### Needs and Approaches to Improve Access to Environmental Information for Transboundary Decision-Making in the Baltic Sea Region

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#### Needs and Approaches to Improve Access to Environmental Information for Transboundary Decision-Making in the Baltic Sea Region

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The Baltic Sea Region (BSR) is in this report defined as the Baltic Sea and its drainage basin. BSR, thus, fully of partially comprises the following nine Baltic Sea riparian countries; Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia, and Sweden, and the five peripheral countries; Belarus, the Czech Republic, Norway, Slovakia and Ukraine.

### Foreword

From an international environment and sustainable development perspective, the Baltic Sea Region<sup>1</sup> is one of the more exciting transboundary regions of the world today. In fact, this region has since the 1970's been followed closely by the international community, and in many respects been considered a model region for its innovative solutions to its environmental problems. In the 1970's, the shared concerns were the increased multiple type pollution to the Baltic Sea and the recognition of these problems as truly transboundary, thus demanding joint solutions. The establishment of the first Convention on the Protection of the Marine Environment of the Baltic Sea Area in 1974 was a result of this recognition. The convention managed by the Helsinki Commission (HELCOM) was the first international agreement to cover all sources of pollution, from land and from ships as well as airborne.

In a decade characterised by remarkable geopolitical changes; such as the disintegration of the Soviet Union, the unification of the two German States and the enlargement of the European Union, the international environment and sustainable development commitments of the region have been further reinforced.

Several high-level as well as grassroot level initiatives have emerged. Many of them have common goals - to improve the environmental health of the Baltic Sea and to secure long-term sustainable ecological and economic development for the people and countries within its drainage basin. A number of these initiatives, including the Baltic Joint Comprehensive Environmental Action Programme (JCP), the Vision and Strategies Around the Baltic (VASAB) 2010 and the Agenda 21 for the Baltic Sea Region (Baltic 21), have all identified a need for monitoring or information systems to support these efforts and to enable the region to quantitatively measure its achievements. In the spirit of chapter 40 of the global Agenda 21, indicators of environment and sustainable development, Geographic Information Systems (GIS) and Internet are tools and techniques frequently mentioned by these initiatives.

UNEP/GRID-Arendal, one of the environmental data and information centres in the global network of GRID centres under the United Nations Environment Programme, in conjunction with its second Board Meeting 1997, organised an expert seminar in Stockholm on 18 September, on *Needs and Approaches to Improve Access to Environmental Information for Transboundary Decision-Making in the Baltic Sea Region.* 

The Seminar clearly pointed to the timely needs of the Baltic Sea Region to develop a monitoring and information system to follow-up the conclusions and actions coming from the international Baltic 21 and VASAB 2010 initiatives. This should complement an enhanced HELCOM and JCP monitoring and information system.

If the Baltic governments are jointly able to agree upon and implement an information system based on indicators, GIS and Internet, we are convinced the

<sup>&</sup>lt;sup>1</sup> For more information about the Baltic Sea Region, please refer to the BALLERINA web site http://www.baltic-region.net/

Baltic Sea Region will become a model region also with respect to transboundary environmental data and information management. Furthermore, this may become a solid and forceful regional contribution to the forthcoming European Convention on Access to Environmental Information and Public Participation developed under the auspices of UN/ECE and expected to be signed at the Environment for Europe Conference in Aarhus, June 1998.

We are grateful for the willingness of the invited experts to share their viewpoints and experiences. These viewpoints, and the main conclusions, you will find documented in this Executive Report edited by Bertil Hägerhäll and Britt Hägerhäll Aniansson in co-operation with Sindre Langaas.

Finally, we will also take opportunity to express our gratitude to the Stockholm Environment Institute for their 'open arms' when contacting them about seminar and board meeting venue.

Sum, reddig

Svein Tveitdal Director GRID-Arendal

### **1. Welcome and Introduction**

The Seminar was opened by the Chairman of the Board of UNEP/GRID-Arendal<sup>2</sup>, *Mr. Leif Christoffersen*.

The participants were welcomed to the premises of Stockholm Environment Institute<sup>3</sup>, SEI, by *Mr. Arno Rosemarin*, Communications Director at SEI. Mr. Rosmarin also made a brief presentation of the organisational structure of SEI and its broad network of co-operating institutions, the SEI vision and work programme, and expressed a hope that there will be increasing scope for co-operation on various projects between UNEP/GRID and SEI.

Mr. Svein Tveitdal, Director of UNEP/GRID-Arendal, first thanked SEI for their hospitality in hosting the Seminar (and subsequent Board meeting). He saw many similarities between SEI and GRID, and a high potential for future co-operation. He then briefly went through the history of GRID-Arendal, and its mission to bridge (mainly) international gaps between scientific data and information and policy-making by offering a multitude of techniques and approaches including Geographic Information Systems (GIS) and Internet. Further, he cited the recent UN Reform Proposal by the UN Secretary General Koffi Annan, in which a further strengthening of the GRID-network was called for. Among the various geographic areas of focus to GRID, Tveitdal then briefly concentrated on the activities carried out by GRID-Arendal in the Baltic Sea Region. The outputs of these activities could be grouped into three main categories; (i) increased availability of Baltic wide seam-less GIS data sets, (ii) increased national capacities in environmental data management within several of the CEE and NIS countries, and (iii) increased access to environmental information on Internet (BALLERINA).

