60-66
- 67-73
- 74-80
- 81-87
- 88-94
- 95-101
- 102-108
- 109-115
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- 3987-3993
- 3994-4000

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Inhabitants of the coast are healthier

Germany: Kurorts

Kustbewoners gezonder dan mensen die in binnenland wonen

AMSTERDAM - Mensen die aan de kust wonen hebben over het algemeen een betere gezondheid dan mensen die verder landinwaarts wonen. Dat blijkt uit een Engels onderzoek.

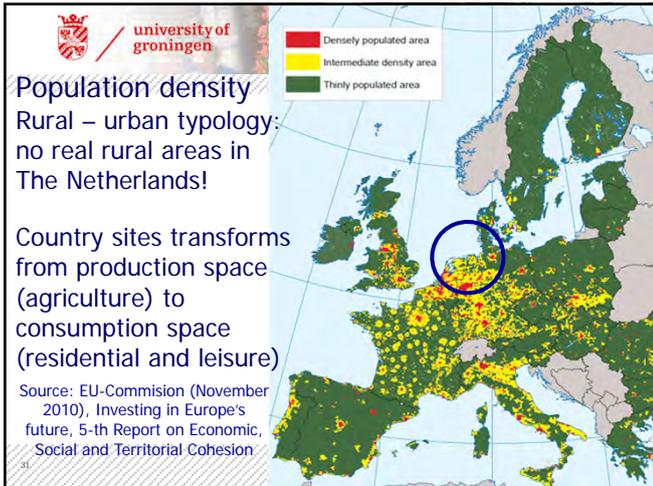
Wetenschappers van de universiteit van Exeter baseren hun conclusie op een bevolkingsonderzoek uit 2001 waarbij meer miljoen mensen onder meer werden ondervraagd over hun gezondheid tijdens de afgelopen twaalf maanden.

Het team keek naar de mensen die hun gezondheid als 'goed' bestempelden en keek vervolgens hoe groot de afstand tussen woonplaats van deze mensen en de kust was. Daaruit concludeerde dat kustbewoners hun gezondheidstoestand in het algemeen inschatten dan mensen die in het binnenland (meer dan 50 km) wonen.

De wetenschappers hebben een aantal mogelijke verklaringen voor dit verschil. Mensen vlak bij de kust wonen hebben meer mogelijkheden om te sporten, zoals strandwandelen maken en fietsen door de duinen. Ook biedt de kust mensen meer gelegenheid om te ontspannen.

Door: NU.nl/Hans Blommestein

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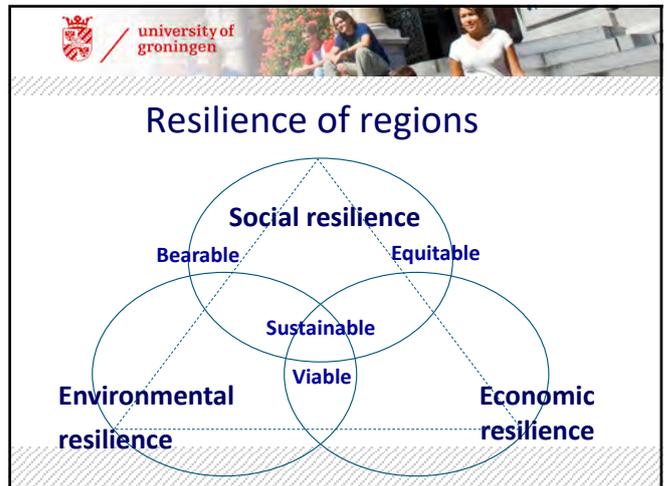
lc frys

WEC-Waddenzee kost ruim 17 miljoen meer

Vrees voor veruyppen van de Waddeneilanden

'Consumptietoeerist' laat Ameland weer links liggen

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Waddenbalans
Monitoring the sustainable development of the Dutch Wadden Islands

The Telos tree capital model
Model for monitoring and assessing sustainability
at a regional/local level

telos breibants centrum voor duurzame ontwikkeling

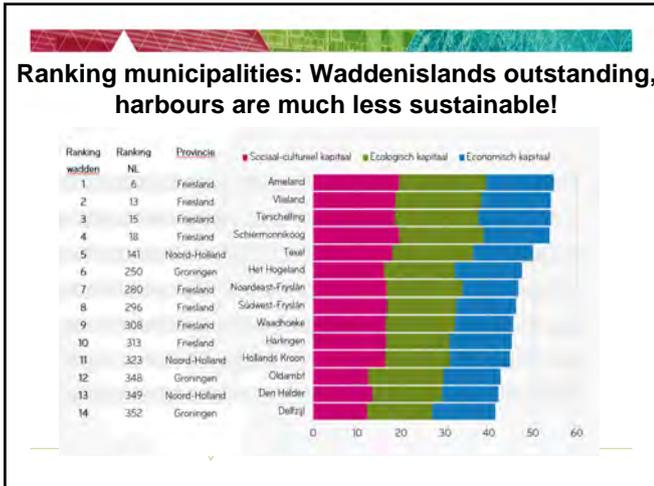
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Wadden area in terms of socio-economic problems is very divers. A detailed geographically approach is needed!

