

Management of Invasive Alien Species: Forging Cooperation in the Baltic/Nordic Region

Copenhagen, Denmark, 21-23 May 2001

Workshop Report and Final Recommendations



Danish Forest and Nature Agency



GISP
Global Invasive Species Programme



United States Government

Management of Invasive Alien Species: Forging Cooperation in the Baltic/Nordic Region

Copenhagen, Denmark, 21-23 May 2001

Edited by

Jamie K. Reaser, Laurie E. Neville, Hans Erik Svart

***THEREFORE BE IT RECOMMENDED** that a forum within existing structures for regional cooperation be established, such as a Baltic/Nordic Alien Species Task Force, to address prevention, eradication, and control (including management) of invasive alien species*

***BE IT FURTHER RECOMMENDED** that a network of experts and National Focal Points be established to support the forum for regional cooperation;*

***BE IT FINALLY RECOMMENDED** that the forum for regional cooperation through support (e.g. funding, scientific, technical) from each of the participating governments and international bodies shall develop a regional strategy to prevent and reduce the impact of invasive alien species*

The Copenhagen Declaration



Danish Forest and Nature Agency



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The views expressed in this publication are those of the meeting participants and do not necessarily reflect the positions of any government or other body represented in the meeting, nor its sponsors.

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COPENHAGEN DECLARATION

Managing Invasive Alien Species: Forging Cooperation in the Baltic-Nordic Region

The participants in the regional management workshop on invasive alien species held in Copenhagen, 21-23 May 2001 declare:

WHEREAS the Baltic/Nordic countries including the Russian Federation, recognise the existence of invasive alien species as a threat to biodiversity and;

WHEREAS these invasive alien species may have irreversible and unpredictable economic and environmental impacts and may cause diseases in humans, animals and plants and;

WHEREAS Baltic/Nordic countries intend to minimize/reduce present and future invasions of invasive species by implementing guiding principles and guidelines, such as CBD principles, ballast water management, quarantine measures, among others, based on IMO, ICES, IPPC, EPPO, Bern Convention, GISP;

WHEREAS regional cooperation and sharing of resources (scientific and technical) is necessary for effective prevention, eradication, and control of invasive alien species;

THEREFORE BE IT RECOMMENDED that a forum within existing structures for regional cooperation be established, such as a Baltic/Nordic Alien Species Task Force, to address prevention, eradication, and control (including management) of invasive alien species and;

BE IT FURTHER RECOMMENDED that a network of experts and National Focal Points be established to support the forum for regional cooperation;

BE IT FINALLY RECOMMENDED that the forum for regional cooperation through support (e.g. funding, scientific, technical) from each of the participating governments and international bodies shall develop a regional strategy to prevent and reduce the impact of invasive alien species.

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PREFACE:

“...alien species have been identified as the second largest threat to biological diversity globally after habitat destruction...the effect of alien species has been described as one of the great historical pains in the world’s fauna and flora.”

Thorbjorn Bernsten
Norwegian Ministry for Environment
Trondheim, 1 July 1996

Invasive alien species (IAS) are non-native organisms that cause, or have the potential to cause, harm to the environment, economies, or human health.

Invasive alien species are one of the most significant drivers of environmental change worldwide. They contribute to social instability and economic hardship, placing constraints on sustainable development, economic growth, and environmental conservation. The direct costs of IAS to a single country can be in the billions of dollars annually. However, the costs to society greatly exceed those that can be measured in currency. They can also include unemployment, impacts on infrastructure, food and water shortages, environmental degradation, loss of biodiversity, increased rates and severity of natural disasters, disease epidemics, and lost lives.

The globalization of trade, travel, and transport is greatly increasing the number and diversity of harmful organisms being moved around the world, as well as the rate at which they are moving. At the same time, human-driven changes in land use and climate are rendering some habitats more susceptible to invasion. Invasive alien species are thus a growing problem, and one that we will have to manage in perpetuity.

In May 2001, the workshop entitled Management of Invasive Alien Species: Forging Cooperation in the Baltic/Nordic Region was held in Copenhagen, Denmark to raise awareness of the regional challenges posed by IAS and to lay the foundation for a regional action plan. The workshop, summarized in this document, was the first in a series of seven regional workshops to be held in 2001-2002 by the Global Invasive Species Programme (GISP) and the U.S. Government under GISP’s Phase II Implementation Plan ([www.http://www.jasper.stanford.edu/gisp](http://www.jasper.stanford.edu/gisp)). These regional workshops build upon two previous, global meetings on IAS: The Norway/UN Conference on Alien Species (Trondheim, Norway, 1996) and the GISP Phase I Synthesis Conference (Cape Town, Republic of South Africa, 2000).

To ensure a comprehensive, cross-sectoral approach to addressing IAS within the Baltic/Nordic region, the workshop engaged government officials and scientists from both agriculture and environment ministries. A select group of representatives from relevant intergovernmental bodies and non-governmental organizations were invited to contribute their expertise on IAS and participated as “resource specialists and observers.”

INTRODUCTION

“Each Contracting Party shall, as far as possible and as appropriate: Prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species.”

Convention on Biological Diversity, Article 8(h), 1993

Thus far, national and international responses to address invasive alien species (IAS) have been insufficient to counter their increasing toll on natural resources and society. Most countries have only recently begun to recognize the scope and significance of the IAS problem. While a few governments are investing in national policies and programs, many are prevented from doing so by a lack of scientific, technological, and financial resources. Efforts of most governments to limit the spread of IAS are so poorly coordinated that ministries within a single government, trading partners, and neighboring countries are often unaware of each other's policies and practices. Non-governmental and intergovernmental organizations face similar challenges and have few mechanisms to develop a holistic approach to the problem.

Recognizing these challenges, the governments of the Baltic/Nordic region came together with regional IAS experts on May 21-23, 2001 to participate in the workshop Management of Invasive Alien Species: Forging Cooperation in the Baltic/Nordic Region.

The primary objectives of the workshop were to:

1. Raise awareness of the causes and consequences of IAS problems among policy makers in the Baltic/Nordic region;

2. Assess the status and trends of IAS in the Baltic/Nordic region;

3. Establish cooperation across relevant sectors (environment, agriculture, marine) and institutions; and

4. Lay the groundwork for the development of a regional action plan to address IAS.

Forty-five participants gathered for the workshop. For the first time ever, IAS problems in the Baltic/Nordic region were collectively addressed by representatives from ministries of agriculture and the environment, the marine sector, scientists, and intergovernmental organizations. Countries represented included Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Russia, and Sweden. The United States participated as a sponsor and observer. Representatives from intergovernmental organizations, including the International Maritime Organization (IMO), International Plant Protection Council (FAO-IPPC), Global Invasive Species Programme (GISP), International Council for the Exploration of the Sea (ICES) and (HELCOM) provided institutional expertise and contributed to group discussions.