*Mr. Sindre Langaas,* UNEP/GRID Project Manager for the Nordic/Baltic Region, presented some basic facts about the Baltic Sea Region, aimed a familiarising those participants from outside the region with the regional setting. In doing so he described how the international co-operation on the environment has developed in the region since its start in the early 1970s. In this respect, the Baltic region is regarded as a "success story" by the international community and an area where international co-operation could continue despite the Cold War.

He also stressed the important changes that have taken place following the geopolitical transitions in the region in the late 1980s early 1990s. These changes have paved the way for a comprehensive drainage area approach to the environment and development issues. This new approached is demonstrated by the development of the HELCOM<sup>4</sup> Joint Comprehensive Environmental Action Programme, the VASAB 2010 initiative (Vision and Strategies around the Baltic Sea 2010), and not least by the most recent transboundary region-wide initiative – the Baltic Agenda 21 process.

<sup>&</sup>lt;sup>2</sup> UNEP/GRID-Arendal - http://www.grida.no/

<sup>&</sup>lt;sup>3</sup> SEI - http://www.sei.se/

<sup>&</sup>lt;sup>4</sup> HELCOM - http://www.helcom.fi/

Furthermore, Mr. Langaas outlined the aim and program of the seminar. (*See Appendix 2 and 3.*) As part of this, he highlighted why the initiation of a discussion

on the information needs and requirements of various users including the general public, as well as on the improvement of access to environmental information for transboundary decision-making, would be timely at this particular point in time.

Some of the reasons for starting such a discussion are, *inter alia:* 

- the existence of many ongoing or planned transboundary initiatives, where consolidated information will be needed;
- the present lack of systems to effectively monitor progress towards agreed targets;
- the lack of a scientific based structure to assess whether the Baltic Sea Region is moving towards sustainable development;
- the lack of good mechanism to provide information which are presented in a form suitable for decision-making.

Finally, Mr. Langaas expressed a hope that the seminar would result in agreed conclusions and recommendations. These could form the basis for further discussion and future agreement on what kind of information system that should be developed in order to provide decisions-makers and all interested parties with easily accessible information on environment, natural resources and sustainable development in the Baltic Sea Region.

### 2. Background Presentations

### 2.1. Data and Information Needs Seen from the Baltic Agenda 21<sup>5</sup> Perspective. *Professor Lars Kristoferson, Secretary General of Baltic 21*

The ongoing process to develop an Agenda 21 for the Baltic Sea Region was outlined by *Professor Lars Kristoferson*, Secretary General of Baltic 21. In his presentation, Professor Kristoferson referred to the Presidency Declaration of the 1996 Visby Summit. In the Declaration it is stated that the essential objective of the Baltic Sea co-operation is the constant improvement of the living and working condition of their peoples within the framework of sustainable development, sustainable management of natural resources and protection of the environment.

The development of an Agenda 21 for the Baltic Sea Region had been called for as one element of the action programmes endorsed by the Summit. The detailed terms-of-reference of the Baltic 21 process had been further elaborated and formally adopted at the informal meeting of environment ministers from all the Baltic countries held at Saltsjöbaden, Sweden, in October 1996.

The scope of the Baltic 21 was summarised in the following points:

- Focus should be on common regional action;
- Focus should be on environment;
- It should provide for sector integration;
- The perspective should be long term, for instance to the year 2030;
- Emphasis should be on the whole region with its environmental and development problems, and not only on the Baltic Sea;
- The process should be open, democratic and transparent (use of Internet);
- The Baltic 21 should build on, complement and extend existing cooperation. As part of that close co-operation with other regional organisations/initiatives such as HELCOM and VASAB should be ensured
- The Baltic 21 should have a transdisciplinary and "holistic approach and should link sectors and build shared visions;
- It should provide links between, and enhance, local, regional and international Agenda 21 initiatives; and
- It should include a proposal for a regional action programme.

The development of action plans for key sectors will be an essential element of the Baltic 21 process. Such plans are being developed for seven sectors; agriculture, energy, fisheries, forestry, industry, tourism and transport. Lead countries or organisations have taken on the responsibility to develop these sector plans. Each sector assessment is expected to include a number of elements, e.g.:

<sup>&</sup>lt;sup>5</sup> Baltic 21 - http://www.ee/baltic21/

- Definitions of goals and indicators for sustainable development;
- Evaluations of activities to date;
- Identification of obstacles and gaps in the process towards sustainable development;
- Scenarios, indicating paths to sustainable development;
- Identification of necessary policy changes;
- Proposals for action programmes including targets, monitoring methods, time frames, actors and financing.

It is hoped that this process will provide new insights on the cross-linking of sectors, as well as a new feeling and understanding of where the obstacles to sustainable development are and what needs to be done.

Professor Kristoferson also emphasised that during the whole Baltic 21 process there will be options for very good synergy between BALLERINA and Baltic 21. The prospects for co-operation between BALLERINA and the Baltic 21 will be even greater during the implementation phase of the Baltic 21. Then there will be a very strong need for solid and comprehensive information to assess progress towards the ultimate goal of sustainable development throughout the whole Baltic Sea Region.

The final product of the first phase of the Baltic 21 process, the Baltic Regional Agenda 21, will be a politically negotiated document. It will be presented during the spring of 1998, and preferably be adopted at the highest political level.

