

Wadden Sea Board

**WSB 8
9-10 October 2013
Groningen**



Agenda Item:	5
Subject:	Report Task Group Management
Document No.	WSB 9/5/1
Date:	25 September 2013
Submitted by:	CWSS

Attached is the TG-M progress report.

Proposal

The meeting is invited to note the information, respectively to decide upon the proposals made in the document

Report Task Group Management

The Task Group Management (TG-M) has met 17 September 2013.

TG-M has discussed three main issues, namely the report of the Working Group Alien Species, the presentation of nature restoration cases at TGC-12 and the further development of the trilateral science-policy matrix. These three issues are presented in detail below.

1. Working Group Alien Species (WG-AS)

The WG-AS has prepared its final report with recommendations to WSB. The report is in **Annex 1**. The report contains an overview of general national regulations for the management and control of alien species (appendix 2), as well as an overview of regulations which are specifically relevant for the Wadden Sea alien species strategy (appendix 3).

WG-AS has not yet been able to evaluate the relevance of the proposed EU Regulation on invasive alien species that was recently published.

WSB has requested WG-AS to prepare an overview of no-regret measures with regard to the management and control of alien species. These are contained in appendix 3, columns "Measures in place" and "Measures/Actions needed".

Proposal. WSB is invited to consider whether or not the proposals in the column "Measures/Actions needed" should be reflected in the Ministerial Council Declaration.

2. Presentation of nature restoration cases at TGC-12

WSB has requested TG-M to arrange a presentation of nature restoration cases at TGC-12. TG-M has selected a number of cases which will be presented within the overall framework of §10 of the Wadden Sea Plan. WSP §10 reads

In compliance with national legal provisions the focal point of trilateral nature conservation policy and management is directed towards achieving the Guiding Principle for "the Nature Conservation Area", as laid down in the "Joint Declaration", i.e. *"to achieve as far as possible, a natural and sustainable ecosystem in which natural processes proceed in an undisturbed way"*. Such an ecosystem contains the full range of natural and dynamic habitat types each of which needing a certain quality (natural dynamics, presence of typical species, absence of disturbance, absence of pollution), which can be reached by proper conservation and management. *The quality of the habitats shall be maintained or improved by working towards achieving Targets* which have been agreed upon for the tidal area, the offshore area, estuaries, salt marshes, beaches and dunes, the rural area, water and sediment quality, fish, birds and marine mammals, as well as landscape and cultural aspects.

The philosophy behind §10, is that habitats with good quality will also lead to improvements in the status of flora and fauna.

The themes suggested so far are:

Salt marshes. Presentation of cases from Lower Saxony. Improving the natural situation in salt marshes will lead to higher biodiversity and better conditions for certain bird species

Tidal area. Presentation of Dutch project to reintroduce sea grass. Fish species will profit and consequently also birds and marine mammals

Dunes/beaches. Presentation of cases from Denmark and The Netherlands Improvement of natural conditions in dunes. This will lead to higher biodiversity and better conditions for birds.

Estuaries. Presentation of cases from Denmark and The Netherlands regarding improving conditions for fish migration. Fish species and consequently bird and mammals will profit.

Proposal. WSB is invited to support the chosen approach and to instruct TG-M to further elaborate the cases.

3. Science-Policy matrix

WSB has requested TG-M to arrange a broad discussion on the Wadden science-policy matrix that was presented at the WSB-8 meeting.

A workshop has been prepared by the CWSS and the Wadden Academy on 20 November 2013 in Delmenhorst, Germany, at which the matrix will be discussed by Wadden Sea scientist, policy makers and managers.

The matrix will be used as the basis for a trilateral research agenda. It will also serve as guidance for the ecosystem assessment in chapter 2 of the Policy Assessment Report (PAR). This chapter will be structured according to the impact categories of the matrix (horizontal axis; see **Annex 2** [page 16]).

The WSB-10 meeting will be informed about the results of the workshop.

Annex 1

Working Group Alien Species

Report to WSB

1. Background

At the 11th Wadden Sea Governmental Conference, 2011, it was decided that a common strategy on dealing with alien species introductions in the Wadden Sea should be developed (Sylt Declaration §26).