The workshop objectives were addressed in two stages (see agenda; Appendix 1):

On day one (21 May), experts provided participants with perspectives on IAS ecology, economics, management, and policy issues. The morning session was designed to provide a global overview and featured several members of GISP. In the afternoon, particular emphasis was given to the patterns, trends, needs and opportunities in the Baltic/Nordic Region.

On days two and three (22-23 May), workshop sessions were used to identify a set of common objectives for the region and the core elements of a regional IAS action plan.

The meeting concluded with the drafting of a regional declaration on IAS, based on the previous three days of discussion. Teams of participants were established to finalize the declaration after the meeting, compile and edit a directory of regional resources on IAS (e.g., species lists, experts, projects, funding opportunities), and write the report of the meeting. Per agreement with sponsors, the regional resources directory and final report will be published under the auspices of the Global Invasive Species Programme.

SUMMARY OF RECOMMENDATIONS

Day One

Presentations

Based on their scientific and technical expertise, speakers made a number of recommendations to the group regarding actions that could be taken to develop a regional approach to IAS issues in the Baltic/Nordic region. In the area of **leadership and coordination**, they suggested that the governments identify a lead agency or other focal point on IAS within each country and that these focal points join together to develop a regional mechanism (e.g., Task Force) for consultation, co-ordination, and co-operation. They stressed that the Task Force should foster inter-sectoral collaboration and establish working groups on marine, freshwater, and terrestrial IAS issues. In order to ensure expert consultation and stakeholder input, they recommended that the Task Force hold annual meetings of scientists and relevant stakeholders within the region.

In the area of **information management**, the speakers recommend that the governments in the region establish a mechanism for sharing information on IAS, such as publications, existing databases, research findings, and strategies for monitoring, prevention, early detection, eradication and control. They stressed that the information needs to be easily accessible to all stakeholders. Members of GISP invited the region to develop a hub under its Global Invasive Species Information Network.

The speakers recommended several strategies for enhancing the regions efforts to minimize the spread and impact of IAS. In particular, they emphasized the need for governments to learn from other regions and

to **apply prevention and management strategies** that have already proven effective. They suggested that the governments work with relevant institutions to identify "success stories" that are particular to the Baltic/Nordic region's IAS, ecosystems, and invasion pathways. GISP members invited the participants to adapt its *Toolkit of Best Prevention and Management Practices for Invasive Alien Species* to meet regional needs.

Experts recommended that the region establish **research projects across the fields of science, management, and economics**. In order to enhance prevention efforts, they suggested that the region conduct an assessment of IAS pathways into and out of the region and rank these pathways in order of risk. Because we do not yet have adequate methods to address some invasive pathways (e.g., ballast water) and are in need of additional environmentally-sound and humane techniques for IAS control and eradication, they recommended that the governments in the region support research and development programs for new methods of IAS prevention and control.

Furthermore, they recommended that the Baltic/Nordic governments work with relevant institutions to undertake an analysis of the economic costs (management costs and losses) associated with IAS in the region, and that they use these statistics to indicate the magnitude of the problem to policy makers.

Several speakers emphasized the need for resource managers and policy makers to know which IAS have invaded the region and in which ecosystems and countries they are currently found. They recommended that

the governments establish *inventory and monitoring programs* for IAS, giving particular attention to "high risk" locations such as ports and watersheds.

Communication, education, and outreach are needed to make people aware of the causes and consequences of invasion, inform them of the actions they can take to address the problem, and motivate them to take these actions. The speakers recommended that the Baltic/Nordic governments establish a regional public awareness campaign. They emphasized the role that international and intergovernmental organizations can play within the region to make statements about the importance of this issue in order to raise awareness and elevate regional priorities. They recommended that experts in communication and education develop tools and training courses for IAS scientists so that they can educate policy makers and resource managers in a more timely and effective manner.

Legal and policy frameworks are important tools for the prevention, eradication, and control of IAS. Speakers recommended that the Baltic and Nordic governments conduct an assessment of the relevant laws and policies within the region and create a directory of these legal frameworks (both voluntary and legally-binding). They recommended that the governments then use this directory to identify and implement a strategy for filling gaps (e.g., pathways not currently addressed through legislation) and strengthening these frameworks. The strategy should aim to ensure that trade and transport activities are being conducted in accordance with existing national and international guidelines and that the governments are consistently adhering to "best practice" guidelines. Several speakers encouraged the countries within the region

to sign and ratify relevant international agreements.

Many of the speakers emphasized the need to build the capacity of governments to address IAS problems and *share scientific, technical, and financial resources*. They suggested that the governments establish mechanisms to generate funding for coordination among all the stakeholders within the region and to send regional representatives to international meetings on IAS. They also recommended that the Baltic and Nordic governments work with industries and other potential "polluters" to establish funding mechanisms for IAS prevention and control through associated pathways.

General Discussion

Following the presentations, participants were asked to consider two general questions:

- ?? What do the participants want the region to achieve in addressing IAS?
- ?? What are the challenges for managing IAS in the Baltic/Nordic Region?

The participants concluded that the region needs to *establish an effective network for communication and cooperation* in efforts to address IAS. They felt network should be seen as a mechanism for raising the capacity of the entire region to address the problem. The criteria were identified for development and operation of the network:

- (a) Includes mechanisms for engaging all stakeholders, including those not yet concerned;
- (b) Enables the sharing of resources (scientific, technical, financial, etc.) throughout the region;

- (c) Raises awareness of the problem, existing work, and structures to address IAS within the region;
- (d) Draws in resources from other regions, international bodies, industries, and other relevant stakeholders; and
- (e) Incorporates the Baltic/Nordic regional work on IAS with other regional and global networks.

The participants identified *a number of challenges that need to be overcome* in order to establish a regional network and programs of cooperation. Many of participants shared personal stories of "lessons learned" in their efforts to overcome these challenges. Most agreed that successes came when ministries and governments were willing to work together.

The participants noted that the governments of the region differ in the level of awareness of the IAS issue and thus level of concern. This reflects, in part, differences in the amount of scientific and technical information on their problems. As a result, the governments vary in the types of mechanisms in place to address the problem. Furthermore, they noted that the governments have different political structures and levels of stability, both of which contribute to a government's ability to address IAS issues.