### 2.2 A Science Perspective on Transboundary Baltic Environmental Issues: Monitoring, Databases, Assessments & Information for Decision-making. Professor Fredrik Wulff, Department of Systems Ecology<sup>6</sup>, Stockholm University

In his presentation, *Professor Fredrik Wulff*, Department of Systems Ecology, Stockholm University, emphasised that the main objective of the various international Baltic activities is to clean up the Baltic Sea. The major environmental problem today is the chronic state of eutrophication and oxygen depletion. At the same time the Baltic Sea can be regarded as a "success story" in terms of reducing the inputs and effects of certain persistent organic substances, such as DDT and PCBs. As a result of actions taken, seals and white-tailed eagles are recovering.

Professor Wulff stressed that the role of the scientists is to identify problems and monitor trends while the banning of substances and/or activities must be political decisions.

In focusing his presentation and discussion on the problems and issues related to nutrients/eutrophication in the Baltic Sea Area, he emphasised that nutrients as a

<sup>&</sup>lt;sup>6</sup> Dept. of Systems Ecology, Stockholm University - http://www.ecology.su.se/

"problem" are different from toxic substances. Nutrients are naturally occurring, life-giving substances which cannot be banned or taken away. Instead it is a matter of controlling the inputs. Bearing in mind the inertia of the marine ecosystems, this raises a number of questions and issues:

- What should be taken away where?
- Will the effects be the same in various parts of the Baltic?
- Local action could imply much for the local coastal area/system but little for the Baltic Sea Area as a whole, whereas other actions could have a much greater total impact.
- It is also quite clear that different actions will have different price tags.

Thus, there is a strong need for careful consideration before decisions on actions are taken. There are risks that a lot of money could be spent on action which prove not to be optimal. The scientists have an important role to play by providing information to this process, in order to avoid having political action taken on the basis of inadequate or incorrectly interpreted data. It is important to realise that scientists understand more now about the real reasons for marine environmental degradation, and see more reliable long-term trends. However, the problem is how to continue in the future and to follow up actions taken. There is an urgent need, for example, to follow up what happens in the marine environment from changes in loads of nutrients and pollutants.

The political changes in the former centrally planned countries resulted in a new openness concerning the environment, and a much more free flow of data and information across the Baltic. Unfortunately, the situation is now changing again for the worse. Institutes and individual scientists in some of the countries (notably Russia but also Poland) are to an increasing extent demanding to be paid for participating or exchanging their data.

Hence, the major obstacle for making timely and frequent compilations and assessments is not related to scientific capacity but to administrative and organisational problems concerning the gathering of all necessary data.

Data is compiled every five years by HELCOM in the production of the HELCOM Periodic Assessments. However, these Assessments do not provide any clear assessments of long-term trends. Professor Wulff illustrated this by diagrams of the input of nitrogen and phosphorus for the period 1980-1990.

He furthermore emphasised the importance of the time aspects. This was illustrated by results obtained within the Gulf of Riga Project. The input of nutrients to the Gulf was greatly reduced when agriculture collapsed within the drainage area. However, the concentrations of nutrients in the rivers and in the Gulf are still high, indicating that the load is also still high. The reason is that large quantities of nutrients are stored in the soils and will continue to leak into the rivers for a long time.

Models to describe scenarios must, thus, be applied to the whole drainage basin. Professor Wulff strongly underlined the importance of considering the time aspect when developing the Baltic 21. One must ask questions like "when will the effects occur" and "where will the effects be seen (locally, regionally)"? He also expressed a warning that the lack of sufficient data will be evident when scenarios are to be developed within the framework of the Baltic 21. Thus, if governments involved in the Baltic 21 process really wish to have good scenarios, they shall have to be prepared to pay for a proper data flow. Pressure must be put on ministries and other government agencies to provide the data required.

He continued his presentation by describing the development of the Baltic Ecosystem Database (BED), a "Baltic Success Story" for the exchange of marine data. Main features of the Baltic Ecosystem Database (BED)<sup>7</sup> are:

- all data are available on the Internet;
- everyone can download the data;
- regions and years can be selected.

The collection and exchange of data within the system is very efficient. For instance, when a call for data for 1996 was made in March 1997, all data from all the marine laboratories around the Baltic Sea were made available within six weeks. Possibly, more data is made available this way – and at once – for scientific use than through ordinary formal channels, including HELCOM. For example, scientists send their primary data from ongoing cruises.

The main reason for this rapid response is that the scientists realise the added value that the system provides: They can link their own data to those provided from regions. The previous reluctance by scientists to supply their data has disappeared as everyone has started to realise that they get something back. One geographic problem area in this respect is, however, still the inner part of the Gulf of Finland. Obviously, quite a lot of work also has to be put into quality assurance of the data provided. Primary quality assurance is essential, but that is only the first step.

There is also a certain time restriction as far as access to data is concerned. Data from the last five years can only be given with the permission of the originator. Some state environmental protection agencies give free access also to these data, whereas others impose strong restrictions (including the requirement to pay).

This notwithstanding, the Baltic Ecosystem Database is a clear example of how environmental scientists can take great advantage of the use of Internet. This kind of data flow would be essential for the Baltic 21 work.

