

## The role of Knowledge for a Sustainable Future Wadden

Prof.dr. Jouke van Dijk, Director Waddenacademie  
 Presentation for the meeting with Danish Wadden colleagues,  
 Huis voor de Wadden, Leeuwarden, March 17, 2017



## 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 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 requires sufficient ecological and social background information (monitoring) and knowledge and understanding this integral system for effective and efficient management**



2

## Reason for and establishment of the Wadden Academy:

- Final report by the Wadden Sea Policy Advisory Group (Meijer Committee, 2004), 'Ruimte voor de Wadden' [Room for the Wadden Sea Region]:
- Observation that in 2004, policymaking and governance of the Wadden Sea had reached an impasse.
- Recommendations included: enlarge and reinforce the natural features of the Wadden Sea; overhaul policy and governance; keep shellfishing and gas extraction within natural boundaries; improve knowledge management of the Wadden Sea Region.
- Dutch government decided: to cease mechanical cockle fishing, controlled gas extraction, set up the Wadden Fund (800 million euros over 20 years) to support nature and the economy, and establish the Wadden Academy to support 'knowledge management' related to the Wadden Sea Region.



3

## Waddenacademie Established 2008 Network organization

### Board



### Boardmembers:

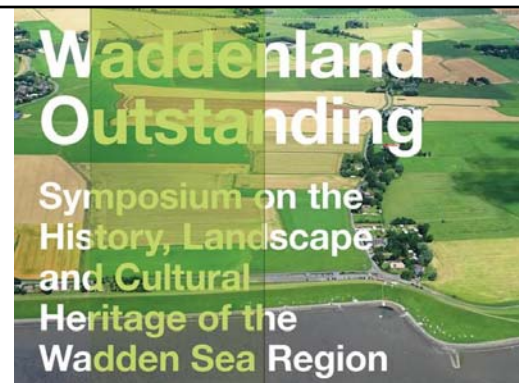
Dr. Katja Philippart  
*Ecology*  
 Dr. Hessel Speelman  
*Geology*  
 Dr. Meindert Schroor  
*Cultural History*  
 Prof.dr.ir. Pier Vellinga  
*Climate and Water*  
 Prof.dr. Jouke van Dijk  
(chair) *Economics*

*Executive Secretary:*  
 Klaas Deen



## Wadden Academie tasks:

- **to identify gaps in cross-domain knowledge** in order to assist in the sustainable development of the Wadden Sea Region;
- **to promote a coherent research programme** at regional, national and international level and;
- **to promote information supply and knowledge exchange** within and between research institutes, government, industry and social organisations.
- **Monitoring:** encourage long term monitoring of ecological, economic and social cultural developments for policy, management and research



Waar en wanneer? → 1-3 December 2016, Husum

6

### Publications

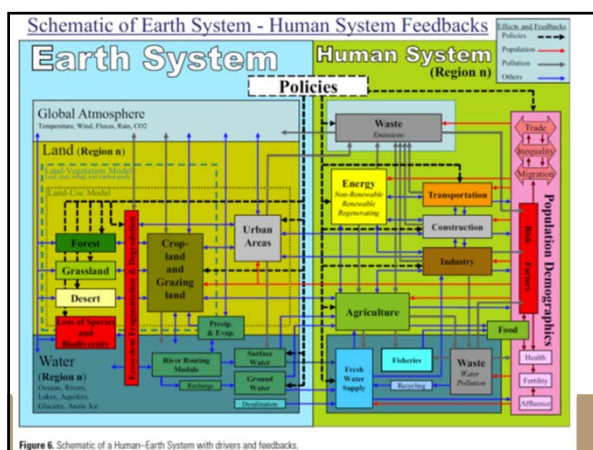
Waddenacademie | Leeuwarden 19-5-2017 7

### The integrated research agenda

'Knowledge for a sustainable future of the Wadden'

Research agenda for the Dutch Wadden Sea Region

Waddenacademie



### 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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### Background Trilateral Research Agenda

- The necessity for a Trilateral Research Agenda (TRA) for the Wadden Sea Region originates from the declarations from the Trilateral Government meetings 2010 and 2014, stating that:
- Sylt-declaration 2010, pkt. 41: "Support the establishment of a trilateral research platform directly connected with existing national networks. The platform will elaborate a trilateral agenda for policy-relevant research in consultation with the Board..."
- Tønder-declaration 2014 pkt. 63: "Encourage discussions by the scientific community and policy makers on the major policy issues and related knowledge as a basis for further developing a trilateral research agenda and a trilateral research platform."

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### Priorities of the Dutch presidency of the Trilateral Wadden Sea Cooperation June 2015:

**7. Scientific agenda for the Wadden Sea World Heritage Site:** The Wadden Sea has long been a site of much and diverse scientific research. For good management of the World Heritage Site there are plenty of questions that will require common and better coordinated research.

**Objective:** A coherent scientific agenda, relevant to the World Heritage Site which supports decision-making on current and future issues, captures the interest of young scientists and promotes scientific cooperation between institutions.