The participants also noted that the governments have many challenges in common. While recognition of the IAS problem exists within the scientific and technical community, in most countries, policy makers have not yet become concerned. In each country, multiple agencies have responsibility for different aspects of the IAS issue. Communication and cooperation on IAS issues are typically poor across these agencies, and even though agricultural and environmental agencies are starting to give significant attention to IAS

issues, other relevant agencies (e.g., trade and transport) have not yet engaged. This may be due to the fact that the various sectors relevant to the management of IAS have vastly different management needs and policy processes associated with them. The governments in the region will have to find a way to address prevention and control measures within each sector, while creating a mechanism to link these efforts through a common framework.

The participants also noted that existing work on IAS (science, policy, etc.) and systems to address the problem, both within and outside the government, are not well known or easily accessible and thus are not being utilized as effectively as possible. Finally, all of the participants stressed that there is a lack of funding to address the problem adequately and that time is of the essence. They felt that the governments and other bodies did not yet recognize the great urgency in addressing IAS in order to minimize the impacts on the environment, economy, and human health.

SUMMARY OF RECOMMENDATIONS

DAY TWO

Working Groups

On day two the participants were divided into two working groups in order to discuss elements of a regional action plan. These working groups had balanced representation from countries, non-governmental and intergovernmental bodies, and the environment and agricultural sectors. Each working group was asked to address the same series of questions. The following section presents the questions, as well as a summary of the responses from both working groups.

I. What are the necessary elements for a strategy to facilitate regional cooperation?

The participants concluded that the IAS problem needed to be effectively communicated in order to establish political will and encourage cooperation among the regional ministries, as well as to engage commercial interests (esp. trade, travel, and transport sectors) and non-governmental organizations. Several people felt that the countries of the region should ***communicate*** not only the environmental impacts of IAS, but also the economic and human health impacts in order to raise awareness among policy makers and throughout the private sector. Case studies of the impacts of IAS and the media were recognized as important resources. They recommended the establishment of an interdisciplinary research program to determine the economic and environmental impacts (links to raising awareness and political will) of IAS. The participants decided to issue a statement from this meeting emphasizing the need for collective action and suggested that lead

agencies or focal points be identified within each country in order to facilitate communication.

The ***exchange of technical information*** was identified as a specific aspect of communication that needed to be strengthened within and among countries in the region. In particular, they concluded that information needed to be exchanged among among scientific and technical experts (e.g. create rosters of experts, conduct joint workshops, promote interdisciplinary communication) and between these experts and policy makers. They recommended that both a Regional Resources Directory and an electronic mechanism be developed and used to report on IAS problems, establish priorities, species lists, activities, policies, and the databases (etc.) within each country.

Participants agreed that a regional strategy must be ***built upon the existing legal and institutional structures*** and policies at national, regional, and global levels. Examples of relevant international conventions included the Bern Convention, Ramsar Convention, Bonn Convention, Convention on Biological Diversity (CBD), International Plant Protection Convention (FAO-IPPC). Examples of relevant international organizations included the International Maritime Organization (IMO), the Council of Europe, and the European Plant Protection Organization (EPPO). Several participants pointed out the need for the countries of the region to support and implement the CBD's guiding principles on alien species.

Many participants pointed to the need for ***adequate financial resources*** to implement a regional strategy and expressed frustration over the current level of funding at both national and regional levels. They felt,

however, that funds would become more readily available as the awareness of the causes and consequences of the problem increased. They pointed out that while there are many mechanisms through which to raise funds, the most effective strategies will likely differ, perhaps significantly, among countries.

Finally, the participants felt that any regional strategy should include appropriate *measures of success* so that countries could continually gauge their progress on the issue at national and regional levels.

II. What are the appropriate measures of success for this region?

The participants felt that the foremost measures of success for the governments of the region are: 1) the *level at which the government is willing to commit financial resources*, 2) *how well individuals at the administrative level know each other* and are working together throughout the region, and 3) *how many joint projects* exist among the countries to address prevention and control measures for specific IAS and invasion pathways. They participants concluded that similar measures would be relevant for other stakeholder groups, such as private sector industries.

Measures of success in the context of *information gathering and exchange* that the participants identified included: 1) the establishment and exchange of lists of IAS, as well as reports on their biological and socio-economic impacts; 2) the establishment and networking of national and thematic focal points; 3) regular meetings of scientists and policy makers; and 4) the level of engagement of stakeholders and the general public in the implementing the regional strategy through educational programs and the media.

Ultimately, the participants concluded that the most important measure of success would be *increases in the level of awareness* of the issue the *results of “on the ground” action*. This measures could be obtained by: 1) evaluating the number and types of scientists and other experts (esp. taxonomists) employed to address the issue, as well as the number of publications resulting from their work, 2) assessing the level of awareness and knowledge on the issue within various audiences (including the General public, industry, and policy makers), 3) documenting the level and trends of funding support for IAS activities and programs, and 4) measuring the level of risk and rate of invasion into countries and specific ecosystems. The participants pointed out that because it is difficult to actually measure the effectiveness of prevention strategies, inventory and monitoring programs would have to be established to document that presence of organisms that bypass prevention measures.

II. How can we promote collaboration/cooperation within existing frameworks?

The participants felt strongly that the region should work as much as possible within existing regional frameworks, rather than creating new ones. They pointed out, however, that there needs to be better communication and efforts made to establish programs of cooperation among the existing bodies (e.g., Nordic Council of Ministers, European Commission, HELCOM, ICES, OSPRCOM, BMB, EPPO, and NNIS).

The participants suggested several actions that could be taken to strengthen engagement and cooperation on IAS among the regional frameworks. These included establishment of a financial mechanism that would enable government officials and experts on IAS (when appropriate) to attend

relevant meetings, 2) a mechanism for sharing information on experts and case studies, 3) a means engaging individuals from relevant stakeholder groups. Furthermore, the participants felt that these instruments should communicate their policies and programs through the media, museum exhibits, academic institutions, and other means of reaching the public.

III. What are the existing resources that can be utilized?

The participants identified a number of existing resources that could be utilized to implement a regional strategy. These included: 1) international conventions and programmes, 2) existing regional initiatives, 3) existing national initiatives, 4) regional experts, and 5) relevant institutions within the region.

With regard to *international conventions and programmes*, they pointed out that the meetings of these bodies provide opportunities for exchanging information through a network of focal points, as well as using their regulatory structures to identify and set policy priorities (see relevant bodies under Original Action Items in Appendix B).