### 2.3 BALLERINA<sup>8</sup> – an Internet Approach to Increase Access to Transboundary Environmental Information. Mr. Sindre Langaas, BALLERINA Network Co-ordinator & Ms. Britt Hägerhäll Aniansson, BALLERINA Editor

*Mr. Langaas* gave a brief overview of the history and rationale of the BALLERINA initative. Basically, Internet, with its integrated web-like structure, is ideally suited for use in co-operative efforts to build better communications and

<sup>&</sup>lt;sup>7</sup> BED - http://data.ecology.su.se/models/bed.htm

<sup>&</sup>lt;sup>8</sup> BALLERINA - http://www.baltic-region.net/

foster collaboration among the environmental research and management communities in international eco-regions, such as the Baltic Sea Region.

Inspired by the Internet-based information sharing activity the Great Lakes Information Network (GLIN<sup>9</sup>) in the bi-lateral Great Lakes region of North America, the BALLERINA initiative was proposed as a regional response to chapter 40 Information for Decision-making - of Agenda 21 in 1996 and discussed thoroughly at a workshop held in June 1996. With financial support from the European Environment Agency, the Ministries of Environment of Norway and Sweden and the Swedish EPA, BALLERINA has in 1997 started its operational work. The First Annual BALLERINA Conference with some 80 participants was held in Riga, Latvia, in May 1997. This meeting confirmed the great interest in BALLERINA.

The overall aim of the BALLERINA initiative is to contribute to the sustainable development and thereby to the improved state of the Baltic Sea Region environment, by improving the availability and accessibility of relevant information on Internet for decision-making at all levels.

Main objectives are:

- To bring more substantive and relevant information on environment, natural resources and sustainable development from and about the Baltic Sea region to Internet.
- To make it easier for the increasing number of Internet users to find Baltic Sea Region information on environment, natural resources and sustainable development by offering a user-friendly 'top-level' Baltic Sea Region web site - the BALLERINA web site.
- To develop a voluntary personal and institutional network of partners working towards the overall aim of BALLERINA.

The institutional basis for the BALLERINA initiative is a large number of institutions with a mandate and interest in disseminating or communicating information (in English) on environment, natural resources and sustainable development about the Baltic Sea Region on Internet. Lead parties for the period 1997 - 2000 are the Stockholm Marine Research Centre (SMF)<sup>10</sup> and UNEP/GRID-Arendal. An advisory board was appointed at the First Annual BALLERINA Conference in May 1997. The advisory board is composed of 12 persons, representing a wide range of institutional types, from most countries in the Baltic Sea Region, with competence and experiences in the range of activities critical to the success of BALLERINA.

In her part of the presentation, *Ms. Britt Hägerhäll Aniansson*, BALLERINA Editor, described the experience to be drawn from the first six months of operation of the BALLERINA web site.

The Baltic Sea Region – the drainage area of the Baltic Sea, including parts of 14 countries – is the common determinator for the information presented by BALLERINA. However, the region is placed in its international and pan-

<sup>&</sup>lt;sup>9</sup> GLIN - http://www.great-lakes.net/

<sup>&</sup>lt;sup>10</sup> SMF - http://www.smf.su.se/

European geopolitical context.

The purpose of BALLERINA is to provide a broad spectrum of users with:

- A gateway to information on environment, natural resources and sustainable development in the Baltic Sea Region;
- Pathways to such information, to ensure as good an overview as possible of what is offered;
- A time-saving tool by showing the way to links on various topics included on the site;
- A guide to information on Baltic Sea Region issues available on the web or through other channels (offline);
- An open and user-friendly as possible information tool;
- A virtual meeting place, encouraging communication and exchange of information and experience between like-minded in the Baltic Sea Region and worldwide.

Another purpose with BALLERINA is to identify information gaps, point to needs for additional information, and stimulate further online publishing of information.

Among BALLERINA advantages could be mentioned that it

- is an independent information initiative with one purpose to guide users to a broad spectrum of information resources and ways to communicate;
- is guided by the principle of networking, opening doors, i.e., by the fundamental principle of free access to information.
- provides a high degree of flexibility.

Mrs. Hägerhäll Aniansson also presented a brief guide to the various sections of the BALLERINA web site:

### **Baltic facts**

The information provided here should supply basic answers to questions about the Baltic Sea itself and its major sub-basins and to questions about the 14 countries that depend on and jointly affect the drainage area of the sea.



**Figure.** The BALLERINA web site (http://www.baltic-region.net/) guides to information on the Baltic Sea Region with a focus upon environment, natural resources and sustainable development.

### Actors

In recent years, a large number of initiatives have been taken and new actors and networks established in the Baltic Sea Region, complementing the already existing ones. The ACTORS section of the BALLERINA has been structured to provide answers to, inter alia, questions like

- who is doing what in the Baltic Sea Region?
- who is in charge, and who is paying?
- who are the important actors and what are their fields of responsibility, or spheres of interest?
- where can the actors be found and where can more information about different initiatives be found?
- how are various initiatives interrelated and how do they differ?
- where could like-minded be found and how can duplication of work be avoided?

### Environment

The ENVIRONMENT section is a main focus for the BALLERINA. It is also the least complete section so far, and probably at the same time the one with most potential to set a model for Internet-based regional information. 15 sectors or issues that affect the various environments of the Baltic Sea Region are presently included.

### Meeting points

The BALLERINA aims at improving communication within the Baltic Sea Region community. So far, a Regional Calendar is provided on the BALLERINA. A mailing list will be opened on BALLERINA during the autumn of 1997.