Upon request of the Wadden Sea Board the Task Group Management (TG-M) prepared a draft strategy, that was submitted to the 6th meeting of the Wadden Sea Board (5 October 2012). WSB-6 took note of the proposed Strategy on Alien Species and agreed on installing an ad-hoc working group for further developing the Strategy. The working group should focus on a catalogue of “no regret” measures that could be adopted at the 2014 Conference. Such a list should preferably be submitted to the WSB-7 meeting. The working group should also prepare proposals for priorities, next steps to be taken, possible amendments to the draft Strategy, as well as the feasibility of implementing the strategy.

The working group alien species (WG-AS) started its work in February 2013 and has held four meetings. The members of WG-AS are in **Appendix 1**.

2. Results

WG-AS has critically reviewed the draft Strategy and submitted a consolidated version to the WSB-8 meeting. This version has been attached to the draft MCD as “Strategic Framework for dealing with alien species”.

WG-AS has furthermore prepared an inventory of current national policies and measures in place for dealing with alien species. An overview is in **Appendix 2**.

Finally, WG-AS has made a first tentative analyses of specific measures needed for implementing the strategy, as well as their feasibility. The outcome of the analysis is schematically presented in **Appendix 3**. WG-AS emphasises in this respect that a full evaluation of the feasibility of the strategy, both as to the financial and practical aspects, will to a large degree depend on the contents of the Management and Action Plan, through which the Strategy will be implemented. It is intended that a pilot Management and Action Plan will be developed and tested in the LIFE+ project that has been submitted in June 2013 and that will start mid 2014 at the earliest.

3. Conclusions

3.1 National policies and measures in place

In all three Wadden Sea countries, overall policies and several measures for dealing with alien species are in place, although in none of the countries Wadden Sea specific measures or policies exist that are sufficiently comprehensive to cover all relevant aspects of alien species prevention and management.

The coordination of the implementation of the Dutch policy is well developed. The policy applies to the whole NL, to both terrestrial and marine species. In Denmark there exists a national strategy (since 2008). There are practical experiences with the eradication of the Rugose rose and there is an action plan for the American mink.

In Germany there is a national strategy in accordance with the CBD and several sectoral approaches on the level of the federal states. There is a central platform for exchanging information on marine alien species.

3.2 Strategic framework

As stated above, the feasibility of the Strategic Framework will strongly depend on the testing of the various elements (early detection and rapid assessment, mitigation and control, dissemination) of a pilot Management and Action Plan, to be carried out within the anticipated LIFE+ project.

The experiences from the LIFE+ project, as well as developments at the national and international level, in particular the recently published proposal for an EU Regulation on IAS, may well lead to the necessity of amending the strategic framework, but for the time being this framework is considered a solid basis for developing a common trilateral alien species management and action plan.

Appendix 1. Ad-hoc Working Group Alien Species (WG-AS)

Netherlands

Mr Saa Kabuta

Rijkswaterstaat Waterdienst
Ministry Infrastructure and Environment

Mr Sander Smolders

nVWA, Team Invasieve Exoten (TIE)
Ministry Economic Affairs

Germany

Ms Vera Knoke

Ministerium für Energiewende, Landwirtschaft, Umwelt und ländliche Räume
Schleswig-Holstein

Mr Gregor Scheiffarth

Nationalparkverwaltung Niedersächsisches Wattenmeer
Lower Saxony

Mr Manfred Rolke

BSH

Denmark

Ms Camilla Uldal

Miljøministeriet/Ministry of Environment
Naturstyrelsen/Nature Agency

Appendix 2. NATIONAL POLICIES AND MEASURES

1. National obligations resulting from international agreements

All three Wadden Sea states are party to the following international conventions/EU directives and regulations which are relevant for national alien species policies.

Convention on Biological Diversity. Recognises the spread of species to far beyond their original habitats as the result of human activity as one of the most important causes of the decline in biodiversity. For this reason the Convention includes the requirement under Section 8h that countries develop policy to prevent the introduction of species that threaten native species or ecosystems.