Existing regional initiatives

that participants identified as being particularly important included legislation and procedures for plant quarantine and the Nordic network of IAS specialists. They also pointed out that the Bern Convention will be establishing a framework to through which the region can address all groups of IAS.

The participants strongly recommended that *national biodiversity plans and strategies* include an assessment of IAS problems and programs to address them. The governments shared the current status of IAS in their

national legislation, revealing both a significant difference among government priorities and clear gaps in the coverage of IAS and invasion pathways through existing legislation. Sweden, Latvia, and Norway all reported that they have national initiatives on IAS. Denmark reported that it is currently developing guidelines on nature management that might include IAS. Poland and Finland include references to IAS within their broader biodiversity strategies, and Germany is in the processes of deciding what to include in its national biodiversity strategy. Lithuania recently adopted a new environmental law noting that the prevention of spread of IAS via ballast water is a priority. Iceland reported that it has regulations in place to control the movement of fish species between waters sheds and through import pathways.

The participants felt that the region has numerous *experts* on IAS (esp. plant quarantine and health issues) that would like to be involved in region-wide efforts to address the problem, but that additional funding would be needed to enable them to engage at an adequate level. The participants felt strongly that regional programs should be interdisciplinary and suggested that experts be drawn from the following fields of study: scientific research, administration, policy, risk assessment, economics, sociology, agriculture, horticulture, agriculture, legal aspects, education, and communication. They also pointed out that “amateur experts” such as plant hobbyists and naturalists could be valuable resources.

Finally, the participants noted that the region has numerous *private institutions and interest groups* that are relevant to IAS and encouraged all of the governments to facilitate cooperation and collaboration with relevant industries, non-governmental

organizations, intergovernmental organizations and the general public.

IV. *What additional resources are needed?*

The participants identified several *new resources* that the region would either have to develop or acquire in order to implement an effective regional strategy. These include: 1) development of new specialist fields and jobs on IAS; 2) establishment and expansion of IAS education in university curricula (to meet need #1); 3) establishment of legislative and administrative policies for the regulation of certain types of industries (e.g., fur-bearing animals); 4) an inventory of existing legal frameworks relevant to the region; 5) creation of a permanent, official working group of experts on IAS within countries and throughout the region; 6) assigning focal points on IAS relevant national, regional, and global bodies; 7) making IAS a priority within all relevant regional frameworks; 8) establishing an IAS strategy in the Baltic region (similar to the Great Lakes regional strategy); and 9) creating an early warning and alert systems to inform countries about occurrences of IAS and their potential impacts.

The participants also discussed opportunities to *strengthen existing actions and resources*. They concluded that the following areas were in need of improvement: 1) assessments and identification of IAS pathways and vectors; 2) risk assessment processes; 3) assessments of economic impacts; 4) IAS monitoring programmes; 5) protocols for prevention, management, and control; 6) measures of effectiveness for prevention and management programs; 7) rigorous implementation of existing guidelines and policies on IAS (e.g., IMO and CBD).

V. *Who needs to be involved, when, and where?*

The participants felt strongly that they should all play a part in the development and implementation of a regional strategy. They identified short-term and long-term actions through which other governmental and non-governmental stakeholders could be engaged.

The participants identified the following actions that could be taken *immediately* or in the *short-term* in order to engage a wide-range of stakeholders, noting that environmental agencies should take the lead in reaching out to other sectors:

- 1) identify focal points for each government and relevant sectors (e.g., ministry of transport, ministry of agriculture, etc);
- 2) develop mechanisms to engage local agencies and communities;
- 3) establish a team to develop an early warning and reporting system;
- 4) educate higher level staff on the results of this workshop;
- 5) identify financial resources for addressing priorities (short and long term);
- 6) create and share lists of IAS;
- 7) initiate planning for a follow-up meeting on linking or merging existing databases and information sources, as well as management and coordination methods;
- 8) establish a list-serve in order to facilitate communication among participants and share regional priorities;
- 9) establish a committee to facilitate development of regional task force and regional strategy and action plan;
- 10) and expand the Nordic information on IAS experts to include information from the Baltics.

The participants also identified *longer-term or ongoing actions* to engage stakeholders, such as: 1) incorporating the issue into existing national programmes; 2) including a wider selection of ministries and trade related (industry) sectors in future meetings,

planning and projects; 3) engaging local agencies in relevant activities; 4) establishing a regional task force for the Nordic-Baltic region to address IAS; and 5) developing a regional strategy for IAS.

SUMMARY OF RECOMMENDATIONS

DAY THREE

Working Groups (continued)

On the third day of the meeting (23 May), the working groups spent the morning addressing two questions:

- ?? What are the steps to establish regional collaboration and promoting action?
- ?? What are the steps that can be taken immediately and who will take them?

The participants concluded that the following *steps* must be undertaken in order *to establish a regional strategy*, establish: 1) a regional “task force” of government focal points within the region; 2) tools (education, information sharing, monitoring results) linking throughout the levels of government and stakeholders; 3) Internet-based network of workshop participants (e.g. list-serve, mail groups etc); and 4) linkages to relevant sectors and agencies within governments (including a timeline and strategy for engagement). The participants also felt that that they should approach intergovernmental agencies to engage and facilitate action within each countries on IAS, acknowledging the need for these bodies to drive policy decisions in the Baltic/Nordic region.

The participants then identified several *steps that could be taken immediately* to raise awareness of IAS and promote the development of a regional approach to addressing the issue. In some cases, participants volunteered to take specific

actions. These are noted in the Original Action Items of Appendix B. General recommendations for immediate action by the participants included: 1) working with their relevant agencies to inform and engage the media (e.g., via press release on the regional workshop); 2) approaching relevant individuals within sectoral agencies to inform them about the workshop and the need for action on IAS; and 3) sending invitations to sectors requesting appointment of focal points on IAS both decision making and technical levels.

Regional Declaration

The participants had discussions as a whole group and in separate working groups on the elements that they wanted to highlight in a *regional statement* arising from the workshop. They felt strongly, that the most important recommendation arising from the meeting was to establish a permanent, cross-sectoral task force to address IAS issues throughout the region. Not only would the task force be able to provide coordination, but it would also be able to measure the success of regional activities. They also agreed that, until the permanent task force was created, regional coordination could take place through a network of national, thematic, and organizational focal points.