#### Science and Technology (SciTech)

The ambition is to make the SCIENCE (SciTech) section a comprehensive gateway to online information on international activities on environmental science and education in the Baltic Sea Region, as well as on new solutions and technology. That way, the BALLERINA would offer a special place for the scientific and technical community, as well as for everybody else with an interest in scientific/educational work and new technical solutions focused on environmental issues.

### Baltic 21

This separate web site is provided and developed by the Baltic 21 Secretariat. It continuously tracks the development of the Agenda 21 for the Baltic Sea Region - Baltic 21 - by offering full access to various types of working documents, information about the participants and the meeting schedule and reports. It also offers opportunities for on-line discussion and sharing of views. In itself, this web site is a good example on how an international programme development can be made as transparent as possible, by means of Internet

# 2.4 VASAB 2010 (Vision and Strategies around the Baltic Sea 2010)<sup>11</sup>. Mr. Harald Noreik, VASAB 2010

The VASAB 2010 project was described by **Mr. Harald Noreik** from the Norwegian Ministry of the Environment, and also member of the VASAB Committee of Spatial Development. VASAB 2010 should be regarded as a vision to stimulate co-operation on transnational regional planning with the aim to contribute to sustainability, regional cohesion, solidarity and freedom. Although intended as a vision, a "guiding light", efforts are also made to carry out projects, studies and concrete planning within the framework of VASAB 2010.

The VASAB organisation comprises ministerial conferences, a committee of senior officials and a secretariat located at Gdansk, Poland. So far, two ministerial conferences have been held, in 1994 and 1996, respectively. VASAB priorities include co-operation with related initiatives on sustainability, i.e., Baltic 21 and regional development (INTERREG II C of the EU, among others).

One project of particular interest from the point of view of data gathering, information and assessment is the VASAB project on indicators for monitoring regional development in the Baltic Sea Region. The goal of this project is to build a monitoring system for spatial development based upon existing initiatives, in order to facilitate the work of spatial planners and to generate and evaluate projects.

Indicators should be developed in relation to urban networks (the pearls), infrastructure (the strings) and rural areas (the patches). The project is planned to be developed during a three-year period (1998-2001), whereafter it will be operated on a continuous basis.

<sup>&</sup>lt;sup>11</sup> VASAB 2010 - http://www.vasab.org.pl/

An initial draft list of indicators include:

- 1. Urban networks
  - city populations;
  - city areas (land use);
  - city functions and services.
- 2. Infrastructure
  - roads, railways, inland waterways (distribution and use);
  - telephones/ 10 000 inhabitants;
  - sea transport;
  - turnover of cargo in harbours;
  - pipeline transports.
- 3. Rural areas
  - protected areas;
  - areas with specific natural or cultural heritage;
  - areas of economic activity (tourism);
  - emissions of pollutants.

### **3. Discussion**

The ensuing discussion was focused on the need for data and indicators, as well as the accessibility of such data and ways to arrive at agreed indicators for decision-making for sustainable development in the Baltic Sea Region. More specifically proposals discussed included the establishment of a an independent group of experts – a Baltic Panel, the use of Internet-based sources of general information, including the BALLERINA, and the publication of a common Baltic environment magazine, a Baltic Watch Magazine.

*Mr. Ulf Ehlin,* former Executive Secretary of HELCOM, now Director of the Stockholm International Water Institute  $(SIWI)^{12}$  pointed out that HELCOM has repeatedly tried to initiate a system for provision of information for decision-making. However, the response from the representatives of the Contracting Parties - the governments of the countries in the region - has been very weak. He agreed that decision-making should, preferably, be decoupled from the provision of information on which decisions are to be based.

Mr. Ehlin also emphasised that the Intergovernmental Panel on Climate Change, IPCC, has been successful due to the fact that it can rely on a good global monitoring system providing meteorological, hydrological data, etc. This is not the case in the Baltic Sea Region, however. In this region, we must rely on relatively poor data with long access time.

If an initiative like a Baltic Panel is to succeed, it will have to involve the active participation and support of governments and government agencies. Otherwise, no sustainable system can be created.

*Professor Fredrik Wulff* also underlined that it would not be easy to establish a good expert panel. A first problem will be that this panel will have too little data to work with. Technically, the flow of data could be ensured, and a partial flow already exists. Much money is spent on monitoring, but the actual flow and exchange of data is less smooth. It is very difficult to have an improved and increased flow of scientific data in the Baltic Sea Region unless current and forthcoming joint data and information organisations join forces and start to work in a much more product and goal oriented manner.

It was generally agreed by the participants that it is up to the entire Baltic Sea community to decide what state of the Baltic Sea environment that could be accepted. This is not a scientific but a political issue, and this must be made increasingly clear to everyone.

*Professor Lars Kristoferson* referred to the present time in the Baltic Sea Region as carried by "the wind of opportunity". We do not yet have a state of sustainable development, there is a great challenge of rapid economic growth and closing of gaps, but this is not done in a sustainable way. Thus, the challenge is to curve increases in economic growth before they go too far to control.

<sup>&</sup>lt;sup>12</sup> SIWI - http://www.siwi.org/

### **Baltic Panel**

What should be the main task and responsibility of a Baltic Panel?

- Quality assurance of data for decision-making?
- Checking progress in the work towards sustainable development in the region?
- Follow and assess implementation of decisions into action?
- Interpret scientific data into "societal language"?
- Elaborate agreed indicators for sustainable development?

