Summary workshops Trilateral Conference UNESCO Ports

A - Green Shipping (Leo van der Burg - FME and Sascha Strasser - MARIKO)

This workshop explains the basics of 'green shipping' and the necessity of wide scale market uptake of innovative maritime technologies and products. An example of new developments in LNG propulsion systems are being introduced on a new catamaran ferry. Also within the Project MariGreen, a new LNG Tank concept is developed into a solution for the flexible bunkering of LNG as low emission option to marine diesel oil. What do these solutions mean for the future of ports in the Wadden Sea? What does this mean for the prospects for other vessels such as the fishing vessels?

In the Green Shipping workshop the participants discussed the current obstacles in the implementation and market uptake of green and clean technologies and possibilities to overcome those obstacles. The following main barriers were identified:

- Lack of funding possibilities for shipping companies investing in green technology.
- Global competition with local regulations
- Taxation of shore power in the Netherlands

The need for more global funding possibilities was stressed. With the shipping industry still fighting the crisis, it is very hard, especially for small sized companies, to secure enough funding through the normal channels, to invest in new and innovative technologies. The shipping industry is a global market that needs global regulations to ensure a level playing field. A transfer of transport from ships to roads due to regional regulations has to be avoided.

B - Building with Nature (Martin Baptist - IMARES/EcoShape and Rio Pals - WUR)

The workshop deals with innovative solutions for harbour development in harmony with nature. We will demonstrate on-going and planned projects in the Wadden region. We will discuss key challenges, pressing issues and possible solutions with regard to siltation in harbours, beneficial use of dredged sediments and nature restoration. Foremost, we will explain how you and your organisation can contribute to marine biodiversity.

In the Wadden Sea Harbours programme four key concepts have been identified that are or will be tested in case studies: (1) optimising dredging strategies, (2) enhancing saltmarsh development, (3) creating estuarine gradients and (4) optimizing flow patterns. The case studies are located in the harbours of Harlingen, Delfzijl and Den Helder.

Martin Baptist (EcoShape / IMARES Wageningen UR, martin.baptist@wur.nl) asked the participants if they can see opportunities for using BwN design concepts in their own harbour. A number of examples were given:

- Applying a tidal basin in the back of Noordpolderzijl harbour to flush out the sediment. Attention is paid to recreation, local biodiversity and fish migration.
- Opening up the Lauwersmeer dam to flush the Lauwersoog harbour. The discussion evolved around the use of freshwater for flushing or tidal salt water. The navigation channel to the Westgat was also discussed.
- In Terschelling harbour the Dellewal functions as a tidal basin already, however, its tidal volume is decreasing due to the growth of Pacific Oysters. In a short brainstorm, ideas were suggested to combat this problem. The oysters can be harvested and sold, or handpicked by the local community.
- The Emden harbour authority is faced with problems of fluid mud. In the workshop reference was made to the 'slibvaren' project of Groningen SeaPorts and EcoShape in the Delfzijl harbour as a learning by doing example.
- The navigation channel of the ferry to Ameland is also suffering from fluid mud. A number of options were explored to decrease the dredging volume and thereby also improving the natural values of the Wadden Sea, however, an easy solution is not at hand.

The participants stated: - that an innovation such as Building with Nature needs more flexible rules, - that the wording of current policies is prohibitive and needs a more stimulating approach, - that doing nothing is making things worse, - that a dynamic area such as the Wadden Sea needs more dynamic regulations and management, - that the focus should be on the opportunities and chances rather than risks, - that the Building with Nature design concept not only brings ecologic benefits but also much appreciated economic profits. Draft paragraphs on Wadden Sea Harbours for the next ministerial declaration are:
"**Stress** the importance of the implementation of Wadden Sea wide trilateral policy principles for the sustainable operation and development of Wadden Sea harbours.
Strive for using Building with Nature solutions in harbour operation and development that proactively use as well as provide for ecosystem services."