POSTSCRIPT

Within a several months of the regional workshop, efforts to implement its recommendations were already underway:

- ?? The U.S. and E.U. announced cooperation on IAS and invasion pathways in Baltic Sea and Great Lakes regions (June, 2001)
- ?? The U.S. and Russia convened an IAS workshop to identify shared concerns and opportunities for cooperation (Borok, Yaroslavl Oblast, Russia; 27-31 August, 2001)
- ?? The IMO, GEF, and UNDP held a Baltic region meeting on ballast water management (Tallin, Estonia; 22-24 October, 2001)
- ?? The Great Lakes Commission identified individuals to participate in the Great Lakes Baltic Fellows Program and brought them to the U.S. for a study tour and to participate in the 11th International Conference on Aquatic Invasive Species (Washington, D.C.; February 2002)
- ?? With funds from the Northern Europe Initiative, the U.S. Embassy organized a workshop on development of a Baltic/Nordic Hub under the Global Invasive Species Information Network (Estonia; May 2002)

APPENDIX A

Agenda

Monday, 21 May 2001

Plenary “Defining the problem from a global perspective”

Morning session

Hans Erik Svart, Chair

08h45 Welcome and overview

Hans Henrik Christensen, Director, National Forest and Nature Agency

Richard Nelson Swett, American Ambassador, U.S. Embassy

Peter Johan Schei, International Negotiations Director, Directorate of Nature Management, Norway (note: cancelled due to illness)

09h00 Introduction of participants

09h25 Overview of the invasive alien species problem: What can we do? Interrelations between science, private sector, and politics Peter Johan Schei (Norway)

09h55 Framework for international cooperation and capacity building: The Global Invasive Species Programme (GISP) Jamie K. Reaser (USA)

10h15 Tea and coffee break

10h35 International Plant Protection Convention (IPPC) and regional plant protection organization Christina Devorshak (Italy)

11h00 The Global Ballast Water Management Programme and other IMO activities on invasive marine species. Steve Raaymakers (UK)

11h25 Group Discussion

12h00 Lunch at Eigtveds Pakhus Restaurant

Afternoon session

Ulrike Doyle, Chair

Plenary

Exploring regional challenges and opportunities

13h05 Biological causes and consequences of the problem: Regional focus on marine issues Stephan Gollasch (Germany)

13h25 Biological causes and consequences of the problem: Regional focus on terrestrial issues Sauli Härkönen (Finland)

13h40 Biological causes and consequences of the problem: Regional focus on freshwater issues Heidi Hansen (Norway)

13h55 Overview of regional policy issues – existing frameworks, needs, challenges, opportunities Inger Weidema (Denmark)

- 14h10** Tea and coffee break
- 14h30** **Regional cooperation in the Baltic Sea area: BMB and HELCOM (Baltic Marine Biologists and Helsinki Commission) activities and objectives** Sergej Olenin (Lithuania)
- 14h50** **The Group on Aquatic Alien Species (GAAS): Regional activities with emphasis on information sharing** Vadim Panov (Russia)
- 15h15** **Risk assessment as a tool for decision making on invasive alien species: What next?** Megan Quinlan (UK)
- 15h35** **The GISP Toolkit of Best Prevention and Management Practices and potential regional applications** Rüdiger Wittenberg (Germany)
- 16h00** **General discussion on regional objectives and needs –**
1. What do the participants want the region to achieve and what will the region gain
2. What are the challenges for managing invasive species in the Baltic/Nordic Region?
- 17h15** **Announcements and overview of Tuesday sessions and plan and objectives**
- 17h30** **Adjourn**

Tuesday, 22 May 2001

Morning session
Henn Ojaveer, Chair

Working Groups
Establishing regional collaboration and promoting action - Part I

- 08h30** **Overview**
Recommendations and directives for working group sessions
- 08h40** **Regional cooperation working group session (Working Groups I and II)**
1. What are the necessary elements for a strategy to facilitate regional cooperation?
2. What are the appropriate measures of success for this region?
3. How can we promote collaboration/cooperation within existing frameworks?
- 10h30** **Tea and coffee break**
- 11h30** **Plenary – presentation of working group summaries, group discussion**
- 12h30** **Lunch at Eigtveds Pakhus Restaurant**

Afternoon Session

Sigurdur Thrainsson, Chair

Working Groups

Establishing regional collaboration and promoting action - Part II

13h30 Introduction

13h40 Great Lakes experiences in intergovernmental cooperation on management of species Julie Wagemakers, Great Lakes Commission (USA)

14h00 Regional action working group session (Working Groups I and II)

1. What are the existing resources that can be utilized to achieve the outcome?
(Identify existing frameworks within the region: regional strategies, experts, institutions)
2. Identify gaps, what additional resources are needed?
3. Who needs to be involved, when, and where? (Taking action: short-term and long-term with considerations for cooperation).

14h30 Tea and coffee break

14h45 Regional action working groups continue and develop summaries

15h45 Summary presentations - reports on outcomes of Working Groups

16h15 Group discussion

17h00 Announcements, review of results and objectives, adjourn

Wednesday, 23 May 2001

Morning Session

Sergej Olenin, Chair

Working Groups

Establishing regional collaboration and promoting action - Part III

08h30 Review conclusions and recommendations

08h40 Working groups I and II address the following points:

- 1) What are the steps to establishing regional collaboration and promoting action?
- 2) What are the steps that can be taken immediately and who will take them?

10h00 Tea and coffee break

10h30 Plenary – presentation of final Working Group summaries

11h15 Group discussion

11h50 Summary of major conclusions, recommendations, and areas for further discussion

12h15 Final drafting of Copenhagen Declaration

12h30 Closing remarks

12h45 Adjourn

13h00 Press conference

APPENDIX B

Original Action Items

Day 1: Monday, 21 May 2001. Plenary Sessions & Group discussion

Summary of Group Discussion

I. What do the participants want the region to achieve?

To establish an effective network within the region that:

- (1) Includes all stakeholders
- (2) Raises awareness of existing work and structures to address the problem within the region
- (3) Raises awareness of the problem and engages governments, industries and other relevant bodies not yet concerned
- (4) Enables the sharing of resources (scientific, technical, financial, etc.) throughout the region in order to raise the capacity of the region as a whole
- (5) Draws in resources from other regions, international bodies, industries, and other
- (6) Relevant stakeholders
- (7) Incorporates the Baltic/Nordic regional work on invasive species in the context of other regional frameworks and the broader global context

II. What are the challenges for managing invasive species in the Baltic/Nordic Region?

A. There are **many different countries** within the region. These countries differ in:

- (1) Level of awareness of issue and thus level of concern
- (2) Amount of scientific and technical information on their problems
- (3) Types of mechanisms in place to address the problem
- (4) Political structure and stability

B. Within each country:

- (1) There are different levels of concern. Concern about invasive species exists
- (2) At the scientific and technical levels in many cases, but this concern hasn't yet reached the "higher" policy making levels
- (3) There is a lack of funding to address the problem adequately
- (4) There are many different agencies with responsibility for some aspect of
- (5) The invasive species issue.
- (6) Ministries other than scientific and environmental have not yet been adequately engaged
- (7) Existing work on invasives (science, policy, etc.) and systems to address the problem are not necessarily visible to others and thus not utilized as effectively as possible
- (8) The various sectors relevant to the management of invasive species have vastly different management needs and policy processes associated with them. Thus, the regional will have to address prevention and control measures with them individually, but find a way to link these efforts through a common framework
- (9) Time is of the essence. There is a great urgency to address this issue.