Several participants noted that a Baltic Panel could have an important function as a qualified pressure group. As a result of the overview, scope and relatively independent position that one would expect from such a group, it could be an important vehicle in highlighting and demonstrating what could and should be achieved and pointing to ways of getting there.

Thus, a Baltic Panel could possibly also stimulate governments to take action within the framework of existing fora for co-operation, e.g., HELCOM.

In a brief description of the IPCC<sup>13</sup>, Mr. Svein Tveitdal explained how the climate panel is set up to provide scientific basis for the political decision making processes that takes place under the Climate Convention (UNFCCC). The panel that is appointed from UN member countries consists primarily of scientists and represents a variety of scientific views. The IPCC does not carry out its own scientific work, but makes assessments of peer reviewed scientific material. These assessments reports which are based on consensus between the scientists preparing the various chapters cannot be altered by decision-makers on a higher level of decision. Summaries and recommendations to the political process made on higher level are thus based on this scientific bedrock. This comprehensive process ensures that the IPCC reports are objective, transparent and based on best scientific knowledge available in the world. The process reduces also the political tug of war over scientific evidences..

*Mr. Sindre Langaas* raised the issue of possible hesitation in the scientific community to the establishment of a structure such as the envisaged Baltic Panel. Although, the past experience has not been entirely glamorous in terms of the joint international data and information management, he underlined that all presently ongoing initiatives in the Baltic Sea Region (VASAB 2010, Baltic 21, etc.) are currently in the process of defining and setting up monitoring systems. Mr. Langaas suggested that, at this particular point in time, it would be to everybody's benefit to start pragmatically and avoid missing a good chance to set up a common BSR information structure founded upon the key tools; Indicators, GIS and Internet. This could guide the various efforts towards environmental improvement and sustainable development upon which everyone seems to agree.

*Mr. Arno Rosmarin* asked whether a new institution like the Baltic Panel is needed. He stressed that HELCOM as a structure has been important in the Baltic Sea Region for a long time, but with changing conditions and approaches existing

<sup>&</sup>lt;sup>13</sup> IPCC - http://www.ipcc.ch/

institutions must either be able to change or they will be replaced by others. He agreed that the HELCOM work connected to the implementation of the Helsinki Convention should be separated from the political work in the region.

Use should be made of the new forces. Could, for example, Baltic 21 be considered a new blueprint for development in the region?

Will governments be prepared to finance monitoring carried out by an independent group, i.e., the Baltic Panel? This issue was raised by *Mr. Ulrich Kremser*. There is no doubt that a joint monitoring programme is required for the new sectorial Baltic 21 approach, but how will joint funding for an independent group be organised?

*Mr. Harald Noreik* reminded the seminar of the time constraints in the work of all presently ongoing initiatives in the region. Results are to be presented to ministerial meetings and other points in time laid down in advance. Hence, only limited funds are allocated to monitoring systems and long-term planning. At the same time, Baltic 21 and VASAB 2010 are both typical examples of planning exercises.

There was general agreement by the Seminar that the establishment of a Baltic Panel could be a fruitful new approach. The question was raised, however, on Terms of Reference (ToR) for such a group. Who could be entrusted to elaborate its ToR?

It was also generally agreed that the concept of independence in this context will have to include a certain degree of government-dependence. The fact that the Baltic Panel cannot work without access to data provided by governments and government agencies will, inevitably, make the Panel dependent on the providers of such information. All governments in the Baltic Sea Region are aware of the problems facing the region and, therefore, in principle in favour of initiatives that could imply improvements and a higher degree of sustainability in the development process. Hence, a Baltic Panel will have to rely on good cooperation with governments in order for their work to be taken account of by governments.

A permanent expert panel for assessment of data and assurance of data quality was, in conclusion, considered as a good idea.

### Indicators

*Mr. Olle Nåbo*, MDC, emphasised that a European wide set of environmental indicators have been developed by the European Environment Agency, EEA<sup>14</sup>, for the purpose of the new Europe's Environment publication to be published in 1998 and in the framework of EIONET. Many of the proposed indicators could also be used in the Baltic Sea Region context.

*Professor Wulff* pointed out that indicators continuously change in dynamic systems, and that the time dimension must be taken into account. This is particularly true in an area like the Baltic Sea Region, with rapid economic

<sup>&</sup>lt;sup>14</sup> EEA - http://www.eea.eu.int/

growth and changing structures. Thus, one has to decide what one wants to use as a point of departure. Is it, for instance, a "typical 1990 situation", or what?

### **Baltic Watch Magazine**

The idea of pulling resources in the region and support the publication of a common journal or magazine was discussed. Such a publication – Baltic Watch Magazine – should be an open forum for everyone who feels they have something interesting to tell and wants share this with the Baltic Sea Region community. Examples of contents would popular articles summarising the assessments and reports from the transboundary initiatives and organisations, reports on ongoing transboundary co-operation in the Baltic Sea Region, feature articles on specific issues, thematic issues which would provide for more in-depth reviews and overviews of specific issue areas, and reports on new initiatives, programmes and projects.

*Mr. Leif Christoffersen* expressed the need for printed information media (traditional paper products), in parallel to the rapid development of electronic media. One is more likely to reach a majority of decision-makers with short printed summaries, for example in a common Baltic Sea Region publication.