Improving policies and regulations for port developments is a long-term strategy for improving biodiversity. The participants were also informed about short-term possibilities. During the workshop attention was drawn to the opportunity for organisations and individuals to contribute to Building with Nature directly by supporting Wageningen UR projects in this discipline. Two crowdfunding campaigns were highlighted. The campaign "Solving the mystery of the stranded sperm whales" (https://crowdfunding.wageningenur.nl/project/potvissen) aims to map migration routes using photo-identification, so these routes can be taken into account when planning human activities or protected areas. Evert Mul of IMARES Wageningen UR attended the workshop to explain the objectives of his project in detail. The campaign "Coastal Resilience for People and Nature" aims to restore coastal ecosystems in Kenia and Bangladesh to enhance biodiversity, coastal protection and livelihoods. For more info: rio.pals@wur.nl.

C - Oil Recovery (Paddy Walker - Hogeschool VHL and Simone Luijendijk - ASCC Group)

In the unfortunate situation that there is an oil spill in or close to the Wadden Sea we must know how to react swiftly and adequately. What techniques, apparatus and international networks can be mobilized in order to prevent large-scale ecological and economic consequences? And are they enough? During the workshop we will not only look at the state-of-the-art technology, but also the decision making process to manage oil spills at a national and trilateral level. What role can and do the UNESCO ports play in this important issue?

Summary of the workshops UNESCO port conference June 20th 2016 Appingedam

During the workshop “Oil Recovery” we discussed the available protocols and techniques for oil recovery and the locations of materials. The three most important conclusions were:

International harmonisation. It was suggested to compare and harmonise the contingency plans (protocols) for oil recovery from the various harbours. The spill of paraffin in the North Sea was presented example of how the international cooperation could be improved. In the current situation the countries inform each other of the impending spill, which reached the coast of a number of wadden islands and had to be cleared up. If the countries could have worked together to clear the spill up on open sea, the effects and costs would have been less.

Innovation. There are a number of innovative techniques being developed specifically for the conditions in the Wadden Sea by small companies. Although the development costs are sometimes financed, it is difficult for the small companies to have their goods accepted in the market due to long-term contracts between government and clean-up companies. It was suggested that government explicitly ask their contracted companies to spend time and money on innovative techniques.

Ownership/leadership. If an oil spill occurs, there should be a designated team with representatives from local government and stakeholders as well as the clean-up company, with one party (national government) who coordinates and has power of decision.

D - Added value of EcoPorts (Antonis Michail – ESPO and Bart van der Kolk – Groningen Seaports)

The workshop will be demonstrating the added value of EcoPorts for both the individual ports and the sector. Dr. Michail will present the benefits of sing SDM and PERS: port testimonies, as well as the benefits for the credibilityy of the European port sector, including a presentation of the Environmental Review 2016 and the new top 10 of environmental priorities of European Ports. Bart van der Kolk will be demonstrating the use of the EcoPorts as a certification measure for sustainability within Groningen Seaports. It leads to a discussion around chances of EcoPorts certification for the Wadden Sea.

ESPO

GRONINGEN SEAPORTS

Since 1997, EcoPorts (www.ecoports.com) is a network of ports that work together and share experiences in addressing common environmental challenges. A second focus area of EcoPorts is on the development of tools that assist port environmental management. The two main EcoPorts management tools are the Self Diagnosis Method (SDM) and the Port Environmental Review System (PERS). The Dutch Wadden Sea ports decided back in 2013 to jointly commit to the EcoPorts approach and to work towards achiever certification under PERS, the only port-sector specific environmental management standard. This process successfully completed in 2016 with the certification of the ports of Den Helder, Den Oever, Groningen, Harlingen and Lauwersoog. In view of celebrating this achievement and expanding this initiative to the German and Danish ports of the Wadden Sea, a trilateral conference was organized on 20 June 2016.

Summary of the workshops UNESCO port conference June 20th 2016 Appingedam

E - Challenges Wadden Sea Ports (Jouke van Dijk and Klaas Deen – Waddenaccademie)

The policymakers of the three Wadden Sea countries dealing with the Wadden Sea area have asked the Waddenacademie to develop a trilateral research agenda for the Wadden Sea area. At the moment, the Waddenacademie is working on this agenda, which will be presented at the next trilateral ministers conference in 2018. During the workshop we will collect research issues regarding the sustainability of the Danish, German and Dutch Wadden Sea ports. Which issues, from the perspective of a sustainable port development, should be part of the trilateral agenda according to you?

waddenacademie

The policymakers of the three Wadden Sea countries dealing with the Wadden Sea area have asked the Waddenacademie to develop a trilateral research agenda for the Wadden Sea area. At the moment, the Waddenacademie is working on this agenda, which will be presented at the next trilateral ministers conference in 2018. During the two workshops at the conference, we collected research issues regarding the sustainability of the Danish, German and Dutch Wadden Sea ports. Toegether with the participants of the workshops, we discussed which issues, from the perspective of a sustainable port development, should be part of the trilateral agenda. This open and general question led to an interesting debate. Questions which should be part of the trilateral research agenda included topics such as dredging, transport logistics and safety, the cultural value of (fishery) ports for tourism, waste ballast water and fuel policy.