Convention on the conservation of European wildlife and natural habitats (Bern Convention). This Convention further elaborates the principles of the Convention on Biological Diversity at European level with proposals to develop control of invasive alien species at European level.

International Plant Protection Convention. The aim of this Convention is to combat the risk produced by international trade of spreading plant diseases, pests and weeds that pose a threat to plants, while causing minimal disruption to trade. The IPPC supports the need for policy for invasive alien species and instruments to prevent spread and establishment of diseases, pests and weeds and can most suitably be used to control alien species in nature areas if they pose a threat to plants or plant products.

Phyto Directive (2000/29). Within the EU the basis of phytosanitary regulation for harmful organisms for plants and plant products is laid down in Council Directive 2000/29. The main aim of the Phyto Directive is to prevent the introduction and spread of organisms harmful to plants.

Convention for the Control and Management of Ships' Ballast Water (BWM Convention) To prevent the spread of non-native organisms in ship's ballast water the International Maritime Organisation has drawn up a Convention to regulate its management.

Birds and Habitats Directives. If certain projects (such as shellfish imports) have a risk of introducing alien species which can have a significant impact on the conservation goals of a Natura 2000 area, then a proper impact assessment should be carried out and/or mitigation measures taken to prevent this impact. Other specific provisions of this directive in relation to alien species are the need for an assessment before the re-introduction of species into areas where they are no longer present.

Water Framework Directive. This directive is a commitment to a pressure-based assessment of the ecological status of water bodies. Invasive alien species (IAS) constitute a major pressure in many aquatic ecosystems and thus fall under Annex II list of specific pressures to which water bodies may be subjected. The presence of alien species detracts from the concept of 'naturalness' that underlies the Directive. As alien species have been deliberately or accidentally introduced, they are considered as a potential anthropogenic impact on the biological elements listed in Annex V of the WFD.

Marine Strategy Framework Directive. The key attributes of the descriptor 2 of the MSFD "Non-indigenous species" include:

- Number of non-indigenous species recorded in an area,
- Abundance and distribution range of non-indigenous species,
- Non-indigenous species impact on native communities,
- Non-indigenous species impact on habitats, and
- Non-indigenous species impact on ecosystem functioning.

Efforts should be made to record all non-indigenous species known in the assessment area; however attention should be paid primarily to assessments of invasive aquatic species impacts.

Council Regulation 708/2007 on the use of alien and locally absent species in aquaculture.

EC Communications. The European Commission has published the EC Biodiversity Communication (2006) in which an EU Strategy in line with the CBD guiding principles is announced, as well as the establishment of an early warning system.

Proposal for an EC Regulation on the prevention and management of the introduction and spread of invasive alien species (COM(2013) 620 final). Published 9 September 2013.

2. National policies

2.1 Netherlands

Policy

The overall Dutch policy with regard to alien species is set out in a policy memorandum of 2007. According to the Memorandum the role of the Dutch government will primarily be to prevent invasive species from becoming established in the Netherlands. If an invasive species does establish itself then it is vital that it is detected as early as possible and action is taken. For this it is important that:

- sufficient knowledge about the processes and effects of invasion is available and accessible, so that it can serve as a basis for risk analysis;
- an efficient detection system is in operation and that people in the field can recognise alien species;
- all parties involved are aware of the problems that can be caused by alien species and people are aware of the consequences of their own actions;
- sufficient measures can be taken on import to prevent undesirable species being carried in on imported goods;
- in identifying a potentially invasive alien species sufficient resources and capacity are available in order to eliminate the species as quickly as possible;
- there is a clear division of responsibility between the various organisations involved;
- there is sufficient legal basis to be able to deal effectively with the situation.

Not every alien species will therefore be actively controlled. The decision will depend on the nature and size of the problem caused and the anticipated effort, both social and financial, that the control requires.

The consequences of the decision to only intervene if alien species form a real danger to biodiversity and only if measures are effective and achievable, is that the majority of alien species present in the Netherlands are left in peace. This policy accepts that such changes have taken place. It also applies to species that have entered the Netherlands independently by their own efforts.

A national policy framework for the coastal area is under development, integrating the legal framework and policies regarding ballast water, aquaculture and hull fouling.