III. Recommendations for Regional Action

(drawn from presentations and group discussion)

A. Leadership and Coordination

- (1) Identify a lead agency or other focal point on invasive species within each country (should be someone with legal authority)
- (2) Establish a regional invasive species "council" – a joint forum for consultation, co-ordination, and co-operation
- (3) Establish regional task forces on marine, freshwater, and terrestrial (plant and animal) invasive species issues
- (4) Establish mechanisms to foster inter-sectoral cooperation

- (5) Hold annual meetings of scientists and relevant stakeholders within the region

B. Information Management

- (1) Establish a mechanism for sharing information on invasive species throughout the region – including information on publications, existing databases, ongoing research, monitoring, early detection, management strategies, etc. The information needs to be easily accessible. Link with GISP Global Invasive Species Information Network

C. Invasive Species Management (Prevention-Control)

- (1) Establish mechanisms to learn about “success” stories from other countries and international organizations
- (2) Create a regional “toolkit” of best practices in the prevention and management of invasive species (use GISP toolkit as starting point)

D. Research

- (1) Conduct an assessment of invasive species pathways into and out of the region and rank these pathways in order of risk
- (2) Establish research and development programs for new methods of invasive species prevention and control
- (3) Undertake an analysis of the costs associated with invasive species within the region in order to indicate the magnitude of the problem to policy makers

E. Inventory and Monitoring

- (1) Conduct biological surveys and conduct monitoring programs for invasives at “high risk” locations, e.g., ports, watersheds

F. Communication, Education, and Outreach

- (1) Establish a regional public awareness campaign
- (2) Establish communication tools and training courses for invasive species

scientists so that they can educate policy makers and resource managers in a more timely and effective manner

- (3) Encourage international and intergovernmental organizations within the region to make statements about the importance of this issue in order to raise awareness and elevate priorities in the region

G. Law and Policy

- (1) Conduct an assessment of the relevant laws and policies within the region - create a directory of these legal frameworks and identify and implement a strategy for strengthening these frameworks
- (2) Ensure that trade and transport activities are being conducted in accordance with existing national and international guidelines
- (3) Ensure consistency within the region in adhering to “best practice” guidelines
- (4) Encourage countries within the region to sign and ratify relevant international agreements

H. Fundraising

- (1) Establish mechanisms to generate funding for coordination among all the stakeholders within the region
- (2) Work with industry and other potential “polluters” to establish funding mechanisms for invasive species prevention and control through associated pathways
- (3) Establish mechanism for funding regional representatives to international meetings on invasive species

Day 2: Tuesday, 22 May 2001. Working Groups

I. What are the necessary elements for a strategy to facilitate regional cooperation?

A. Communication

- (1) Statement resulting from this meeting stating the will for cooperation and a common goal

- (2) Establishing political will (within individual nations and throughout the region)
- (3) Identifying lead agencies/focal points within each country for each sector
- (4) Encouraging cooperation across ministries within each country
- (4) Engaging commercial interests (especially trade, travel and transport sectors)
- (5) Engaging non-governmental organizations

B. Information/ Networking

- (1) Exchanging information among scientific and technical experts (e.g. create rosters of experts, conduct joint workshops, promote interdisciplinary communication)
- (2) Facilitating exchange of information between experts and policy makers
- (3) Establishing interdisciplinary research to assess the economic and environmental impact (links to raising awareness and political will)
- (4) Reporting on problems, establishing priorities, species lists, activities, policies, databases, etc. within each country
- (5) Communicating economic and human health impacts is an important tool in promoting awareness
- (6) Raising awareness of the issue: national and regional approaches; utilizing case studies of invasive species and their impacts; recognizing media as a key resource

C. Action

Must be built upon and incorporate the following:

- (1) The regulatory and legislative frameworks that already exist within each country
- (2) Fundraising (there are many options for mechanisms to accomplish this. What is effective will likely differ among countries)
- (3) The “Guiding Principles” of the CBD
- (4) Other relevant international conventions such as the Bern Convention, Ramsar

Wetlands Convention, Bonn, International Plant Protection Council (FAO-IPPC) (and other relevant bodies such as the Council of Europe, European Plant Protection Organization (EPPO), etc.)

- (5) Mechanisms for measuring success (nationally and regionally)

II. What are the appropriate measures of success for this region?

A. Communication

- (1) Government commitment to the issue (e.g. government is willing to spend on research and other relevant activities)
- (2) People at the administrative level know each other (focal points and network established)
- (3) Stakeholders are identified, know each other and are involved in the
- (4) Joint projects among countries to address prevention and control measures targeted at specific species and pathways

B. Information/Networking

- (1) Successful exchange of lists of experts and focal points
- (3) Establishment of lists of invasive species within each country, communications of list and management between countries
- (4) Meetings of scientists with policy makers
- (5) Reports of environmental and economic impacts prepared
- (5) Engagement of stakeholders and the general public through education outreach and media

C. Action

- (1) Scientists and others are employed/engaged to address the issue (taxonomists are especially important, and are lacking in many countries)
- (2) An increase in the number of publications on the issue
- (3) Realization of funding of support for activities and programmes

- (4) Risk and rate of invasion is lowered (effective prevention is difficult to measure, inventory, assessments and monitoring programs are needed)
- (5) Increase awareness and knowledge of various audiences including general public, stakeholders, industry, and policy makers

II. How can we promote collaboration/cooperation within existing frameworks?

- (1) Identify and use of existing regional frameworks (e.g., Nordic Council of Ministers, European Commission, HELCOM, ICES, OSPRCOM, BMB, EPPO, NNIS)
- (4) Establish financial mechanisms for participation in meetings of existing frameworks
- (3) Share information on expertise (successful prevention, monitoring and management through meetings on international organizations)
- (4) Engagement in international and national meetings with individuals from identified and relevant stakeholder groups
- (5) Utilizing the media, museums, academic institutions, etc to communicate information on the existing frameworks and policy