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## Spring 2015: Start

### Trilateral supertrio installed by the Wadden Sea Board:

Mette Guldborg (Denmark)  
/ Jesper Bartholdy

Karsten Reise (Germany)

Jouke van Dijk (Netherlands, chair)

Support and coordination by CWSS

## Summer 2015: Installation five subgroups

### 1. Geosciences

DK Jesper Bartholdy Chair  
DE Alexander Bartholomä  
NL Hessel Speelman

### 2. Ecology

DK Karsten Laursen  
DE Christian Buschbaum  
NL Katja Philippart Chair

### 3. Economy and Society

DK Torben Dall-Schmidt Chair  
DE Ingo Mose  
NL Jouke van Dijk

### 4. Cultural Heritage

DK Mette Guldborg  
DE Beate Ratter Chair  
NL Meindert Schroor

### 5. Climate and Water

DK Aart Kroon  
DE Horst Sterr  
NL Pier Vellinga Chair

## Summer 2015 – summer 2016: Working process subgroups

The subgroups write an overall outline of 3-4 pages of themes and issues within their field. The outline serves as a starting point for a broad discussion among scholars in the same field at a workshop. The subgroups finish their report concluding with suggestions for 5-10 important research questions within its field.

The report contains an outline of

- Major achievements and persisting gaps of knowledge (5-10 most important research questions)
- Main questions relevant for policy
- Suggestions for transdisciplinary themes

The final report per subgroup is 3-4 pages.

## How to proceed? → Autumn 2016 – May 2017: draft version trilateral research agenda

On the basis of the outlines from the subgroups and the introduction a draft version of the trilateral research agenda needs to be produced. This is now in preparation with help of a professional (Josef Stuefer) from the Dutch National Science Foundation in cooperation with the super trio and with consulting representatives of the five thematic groups. The format should fit with the needs for the formal trajectory to the Trilateral Scientific in Tonder, Denmark in May 2017 and the Government' conference in 2018 and should be linked to priorities of the science-policy matrix and contain ideas for trilateral funding schemes.

Relation with the plans for the establishment of a Wadden Sea World Heritage Partnership Center (PC). The PC should be linked to the tri-lateral science community in a model like the Waddensademie or another model that guarantees the independent position of scientific research.

Relation with Quality Status Report

## NEXT:

### Trilateral Scientific, Tonder, Denmark in 9-11 May 2017

At the symposium a broad range of scholars gets the opportunity to comment on the work and give input to further content or enhancements. The super trio will subsequently finish the proposal, so it will be ready to be presented to the ministers' conference in 2018.

### ... 2018: Government' conference

The trilateral research agenda is presented to the government' conference in the Netherlands 2018 in Leeuwarden.

## Science – policy matrix

### Size of the box:

Degree of concern to management: which policy problems have the highest priority?

High	Management has a high level of concern for the value due to its current degraded condition and/or the high level of single or cumulative pressures affecting it.	<input type="checkbox"/>
Moderate	Management has a moderate level of concern for the value due to its current condition and/or the moderate level of single or cumulative pressures affecting it.	<input type="checkbox"/>
Low	Management has a low level of concern for the value due to its current good condition and/or the low level of single or cumulative pressures affecting it.	<input type="checkbox"/>

### Colour of the box:

Adequacy of information: do we have the knowledge to solve the problem?

Good	The good level of information available directly supports management decisions and is currently sufficient to allow progress on the particular issue/interaction. However, further information to support ongoing adaptive management may still be required.	<input type="checkbox"/>
Moderate	The moderate level of information gives a reasonable basis for management decisions, but decisions regarding some aspects of the issue/interaction may be hampered by current knowledge gaps.	<input type="checkbox"/>
Low	The low amount or adequacy of information is a hindrance to management. Decisions are pending the availability of improved scientific understanding of the issue/interaction.	<input type="checkbox"/>

### Science-Policy Matrix

Impact indicators	Drivers						Pressures						RESPONSE	
	Land-use	Coastal Protection/Restoration	Shipping and Navigation	Aquaculture	Wing	Energy Generation	Ports and Shipping	Climate Change	Marine Data Usage	Pollution	Marine Litter	Climate Change	Government	NGOs/ACADEMIE
<b>ENVIRONMENT</b>														
Subsurface use and geohazards														
Longer term geomorphology														
Shorter term morphodynamics														
<b>ECOSYSTEM</b>														
Biodiversity - ReefBuilding Zosterae														
Biodiversity - Chelonicae Fish														
Biodiversity - Breeding Birds														
Biodiversity - Subtidal Sandbanks														
Habitats - Salt Marshes														
Habitats - Beaches & Dunes														
Functions - Primary Productivity														
Functions - Foraging North Sea Fish														
Functions - Foraging Station Migratory Birds														
<b>CULTURAL/RECREATION</b>														
Awareness/valuation														
Recreation														
Public access														
<b>SOCIOTECHNOLOGY</b>														
Employment														
Income														
Population														
Quality														
<b>ENVIRONMENTAL</b>														
Longer term coastal rise														
Fresh water availability														
Weather extremes														

## THANK YOU FOR LISTENING! DO YOU HAVE ANY QUESTIONS?

For more information and PDFs of all publications, please visit:  
<http://www.waddenacademie.nl>

The screenshot shows the Waddenacademie website with a navigation menu including Home, Organisatie, Taken, Thema's, Waterschap, Externe, Nieuws, and Contact. Below the menu is a large image of a wetland landscape with a 'Publications' button overlaid. At the bottom, there is a footer with the Waddenacademie logo, the text 'Waddenacademie | Leeuwarden', the date '19-5-2017', and the page number '20'.

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The slide features a background image of a wide, flat wetland landscape under a clear sky. The Waddenacademie logo is positioned in the bottom left corner.