F - Prevention of invasive species (Edo Donkers - MEA)

Past centuries the shipping sector was an enormous vector of invasive species. The international regulation of ballast water is still pending, but 'on the doorstep' of a World Heritage Site, a game changing mobile treatment facility was born: the InvaSave. This inspiring example of environmental contingency planning will be placed in a broader context. How to deal with one of the major environmental challenges of the 21st century: minimizing the risk of invasive species in ships' ballast water and bio fouling; both as 'good housekeeper' and service provider to the marine industry.

MEA-NL MARINE ECO ANALYTICS

(Each workshop was introduced by short presentations about the problem of invasive species (Edo Donkers: MEA), Port Contingency Planning (Cato ten Hallers: MEA/ IUCN) and the InvaSave (Matthijs Schuiten: Damen Green Solutions)

- Yes, it is recommendable for every port adjacent to an UNESCO area to have a contingency plan and if necessary on the basis of Risk Analysis', to consider a port reception option like the InvaSave
- The big problem, though, is lack of awareness. Awareness of the general public concerning the risk of alien species and awareness at ports of the risks concerning their areas. In this respect, the problem of biofouling has far more opportunities to raise awareness than ballast water: the effects of fouling are very tangible and visible on the port basins and quays. Awareness should have high priority, regardless of the fact that the figures are worrying (Gittenberger research: 25 % or more of observed species in the Wadden Sea basin are alien) but disasters have (not yet) taken place.

- Biofouling on ship's hulls also poses significant risks of invasive species. Fleet Cleaner offers an environmentally sound solution for in water cleaning of ships' hulls, and is able to collect the cleaned material. Further innovative development is expected to bring down the risk for introduction of invasive species close to zero.

Group II
(among the participants: municipality of Harlingen, Dutch Ship Owners Association, Bremen Ports)

Thesis 1: 'Is A Port Contingency Plan For Invasive Species Necessary For Ports?'
Thesis 2: 'How can a more pro-active role of ship owners be achieved?'

- Thesis 1: a plan as such is not a solution. What is important to co-operate regionally to achieve an operational plan for a facility like the InvaSave. What it will come down to that not every smaller port can afford a facility like the InvaSave, and if a port prefers an extended exemption strategy in a confined bio region, the InvaSave can proof to be useful for both ecological and economical reasons
- Thesis 2: Shipowners - especially smaller companies- do not have the financial means to invest in ballast water technologies. The exemption policy on the basis of bio regions should be robust and flexible.

G - Port of the Future (Cor Schipper)

The workshop discusses the need for innovative solutions for port development which are in harmony with the ecosystem and which are robust or adaptable under change. Through an integrated and ecosystem-based approach, port development can be realized in an inclusive way, providing an economic, environmental and social vital port: the "Port of the Future" concept. The selection is based on the characteristics and processes of the ecosystem, like sedimentation and erosion and the location of biodiversity hot spots that deliver food and water purification.

Deltares
Enabling Delta Life

The Port of the Future Serious Game aims at raising awareness for the current policy-making challenges of sustainable ports, so as to support the port stakeholders in achieving sustainable development. The game applies a fictional but realistic environment, autonomous scenarios, a set of measures and a qualitative set of indicators that provide information on the effects for society, natural environment and economy. By introducing real-world challenges associated with port development and going through a decision making process for selecting sustainable measures, the stakeholders can experience aspects of sustainable port development first hand through the serious game.
The twenty participants of the International Trilateral Conference worked as stakeholder or port authorities in Dutch and German ports, were encouraged to work together and to collaborate on the development of a sustainable port. Their lessons to learn in the game evaluation were that the game raised awareness of the impact that interventions have, and the multi options for sustainable ports. The gamers have chosen to achieve sustainable conditions by the combination of Port Infra /urban investment, Environmental and Governance sustainable measures. The other lessons learned

were that bottom up in co-creation with all stakeholders brought more solutions in consideration, since the participants recognized and were convinced about the several opinions with solving multi problems. The Port of the Future game is by the virtual training aspects easy for use in multi-disciplinary discussion, since it shows to combine the best options for knowledge exchange with integrated decisions.