Legal basis

Flora and Fauna Act. Animals or eggs may not be released into nature. It is also prohibited to plant or sow certain plants in nature. The Flora and Fauna Act also provides for a ban on the trade in and possession of plants and animals.

Nature Conservation Act 1998. This Act lays down conditions for activities in Natura 2000 areas to ensure that these activities will not affect the achievement of maintenance targets for the area concerned. For marine ecosystems for instance this can be reason to ban activities which pose a risk of the introduction of undesirable species.

Fisheries Act This Act applies to all species of fish, shellfish and crustaceans defined under the Act, including a number of established alien species. On the basis of the Fisheries Act further restrictions can be applied to fishing and to the introduction of specific species.

Plant Diseases Act. National phytosanitary policy is laid down in this framework act implementing the EU's phytosanitary law in the Netherlands. A mandate decision under this

Act places responsibility for action with the Director of the Plant Protection Service when organisms harmful to plants are discovered.

Implementation

The introduction of a new species usually occurs over a number of stages. The opportunity to intervene in the spread of such species varies according to the stage.

The order of priority is:

- 1 prevention
- 2 eradication
- 3 isolation and management of the population

The Dutch Team Invasive Exotics (TIE) placed within the Food and Consumer Product Safety Authority (nVWA) of the Ministry of Economic Affairs of the Ministry of Economic Affairs coordinates the policy and has a budget of 1 million Euros (2013) and an extra elimination budget if needed.

TIE is responsible for

- a) gathering information on (new) alien species,
- b) setting up monitoring programs (early detection of new alien species),
- c) risk analysis (carried out by experts),
- d) advising the Ministry on invasive species (risks and possible management options),
- e) informing the public on invasive species (raising awareness).

TIE focuses on invasive alien species that (potentially) impact biodiversity, but also takes impact on human and animal health, safety and economy into consideration. The management of the (invasive alien) organisms that threaten human, animal and plant health or the economy is dealt with by the larger nVWA and other ministries. If an initial analysis indicates possible impacts on biodiversity and more information is needed, a risk analysis will be carried out by experts. If needed, further monitoring will be carried out to determine the spread of the alien species. Based on this information the Invasive Species Team will inform the Ministry on the possible impacts of the alien species and possible management actions. Cooperation on management projects for shared water catchments with the neighbouring countries Belgium and Germany is initiated where possible.

2.2 Germany

Policy

The National Biodiversity Strategy (2007) sets specific IAS targets, including preparation of a National IAS Strategy. Discussions are on-going on the feasibility of developing an overarching strategy across separate sectorial approaches. However, there is not yet a policy scheme like in NL, although such an instrument is under discussion.

In accordance with the CBD's guiding principles (CBD, 2000), Germany has in 2007 prepared a national strategy on invasive alien species. The overall strategy for alien species comprises two main components: dealing with the problem of alien species already present, and the prevention of further introductions including the response if prevention should fail.

Depending on the species, efforts should target one of the five categories:

- (a) prevention of introductions through education and regulations;
- (b) monitoring and early detection by effective monitoring programs;
- (c) rapid measures to eliminate newly introduced invasive alien species;
- (d) minimization of impacts of established invasive alien species by eradication and control;
- (e) acceptance of established non-invasive species.

A draft National Strategy for the protection and sustainable use of the seas also addresses IAS. The German Länder (Federal States) are responsible for alien species policies in the coastal area under their jurisdiction (12 nm zone) and the federal government is responsible for offshore areas in the German EEZ. According to the national park laws it is

not allowed to introduce alien species. Removal of alien species may, however, contradict with the policy principle of natural dynamics. The approach is to deal with alien species introductions on a case-by-case and project-like basis. The first step towards a combined approach of the federal states agencies and the federal agencies has been the establishment of a shared information exchange platform for issues related to marine alien species.

Legislation

Nature Protection Law (Bundesnaturschutzgesetz). Contains provisions with regard to prevention, monitoring, early warning and rapid measures, control and licensing.

Federal Species Protection Act. (Bundesartenschutzverordnung). Regulation of trade and possession of non-native species.