This view was supported by *Mr. Lars-Erik Liljelund*, who confirmed that printed media will remain an indispensible means of information dissemination to decision-makers. They will, generally, find Internet-based information resources like the BALLERINA too time-consuming to search.

*Mr. Miles Goldstick*, SEI, pointed out that the boundaries between on-line information on electronic media, in particular the Internet, and off-line information on traditional media, such as books, magazines, reports, will become more and more fuzzy in the future. He stressed the need to mix media in order to achieve optimal dissemination of information to target audiences and target groups at each given point in time.

### 4. Conclusions and Recommendations

- The Seminar concluded that the political changes which have taken place in the Baltic Sea Region have created new possibilities and opportunities to develop systems that could improve access to information.
- Access to such information is essential for the assessment of the state of the environment, as well as for progress towards sustainable development on a regional/transboundary scale (i.e., on the drainage area level).
- Open and speedy access to essential data is of utmost importance and must be ensured in the Baltic Sea Region. Enhanced efforts are, therefore, needed to improve access to information on environment and sustainable development in the Baltic Sea Region.
- The Seminar also noted that there is a number of transboundary/regional initiatives carried out or being planned in the Baltic Sea Region. For these to be successful, access to data/information is required in primary as well as in a consolidated/assessed (indicator based) form. This is of essential importance for the assessment, on a continuous basis, of progress towards the goals set out for the respective initiative.
- It was, furthermore, concluded that it would now be timely to start a process of developing an information and assessment system including the development of relevant agreed common indicators to serve a wide range of potential users, including actors/users such as HELCOM, Baltic 21 and VASAB and harmonised with EEA and other European actors. Meetings at the political level will be held within the framework of all these three initiatives or organisations during 1998. These meetings could provide the necessary political impetus for a step-wise development and introduction of such a system.
- The major objective of such an information and assessment system would be to provide different users with independent, objective, reliable information and with assessments of developments and trends aggregated on a regional scale.
- Such a system should be attractive to various users due to the fact that unnecessary duplication of work could thus be avoided (the system would prove cost-effective), and comparability of data/information between various users could be ensured.
- The envisaged system would also be an effective instrument for identifying gaps in the present management systems and, thus, when necessary, provide decision-makers with a solid basis for deciding on new priorities for action.
- Organisational issues need further careful consideration. It will be a
  matter of deciding, e.g., whether an existing or new organisation should or
  could take on the responsibility to lead the development of the proposed
  new and improved information and assessment system. As part of this, the
  idea of creating an (independent) Baltic Panel using, among others, the
  IPCC as a model should be further explored.

- The continued use of BALLERINA as an efficient Internet gateway to various sources and types of Baltic Sea Region data and information on environment, natural resources and sustainable development was strongly supported. Additional desirable features for BALLERINA included a weekly News section.
- There will be a need for information to be provided both electronically on the Internet and in printed form. Printed information would be important to reach decision-makers which often do not have the time to look for information on the Internet.
- In this context, the proposal for the publication of a *Baltic Watch Magazine* was generally supported. The purpose would be to complement the proposed Baltic Panel and Internet-based initiatives like the BALLERINA by providing printed, easily accessible information on environment, natural resources and sustainable development to a very wide audience.

## Appendices

Appendix 1. List of Participants Appendix 2. Seminar Programme Appendix 3. Discussion Background Note Appendix 4. List of Acronyms

### **Appendix 1. List of Participants**

### Invited Experts

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Mr. Arno Rosmarin, Communications Director, Stockholm Environment Institute. Fax: +46-8-723 03 48

Mr. Fredrik Wulff, Professor, Department of Systems Ecology, Stockholm University. Fax: +46-8-158417

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Mr. Morten Sørensen, Project Manager/Staff Representative, GRID-Arendal, Norway. Fax: +47-370 35050

Mr. Sindre Langaas, Project Manager, GRID-Arendal - Stockholm Office, Sweden. Fax: +46-8-158417.

#### Other participants

Mr. Miles Goldstick, Communications Officer, Stockholm Environment Institute. Fax: +46-8-723 03 48

### **Appendix 2. Seminar Programme**

### The Baltic Sea Region:

Needs and Approaches to Improve Access to Environmental Information for Transboundary Decision-Making.

### Welcome and introduction.

Leif Chrisoffersen, Director of the GRID-Arendal Board, Arno Rosmarin, Communications Director SEI, Svein Tveitdal, Director GRID-Arendal and Sindre Langaas, Project Manager GRID-Arendal 16.00 - 16.30

#### **Data and Information needs - seen from the Baltic 21 perspective.** Lars Kristoferson, Professor, Secretary General Baltic 21 16.30-17.00

A Science Perspective on Transboundary Baltic Environmental Issues: Monitoring, Databases, Assessments and Information for Decision-making. Fredrik Wulff, Professor Marine Systems Ecology, Stockholm University

17.00 - 17.30

## **BALLERINA** - an Internet approach to increase access to transboundary environmental information

Sindre Langaas, BALLERINA network co-ordinator and Britt Hägerhäll Aniansson, BALLERINA Editor 17.30 - 18.00

Discussion: How to improve the availability and accessibility of environmental information and thereby decision making in the Baltic Sea Region

Facilitator: Bertil Hägerhäll, Ardea AB, former manager of WWF Baltic International Programme 18.15 - 19.15

### **Appendix 3. Discussion Background Note**

"How to improve the availability and accessibility of environmental information and, thereby, improve decision-making in the Baltic Sea Region"

Some points for discussion

1. Should those providing background environmental information for decisionmaking be the ones also making the decisions?

2. If not, the establishment of an independent Baltic Panel could be a new approach for the provision of consolidated environmental information for decision-making?