III. What are the existing resources that can be utilized?

A. International conventions and programmes

- (1) Collaborating with meetings of regional and global international organizations as an opportunity to exchange information, by utilizing the established network of focal points available; using the regulatory structures of these organizations for identifying and setting policy priorities and focal points as a resource for developing national focal points on invasive species issues
- (2) Relevant conventions and programmes including: IMO Globallast programme,

GISP, IPPC, CBD, CITES, Ramsar, HELCOM, OSPRCOM, Bern convention (invasive species initiative), GISP products (Global Strategy, Toolkit on Best Practices for Prevention and Management, Guide to Legal and Institutional Frameworks, etc)

B. Existing regional initiatives

- (1) Legislation and procedures for plant quarantine, Nordic Network on Invasive Species Specialists (includes full listing of experts on invasives and areas of focus), can be expanded to include Baltic countries using the information gathered through this meeting. Consideration for working within the frameworks and applying resources available with the following: Global Biodiversity Information Facility (GBIF), European Plant Protection Organisation (EPPO), Nordic Baltic Plant Health Cooperation, the Nordic Council of Ministers, Nordic Report on Invasive Species and others.

C. Upcoming opportunities

- (1) Bern Convention will be establishing a strategy on framework to address all groups of invasive species.

D. Existing national initiatives

- (1) Convention on Biological Diversity (CBD) plan and call to develop national biodiversity strategies and plans to include invasive species initiatives (individual national representatives to define gaps and note what is included in respective countries). Some of these plans are included at the CBD-CHM (Clearinghouse Mechanism) site (<http://www.biodiv.org/chm/>) as potential models)
- (2) National initiatives pertaining to IAS exist for Sweden, Latvia, and Norway
- (3) Norway just finished white paper on IAS and revises regulations regularly to address IAS issues
- (4) Denmark is developing guidelines on

nature management that might include IAS

- (5) Germany plans to write a national strategy and is deciding what issues to include
- (6) Poland and Finland have a broad strategy on biodiversity. Within this strategy, there are some references to the need of further work in the field of invasive alien species management
- (7) Lithuania has a biodiversity strategy that might address IAS - new environmental law notes that prevention of spread of invasive alien species via ballast water transfer is a priority
- (8) Iceland has some regulation regarding the movement of fish species between watersheds, import pathways, etc

E. Experts

- (1) There are many experts within the region that would like to be involved, particularly invertebrate specialists (Estonia). Funds are a limiting factor
- (2) Hobbyists, naturalists and others interested in particular groups could provide resources
- (3) There are good lab specialists associated with plant quarantine and health issues
- (4) The following fields of expertise need to be considered in addressing the issue, and experts identified within the region:
Scientific research, administration, policy, risk assessment, economics, sociology, agriculture, horticulture, agriculture, legal aspects, education & communication

F. Institutions and interest groups

- (1) Encourage facilitation of cooperation and collaboration with industry, organizations, NGO, IGO and general public

IV. What additional resources are needed?

A. New actions and resources

- (1) Develop new specialist fields on IAS (e.g. taxonomists, etc) establishing jobs for these specialists is necessary

- (2) Establish and expand education and outreach programmes to include university curricula to educate the people to fulfill these jobs that are going to need to exist in the future
- (3) Establish legislative and administrative policies for regulation of certain types of industries (e.g. fur-bearing animals)
- (4) Inventory of existing legal frameworks relevant to the region
- (5) Identify permanent, official working group of experts on invasive species (marine, terrestrial, freshwater biomes) within countries and throughout the region (starting immediately, but with understanding that development of this cross-sectoral holistic approach will take time (years) to become fully established)
- (6) Encourage relevant regional frameworks that don't have focal points on invasive species to name focal points to address the issue.
- (7) Encourage relevant regional frameworks that do not currently include invasive species as priority issue, to do so
- (8) Establish strategy in the Baltic region (similar to the Great Lakes regional strategy). This should begin with the marine environment, then expanding to include freshwater and terrestrial, with emphasis to include the entire drainage basin into the region
- (9) Establish early warning and alert systems to inform other countries about occurrences of invasive species impacts

B. Strengthen existing actions and resources

- (1) Assessments and identification of pathways and vectors
- (2) Improve risk assessment processes
- (3) Expand and improve assessments of economic impacts
- (4) Expand monitoring programmes
- (5) Develop new and more effective prevention, management, and control protocols
- (6) Expand and more rigorously apply a system to assess effectiveness of measures
- (7) Rigorously implement existing guidelines on IAS (e.g. IMO ballast

water guidelines, ICES, WGITMO Code of Practice, and the Guiding Principles for the Prevention of Impacts of Alien Species as established by the CBD

V. Who needs to be involved, when, and where?

*All government representatives in this meeting should engage and become involved in some way

A. Short term actions

- (1) Environmental agencies take the lead, initiating engagement with other sectors
- (2) Identify focal points for sectors (e.g. ministry of transport, ministry of agriculture, etc)
- (3) Stimulate awareness and involvement of local agencies and relevant agencies and stakeholders
- (4) Build awareness and stimulate local community engagement
- (5) Establish team for reporting system
- (6) Educate higher level staff on results
- (7) Identify financial resources for addressing priorities (short and long term)
- (8) Work in collaboration with other ministries to identify invasive species focal points for country
- (9) Plan future meetings on linking and or merging existing databases and information sources, management and coordination methods
- (10) Identify and share lists of IAS
- (11) Employ email/mail group system to discuss shared priorities; and establish a committee to facilitate development of regional task force and regional strategy and action plan
- (12) Those overseeing the Nordic Network can input the information on experts that was and is being collected with response to this meeting (suggest partnering countries Nordic-Baltic to compile the information, to be established as a regional resource directory on invasive alien species
- (13) Maintain a Baltic-Nordic IAS network from this meeting by email discussion

(establish coordinator for list management)

B. Long term actions

- (1) Consider ways to incorporate this issue into existing work programmes (self-motivated or by engaging others)
- (2) Include a wider selection of ministries and trade related (industry) sectors in future meetings, planning and projects
- (3) Stimulate and engage/involve local agencies
- (4) Develop a regional task force for the Nordic-Baltic region to address IAS
- (5) Develop a regional strategy for IAS

Day 3: Wednesday, 23 May 2001.