Implementation

The Federal Nature Agency (BfN) is currently developing black and grey species lists. For all selected species a "Steckbrief" (brief case history account) will be prepared.

Work is going on regarding descriptor 2 of the MSFD, in particular the development of monitoring and surveillance. So far, two rapid assessments have been carried out in the marine environment.

2.3 Denmark

Policy

In Denmark a National Action Plan for Alien Species of 2009 applies. The plan has five focus areas: prevention, eradication, information, research and administration and regulation. For each focus area a number of recommendations are given and these lay down the path for the daily work. Regarding prevention focus has been on prioritizing international cooperation through the NOBANIS network on early warning, control and information exchange, establish a portal for the public to record observations of invasive species and work for an implementation of the Ballast Water Convention.

Apart from recommending focusing eradication and control initiatives towards species based on species biology and cost-effectiveness in the eradication, the policy is to involve municipalities, NGOs, private landowners etc. in the initiatives.

As several ministries work with different aspects of alien species a network of the involved ministries and agencies has been created to ensure information flow and a common approach. Furthermore to involve non-governmental actors a group consisting of the governmental agencies, NGO's and research institutions has been established. The aim of this group is to give advice and input to the governmental institutions on e.g. listing of species on black lists, prioritize and to exchange relevant information and experiences.

Legislation

Nature Protection Act. Release of animals that do not naturally occur in Denmark into natural environment is prohibited. The Act states that animals alien to Denmark are not to be released to nature without permission.

The Hunting Act. Release of the game animals.

The Hunting Act regulates game animals including species that are non-native and that are deliberately released or have unintentionally escaped captivity and which have established self-reproducing populations in the wild (article 2 §1). According to the Hunting Act (Article 6 §1) the Environment Minister may issue a prohibition against deliberate releases of certain game animals. The hunting season is also defined according to the Hunting Act. The Hunting Act is supplemented by a statutory order on the ways of hunting and hunting gear (statutory order no. 1018/2004). Under certain conditions the statutory order allows breeding and release of Partridge (*Perdix perdix*), Mallard (*Anas platyrhynchos*) and the introduced Pheasant (*Phasianus colchicus*)

Fishing Act. Fish for maricultural purposes. Chapter 12, Article 63, of the Fishing Act states that the deliberate release of fish and eggs or brood thereof is not allowed, unless permission is obtained. The Minister of Food, Agriculture and Fisheries must approve the species to be released as well as a plan for the release. Mariculture is specifically mentioned by the Fishing Act which states that the Minister of Food, Agriculture and Fisheries must approve the breeding of fish on Danish fishing territories (chapter 13, articles 66 and 67).

Act on access in nature (revised), No. 61 of 19.01.2007. § 1 - Everyone is obliged to keep their domestic animals, including furred animals that are bred in captivity and tamed rabbits, on his own property all year round. If a domestic furred animal escapes from captivity and is not captured within two months, it is considered a game. This also goes for offspring that follow the mother

Bekendtgørelse om bekæmpelse af kæmpebjørneklo / Statutory order on eradication of Giant hogweed, No. 862 of 10.09.2009. § 1, 4 & 5: The municipality can, according to an adopted and published action plan, impose owners or users of areas where Giant hogweed is present, to eradicate the plant. If an action plan has been published, owners and users of the above mentioned areas are obligated to effectively eradicate the plants. This also applies for public agencies. The municipality may impose owners or users of areas where Giant hogweed is present to carry out the eradication. The municipality controls that action plans and orders of eradication are complied with. The municipality has, with the proper identification, the right to access areas included in the action plan at any time in order to carry out control or eradication measures.

§ 2 - Eradication of Giant hogweed must lead to the extinction of the plant on the area in question and must prevent reproduction of the plant during the effort.

Statutory order on eradication of Ondatra zibethicus, No. 819 of 11.12.1987

§1 & § 3 : Owners or users of real estate that know of or suspect a presence of *Ondatra zibethicus* are committed to report this immediately. That applies even though the owner or user may have killed the animal. After instruction from the Danish Pest Infestation Laboratory, the owner or user is under obligation to eradicate or assist in the eradication of the animal.