Waddenbalans built up from geographical level of the municipality.
Distinction between: harbor, coastal and island municipalities

Legenda
Waddenbalans
Harbor municipalities
Coastal municipalities
Island municipalities

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Important issues for sustainable future

- Gas and salt extraction: surface subsidence
- Climate change and sea level rise; salination
 - Safety protection for people and capital by dikes etc.
 - Flyway: Waddensea is important for migratory birds
 - Swimway: dikes etc. prevent that fish migration
- Fisheries: new techniques
- Harbour activities; power plants, chemical industries, Cruiseships Meyer Warff Papenburg
- Windpower: horizon pollution, cables needed, pipelines, ship wrecking, lost containers
- Tourism carrying capacity; effects of COVID19
- **Special case: Holwerd aan Zee**

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German mainland tourism inspired Holwerd aan Zee

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German beach fun

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German beach fun

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Borkum: hotels + Kurort

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Juist: horse island

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Air transport to German Wadden islands: € 37 - 450

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LEEDWARDER COURANT 02 maart 2011, pag. 1

'Vliegen naar de Wadden'

Other solutions: fly!
Or: a tunnel

Netherlands: airports on Texel and Ameland for small planes and parachute jumping

Vlieland: military targets

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Pier Holwerd (to island Ameland)

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Nordeich (to Norderney / Juist)

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Comparison with Germany: Carolinensiel

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- Revolutionary Plan: **Holwerd at Sea!**

Idee comes from the inhabitants itself: bottom up

But they need help from ambassadors and knowledge for underpinning

And (a lot of) money: about 200.000.000 Euro

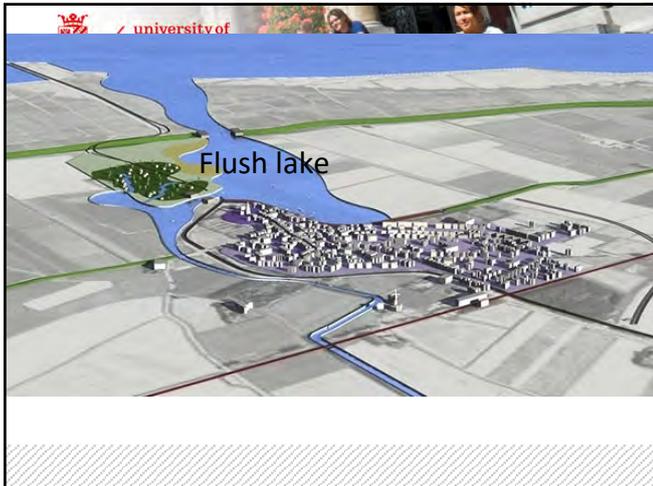
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De infrastructuur ligt er grotendeels Maar loopt dood op de Waddenzee

Overzichtskaat vaarroutes

Ontbrekende schakel 2KM

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Holwerd aan Zee: shall it happen?

Zie: <https://www.holwerdaanzee.nl/nld/>

Impressie van Holwerd aan zee. Holwerd aan zee is een dorpje aan de Waddenzee. Sinds in 2012 heeft het dorpje Holwerd aan zee een nieuw gezicht.

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fryslân 23

'Alternatief Holwerd desastreus'

Dragers waterproject Holwerd: even ademen en doorgaan

Enthousiasme blijft voor Holwerd aan Zee

LEEUWARDEN Het ontluisterende rapport over de slagingskansen van Holwerd aan Zee maakt de ambassadeurs van het waterproject niet nerveus.

Onverdroten zetten ze hun strijd voor het miljoenenproject bij de Waddenzeedijk voort. Initiatiefne-

baar en onderhoudbaar zijn. Verantwoordelijk gedeputeerde Klaas Folkinga blijft onverminderd enthousiast. „Wij horen noch net safer om te sizzen dit wurdt 'm net. Sa lêze wy it rapport ek net, dat dat de konklúzje is.“

Een niet-openbare notitie legt een bom onder Holwerd aan Zee. Drie

Holwerd aan Zee: ons eigen Dubai?

De Waddenzee is cultureel-historisch waardevol. It loaret derj nait en fer kuer 'n najaak tegj erlde. doerke rjip. Ittj olt de de Holwerd aan Zee oergrjip?

Alternatief voor Holwerd aan Zee: buitendijks zandstrand

It is in de oerke fan de brallige fryske ferkear fan Holwerd oan de Waddenzee. It is in de oerke fan de brallige fryske ferkear fan Holwerd oan de Waddenzee. It is in de oerke fan de brallige fryske ferkear fan Holwerd oan de Waddenzee.

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Cijfers plannen Holwerd aan Zee slaan dieprood uit

in het nieuws 3

Komt Holwerd nog wel aan zee?

Het project Holwerd aan zee wordt uitgesteld. Dit komt omdat er nog te veel onzekerheden zijn over de realisatie van het project.

Holwerd aan Zee: 1200 bedden nodig

Vrees voor veruyppen Waddeneilanden

De Waddenzee is cultureel-historisch waardevol. It loaret derj nait en fer kuer 'n najaak tegj erlde. doerke rjip. Ittj olt de de Holwerd aan Zee oergrjip?

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IN HET MIDDEN 6 woensdag 22 september 2013

Vaargeul tussen Holveerd en Ameland

Huidige situatie van de vaargeulen en de meergebende vaargeul tussen Holveerd en Ameland

Situatie in 1922

Shipping lane ferry Vaargeul clogged with mud causing delays of the ferry and high dredging cost. New lake may solve this problem? Other option: ferry from Ferwert to Hollum/Ballum

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De dam die er nooit kwam

1899 was gebouwd tussen het Fries provinciehoofdkantoor in Sneek en de waddengedeeftes die naar het land toegevoerd werden. Het was de bedoeling dat de dam de vaargeul zou ontstoppen en de verbinding met de waddens zou herstellen. Maar de dam werd nooit voltooid.

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Thank you for your attention

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Sustainable Regional Development in the Trilateral World Heritage Wadden Sea Region

Summer School Sustainable Landscapes, Willem Jacob, Ameland, August 31, 2022

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