Working Groups

I. What are the steps to establish regional collaboration and promoting action?

- (1) Recognizing the different national infrastructures - a "task force" should be established within representative government agencies (country focal points within region)
- (2) Regionally link the focal points and develop a program of action to create intra and inter country networking
- (3) Establish tools (education, information sharing, monitoring results) linking horizontally and throughout the levels of government and stakeholders
- (4) Maintain a network for workshop participants (e.g. listserver, mail groups etc)
- (5) Establish an appropriate approach to link sectors on engagement
- (6) Engage relevant agencies within their country
- (7) Participants should approach Intergovernmental agencies to engage and facilitate action within countries
- (8) Acknowledge the need to drive policy decisions in the Nordic/Baltic region, with special emphasis on increasing awareness on the importance of the issue in the Baltic countries

- (9) Establish format/timing and distribution of materials for various agencies initiating engagement (define level of government to be approached and clarify level of transfer of invitation to engage (across sectors))
- (10) In recognition of important EU initiatives, such as the Bern Convention, as well as CBD directives and regional initiative and working within these existing frameworks we must take action to implement the initiatives addressing the management of IAS in the N/B region

II. What are the steps that can be taken immediately and who will take them?

- (1) Participants and their associated agencies should inform and engage media, (e.g. via press release) within respective countries to begin raising awareness
- (2) Participant action: each representative country should appoint individual representative to connect with GISP Secretariat in USA to modify (if needed) and translate a press release for distribution in respective countries in the Nordic Baltic region
- (3) Participants from workshop should approach relevant individuals within sectoral agencies to invite/engage/inform them about the workshop and the need for action in relation to IAS
- (4) The relevant agencies/participants could send invitations to sectors requesting appointment of individual at level of decision, but also with emphasis on technical working level

Follow up activities as presented by individuals in Working Group 2:

Vilnius Bernards (Latvia)
 Contact marine research institute
 Write story for magazine

Gintaras Lapinskas (Lithuania)
 Report to minister of Agriculture

Contact Environmental. Ministry to take some action

Krzysztof Skora (Poland)
 Education programs for children
 Program for Polish navy

Girts Kalnins (Latvia)
 Report to Min of Agriculture
 Establish working group to discuss issue

Melanie Josefsson (Sweden)
 Report to different people in Ministry of Environment
 Contact scientific committee for biological diversity
 Establish network of people working on invasive species within the country

Megan Quinlan
 Meet with WTO delegates about IPPC processes
 Meet with Rockefeller Foundation etc. re invasive species issue

Hans Erik Svart (Denmark)
 Report to agency, especially those responsible for bi-lateral cooperation
 Report that this is an area for projects, especially in the Baltic Countries
 Organize a follow-up on what has happened here
 Expanding Nordic Network

Sigurdur Thrainsson (Iceland)
 Inform Minister of the Environment about this meeting
 Work on issues related to invasive species re species list and regulatory framework regarding import
 Encourage others to keep in mind the Nordic/Baltic partnership

Ulrike Doyle (Germany)
 Write a report for Ministry
 Get the idea across that it would be a good idea to have a strategy for the Baltic
 Region that could be built upon (e.g. Great Lakes region)

Write country against strategy against IAS under CBD

Heidi Hansen (Norway)

Give report on workshop to Ministry
Hold workshop with fisheries officers and discuss invasive species, reporting on hotspots and making an action plan
Eradicate two or three rainbow trout populations this summer
White paper on biological diversity and monitoring of invasive species

Raina Motus (Estonia)

Make a statement to Ministers
Take idea of intergovernmental working group seriously
Identify national focal point on invasives to coordinate work

Liina Pirsoo (Estonia)

Build on Nordic database with Estonia information
Make a black list for Estonia
Create a booklet about invasive plant

Sergej Olenin (Lithuania)

Get HELCOM to support activity, look into GEF project for support
Create regional focal points to collect information
Continue seeking cooperation with Nordic region to finish ballast water studies
Talk to B and B coordinating committee
Bring together ministers within country

Day 3: Wednesday, 23 May 2001. Group Discussion on Declaration

A. General points

- (1) Need to establish strategy for the Baltic region [similar to Great Lakes Commission (USA)] initially starting with marine environment, then establishing similar plan for freshwater and terrestrial. Include entire drainage basin to the region
- (2) Establish permanent, official working group of experts on IAS (marine, terrestrial and freshwater) within

countries and throughout the region (start now, with understanding that it could take up to a couple of years to become fully operational)

B. Other considerations

- (1) There can be unexpected consequences to accessing information and how it is used
- (2) There is a lack of information on what resources are available in the region on some topical areas. People tend to only be aware of the issue that they work in (need to consider a holistic approach)
- (3) Acknowledging that the Baltic Sea Fisheries Commission works with industry
- (4) Can be difficult to engage sport hunting and sport fishing groups as certain species are used for these industries. Noting that these groups can also work cooperatively in many instances (baitfish release, boat/gear cleaning to minimize spread of organisms) with education and awareness campaigns
- (5) Concern that a Baltic strategy crossing marine, freshwater and terrestrial issues will have success as some people will have difficulty in communication and understanding
- (6) Some participants expressed doubt about which measures are considered short or long-term actions.

C. Question: who will establish and manage these projects (e.g., networks)?

- (1) These are requirements to establish focal points and networks under various international agreements. Some of these agreements have structures in place to help facilitate these networks
- (2) Networks are a good way to work toward the function of a regional council – which would be expensive. Focal points can take turns organizing and acting as a regional body until a

permanent regional body can be created. Ultimately the permanent regional body would be able to provide assistance in measuring our success

- (3) Many of the countries already have focal points under the International Maritime Organization (IMO) and other organizations/agreements – thus you already have a network within each country. What we may need to do is build bridges across the existing networks and fill gaps where necessary
- (4) Some of the international agreements, such as the Baltic Marine Environment Protection Commission (HELCOM), already have regional structures in place that can also facilitate regional networking
- (5) The European Plant Protection Organization (EPPO) would be a resource to address establishing a regional structure on the terrestrial perspective

APPENDIX C

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APPENDIX D

Poster Presentations

The Invaders in the Curonian and the Vistula Lagoons of the Baltic Sea
Elena Naumenko

*Consequences of biological invasions: case study of a predatory cladoceran *Cercopagis pengoi* in the Baltic Sea*
Henn Ojaveer

Neogobius melanostomus (Pallas 1811) - new fish in the Baltic Sea
Krzysztof E. Skora and Janusz Stolarski

*Expansion of a round goby (*Neogobius melanostomus* Pallas 1817) in the Gulf of Gdansk (Baltic Sea)*
Mariusz R. Sapota and Krzysztof E. Skora.