Statutory order on release of crayfish in freshwaters, No. 334 of 26.05.1999

§ 1: Release and translocation of crayfish other than *Astacus astacus* (native) are forbidden in all freshwaters. This also goes for eggs or fry.

Statutory order on protected habitats, No. 1172 of 20/11/2006

Annex 2 - Includes a white list of fish and crustaceans not regulated by Protection of Nature Act (see above) because they are considered to be native. However, the species *Stizostedion lucioperca*, *Cyprinus carpio*, *Oncorhynchus mykiss* are also listed even though they are not native, because they are considered very common.

§ 5.3 - Release into the wild of species listed in Annex 2 (white list) does not require a permit from the Minister of Environment.

Action plan against Raccoon dogs in Denmark, Non-legally binding text

Ch. 7.1 – Denmark should have no breeding population of Raccoon dogs in 2015. The action plan describes biology, habitats etc of the Raccoon dog and includes eradication methods, best practices and measurable goals and strategies for eradication. It also includes a section with a “tool box” of eradication measures for Raccoon dogs. Several have been implemented. For example as part of the LIFE+ project on Raccoon dogs, an Early Warning System, consisting of number of cameras has been set up along the Danish-German border and in Denmark between the peninsula of Jutland and the Island of Fynen.

Forestry Act. Terrestrial plants.

Implementation

The Action Plan also includes the first Danish “black list” of species regarded as the “worst” alien invasive species in Denmark. Furthermore there is an “observation list” of species either not yet present in Denmark, but known to be invasive in neighbouring countries or

present in Denmark but still rare. The "black-list" contains a few marine species, such as Pacific oyster and *Mnemiopsis leidyi*.

In 2012 the Danish Nature Agency made an action plan for the American mink. The action plan is based on the experiences gained during a 4 year project on mink. It is not possible to eradicate mink from Denmark, thus control efforts is focused in 20 prioritized areas where mink is found to be a considerable problem and where control actions may have a positive effect on especially ground nesting birds.

Also a national action plan for raccoon dog was made in 2009 in relation to a trilateral LIFE project on control and eradication of raccoon dog in Sweden, Finland and Denmark. The main eradication measure has been to capture, sterilize and attach GPS collars on raccoon dogs that subsequently have been released to seek new mates. These mates have then been put down. The LIFE project ends in September 2013 but the methods will still be used. Studies are on-going on different eradication methods for the Rugose rose.

The statutory order on eradication of Giant Hogweed gives the municipalities a possibility to make local action plans for giant hogweed. The action plan may include the area of the whole municipality or only parts of the area. If an action plan has been made eradication is mandatory in all areas covered by the plan regardless of ownership.

The organisms released into freshwater environments are regulated by the Forest and Nature Agency. Guidance is given in form of a "positive list", i.e. species that may be introduced and further a "negative list" for species not to be released was prepared (see also above).

Appendix 3. Inventory of measures in place for implementing the Strategy

		Policy/actions from Strategy		Measures in Place	Measures/Actions needed	Feasibility	Responsible
PREVENTION							
Aquatic	Ballast water	Harmonised implementation BWM	NL	BWM Convention signed by WS states but trilateral harmonisation of measures not yet planned. North Sea Ballast Water Opportunity project: strengthen regional cohesion	Installation of trilateral WG to coordinate harmonisation	In framework of LIFE project with extra input from ministries at higher policy level	Ministry I&M
			DE				Ministry BMVBS
			DK				Ministry of Environment
	Bio-fouling	IMO guidelines for hull bio fouling to be made mandatory and harmonised for the Wadden Sea	NL	Guidelines accepted. Some already applied in practice	NL, DE and DK to discuss options, for example joint action within IMO for global mandatory preventive measures. At national level legislation to be developed.		Ministry I&M
			DE	?			Ministry BMVBS
			DK	Guidelines accepted			Ministry of Environment
		Mandatory cleaning of harbours and hulls after risk assessment	NL	No measures in place	At national level legislation to be checked or developed		Min EZ
			DE	?			?
			DK	No measures			Ministry of Environment
	Aqua-culture	Regulation or prohibition bivalve transport to and from Wadden Sea	NL	Regulation system in place	Trilateral decision on mussel transport policy needed		Min EZ
			DE	SH: Seed mussel transport forbidden. NdS: Currently not practiced			SH Min MLUR NdS Min Environment NdS Min Agriculture/fisheries
			DK	No transport to/from WS			Ministry FAF
	Recreational craft	Cleaning of hulls before entering WS	NL	No measures in place	Installation of trilateral WG to coordinate harmonisation.		Min EZ
			DE				Min BMVBS (?)
			DK				Ministry of Environment