The task of such a panel, modelled on, e.g., the Intergovernmental Panel on Climate Change, would be to assess progress towards achieving agreed regional (Baltic Sea Region) environmental and development objectives, using agreed biological and socio-economic indicators.

One important purpose for establishing an independent Baltic Panel of experts would be to ensure more frequent, improved and easily accessible information with on the efforts made to achieve sustainable development in the Baltic Sea Region

3. The Executive Secretary of HELCOM recently suggested that an independent, comprehensive publication for the Baltic Sea Area could be a way to make environmental information more easily accessible to a wide audience:

"HELCOM NEWS is one of those many publications published regularly by actors working for the protection of the Baltic Sea. - - - It has been discussed whether the existing but limited resources would be used more effectively by combining available resources and publishing an independent newsletter or journal in the Baltic Sea Area. One good example of this is the Danube Watch which gives information about all environmental activities in the Danube river basin."

Would the publication of a Baltic Watch improve the dissemination of environmental information - or rather, information about environment, natural resources and sustainable development - in the Baltic Sea Region?

4. The BALLERINA web site and network - Baltic Sea Region On-Line Environmental Information Resources for Internet Access - is the result of a cooperative effort to provide comprehensive information about issues on environment, natural resources and sustainable development relating to the transboundary Baltic Sea Region.

BALLERINA is an independent initiative with one sole purpose: to guide users to a broad spectrum of information resources and ways to communicate on issues of fundamental importance to the future of the region. It is an open environmental information gateway.

Although praised as a valuable initiative, with much potential in a region where the use of Internet is rapidly accelerating, it has proved extremely difficult to secure long-term funding for capacity building as well as for central coordination. It has also proved more difficult than expected to encourage active participation by the BALLERINA partners and active contributions from users.

If an information platform like BALLERINA is not the right way to improve the dissemination of information, then how should the Internet best be used in the Baltic Sea Region to secure independent guidance to information presented by a wide array of providers?

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Definitions, concepts and important points of departure Or: Are we all talking about the same thing? (These points will briefly be gone through before the discussion)

### What do we mean by "environmental information"?

UN/ECE has the following definition:

Environmental information means any information on the state of water, air, soil, fauna, flora, land and natural sites, and on activities or measures adversely affecting or likely to affect these, and on activities or measures designed to protect these, including administrative measures and environmental management programmes

Who is providing what kind of environmental information in the Baltic Sea Region, in which form, through which channels, for what purpose?

- International bodies?
- Regional bodies (Baltic Sea Region)?
- Subregional bodies?
- National bodies?
- Local bodies?
- The scientific community?
- The educational community?
- The business community?
- Opinion-makers, such as NGOs and the media?

Do we have any credibility problems in the Baltic Sea Region as far as dissemination of environmental information is concerned?

- Do receivers generally trust or distrust providers and their purposes?
- Any difference between possible distrust in different parts of the region?

Who is seeking and using what kind of environmental information in the Baltic Sea Region, in which form, through which channels, for what purpose?

- Politicians
- Officials in international, regional, subregional, national or local bodies (to prepare backgrounds for political decisions)
- The scientific community
- The educational community

- The business community
- The general public
- Opinion-makers, such as NGOs and the media

Who are the transboundary decision-makers, and what kind of environmental information do they need - and seek?

- On an international, European level affecting the Baltic Sea Region
- On a regional (Baltic Sea Region), multilateral level
- On a subregional, bilateral level
- On a national level, between provinces or municipalities

### To a high degree, decision-making is driven by public opinion, regardless of how well or poorly informed the general public and interest groups may be.

Are sufficient efforts made on the part of information providers to encourage communication and increased public awareness about complex environmental issues?

### Appendix 4. List of Acronyms

BALLERINA BALtic sea region on-Line Environmental information	n Resources
for INternet Access	
Baltic 21 the Agenda 21 for the Baltic Sea Region	
BED Baltic Environmental Database	
CEE Central and Eastern Europe	
DDT Dichlordifenyltrichlormetylmethane	
EEA European Environment Agency	
EPA Environmental Protection Agency	
EIONET European Environment Information and Observation N	NETwork
ETC European Topical Centre	
GIS Geographical Information System	
GLIN Great Lakes Information Network	
GRID Global Resource Information Database	
HELCOM Helsinki Commission	
INTERREG IIc An European Regional Development Fund (ERDF) pro-	ogramme
for transboundary co-operation	
IPCC Intergovernmental Panel on Climate Change	
JCP the Baltic Sea Joint Comprehensive Environmental Ac	ction
Programme	
MDC Environmental Satellite Data Centre, Kiruna, Sweden	
NIS Newly Independent States	
PCB Polychlorinated biphenyl	
SEI Stockholm Environment Institute	
SIWI Stockholm International Water Institute	
UN/ECE United Nations/ Economic Commission For Europe	
UNEP United Nations Environment Programme	
VASAB 2010 Vision and Strategies around the Baltic Sea 2010	