H - Port Reception and Waste Handling (Coen Peelen – Ministry IenM and Mike Mannaart - KIMO)

The reception and handling of ships' waste is an important issue that needs to be carried out properly to prevent pollution. But what are the pros, cons and bottlenecks in the current process and how could these be addressed? A discussion to identify the most important issues , which feeds directly into a new incentive for improvement of ships' waste reception and handling in EcoPorts in the Wadden Sea area.

Ministry of Infrastructure and the Environment of the Netherlands

KIMO

Two workshops were held. The first workshop was attended by 12 people and the second one by 4. Attendees had different backgrounds, they worked in ports, the fisheries sector, municipalities, waste collectors/processors and associations. Discussions were lively and interesting information and views were exchanged. The main messages of the workshops include:

1) Harmonisation is required:
    a. between maritime sectors, since waste management in the port is organised and financed differently for each sector (shipping, fisheries, inland shipping etc.), which is not efficient and effective.
    b. between different ports (between different countries), regarding I) cost recovery schemes and II) waste collection/separation. In many ports different schemes apply, even in the same country, which makes understanding the schemes and delivery of waste quite difficult or unattractive
2) Awareness of all chain partners
    a. Not all partners in the chain (e.g. shipping agents, captain, crew, port staff) are aware of all the regulations that apply to waste delivery and reception. The captain is not always aware that it is possible to land ship generated waste at low or no costs in Dutch ports, This may result in ships choosing to keep the waste on-board and might even cause pollution because if it is discharged into the sea
3) Adequate Port reception Facilities
   Port Reception Facilities need to
    a. Have sufficient storage capacity to receive all wastes (volume and types)
    b. Be easily accessible
4) Port Staff
   Sufficient port staff who are responsible for waste management are advised by the group, including:
    a. Port Waste Coordinator who knows the rules and has knowledge of the facilities of the port
    b. Waste Pickers to clean up the quays

The key message was: make it as easy possible to deliver waste to the port

J - Opportunities for both ports and the Wadden sea

(Taco van den Heiligenberg)

The ports of the Wadden Sea are of social economic importance and impact the ecology of the Wadden Sea. The transition towards sustainable ports has started. What are the opportunities of this transition to contribute to the ecology of the Wadden Sea? This workshop starts with two inspiring pitches about Darkness and Birds and a reflection by an illumination expert. Enough input for fascinating discussions and seizing opportunities!

PROGRAMMA NAAR EEN RIJKE WADDENZEE

In cooperation with Taco van den Heiligenberg (PRW), Brugt Hoogland (Foundation Feel the night), Andre ter Velde (Clafis) and Bernard Baerends (Ministry of Economic Affairs)

In this workshop, led by Taco van den Heiligenberg/PRW, the central question addressed was “How can the ports of the Wadden Sea contribute to the ecological key qualities of the Wadden Sea in their transition towards sustainable ports?”. In two pitches possibilities and opportunities were presented from the Wadden Sea’s perspective. The ideas presented from the importance of darkness were the possibilities of less and environmental friendly illumination. And from the international importance of the Wadden Sea for breeding and migratory birds were bird friendly ports with breeding islands and walls and temporary nature.

This was followed up by an animated discussion with representative of different organisations on the awareness that ports adjoin a Unesco World Heritage. Because all actions start with awareness! The conclusion regarding the illumination issue was that it would be good to develop a lightning management investigation plan on how to best adjust the illumination of ports. There was much interest in exchanging good practices, like for instance the illumination at the port of Harlingen, and the fact that less and adjusted illumination can also be financially profitable for ports.It was recommended to examine how ports can embrace the ‘Dark Sky Park’ initiative. Putting the Wadden Sea central in the transition towards sustainable ports issued even more ideas; ranging from stimulating tourism in ports, to the development of salt marsh and stimulating the use of renewable energy and fuels.