		Policy/actions from Strategy		Measures in Place	Measures/Actions needed	Feasibility	Responsible	
		IMO guidelines for hull bio fouling to be made mandatory and harmonised for the Wadden Sea	NL		At national level legislation to be developed.		Min EZ	
			DE					Min BMVBS (?)
			DK	No legislation				Ministry of Environment
Terrestrial		Prevent introduction and immigration of alien species to the Wadden Sea Area	NL	In line with national policies	Develop trilateral list of alien species		Min EZ. Provinces	
			DE					NdS, SH
			DK					Min environment
		Prevent introduction and immigration of mammalian predators to the Wadden Sea islands	NL		NL, DK. specific measures to be applied.		Min EZ. Provinces	
			DE	Several measures in place and under development			SH. Min MLUR NdS. Min Environment	
			DK	Action plans for Raccoon dog and American mink			Min environment	
EARLY WARNING								
		Harmonized surveillance system for early detection (marine and terrestrial)	NL	Monitoring and surveillance	Harmonized surveillance system for early detection of alien species	to be developed and tested in LIFE project	NL. Min EZ Min I&M SH. Min MLUR NdS. Min Environment DE. Min BMVBS DK. Ministry Enironment	
			DE	Benthic monitoring in WS				
			DK	Monitoring				
		long-term monitoring of alien species in the framework of existing monitoring parameters	NL		Adapt and where necessary extend TMAP			
			DE					
			DK					
		alien species early warning and reporting system on the CWSS website	NL	NOBANIS portal and network. Not WS specific	WS alien species early warning and reporting system			
			DE					
			DK					
		Risk assessment after detection in harbour	NL	Incidentally	Harmonised guidelines for risk assessment			
			DE					
			DK					
ERADICATION / CONTROL								
Aquatic		Cleaning of marinas after discovery alien species; if invasive, cleaning to include ship hulls	NL	No regulation in place	At national level legislation to be checked or developed.	to be tested in LIFE project	Min EZ	
			DE	No measures in place			?	
			DK	No measures	Cleaning methods to be developed and tested		Ministry of Environment	

		Policy/actions from Strategy		Measures in Place	Measures/Actions needed	Feasibility	Responsible
		Rapid measures after discovery problem species to be discussed and conducted	NL	mussel transport	Rapid measures to be developed and tested	To be inventoried in LIFE project	Min EZ
			DE				SH. Min MLUR NdS. Min Environment
			DK		Procedures to be developed		Ministry of Environment
Terrestrial		Invasive alien plants on islands should be removed when feasible	NL	No obligation	Wadden Sea wide inventory and risk analysis	Study: 30-40000 Euros	Min EZ
			DE	Incidental			SH. Min MLUR NdS. Min Environment
			DK	Incidental			Min Env
		Animal problem species, harmful to the ecosystem on islands and halligen, have to be eradicated or removed from islands	NL	Incidental	Exchange of experience and best practice		Min EZ
			DE	Under development			SH. Min MLUR NdS. Min Environment
			DK	Action plans for Raccoon dog and American mink. Otherwise Incidental			Min Env
AWARENESS							
		Develop communication (awareness raising) and education plan and material	NL	Material available but not WS specific	Develop WS specific communication (awareness raising) and education plan and material	To be developed within LIFE project	Min EZ, Min I&M. Provinces
			DE				SH. Min MLUR NdS. Min Environment DE. BMU
			DK				Min Env. Nat Park. Municipalities

Annex 2. Science-Policy matrix

[illegible]