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**Barents Euro-Arctic Council  
Working group on Environment**

**Subgroup on Water Issues**

***Strategy and action program  
2008-2009***



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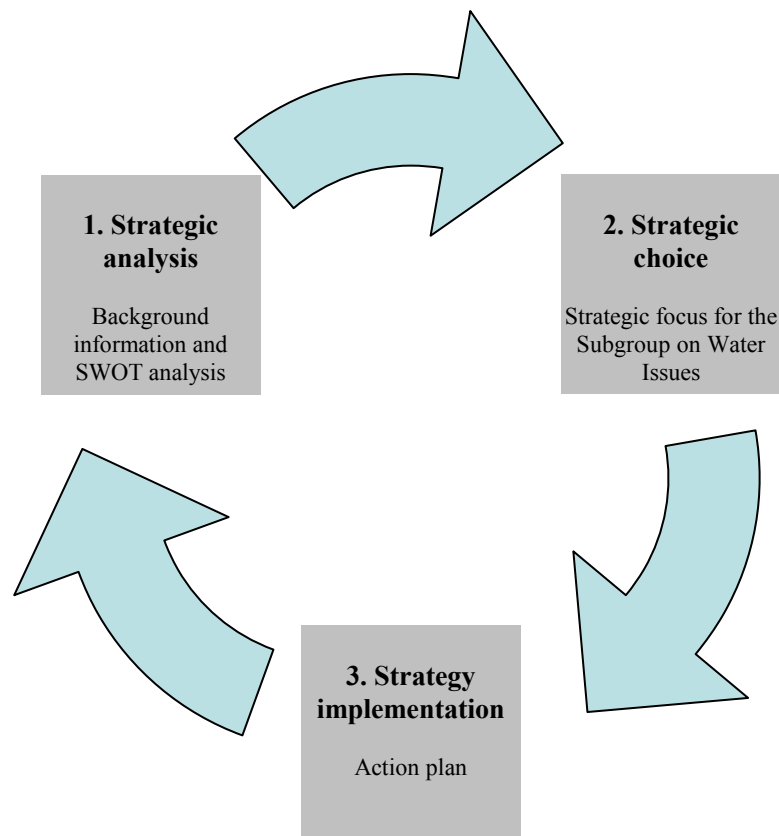
## **BACKGROUND**

### **Strategy process**

Subgroup on Water issues is one of three subgroups organized under the Working Group on Environment (WGE). The other two are: subgroup on Nature Protection and the Subgroup on Cleaner Production and Environmentally Sound Consumption (SCP).

Mandate for the Subgroup on Water Issues was given in the Declaration of the Ministers of the Environment in Moscow on 9<sup>th</sup> of November 2007. The strategy and action program for the Subgroup on Water Issues from 2008 to 2009 were asked to be compiled/ prepared in the Working Group on Environment meeting in Tromsø on 10<sup>th</sup> of March 2008.

In this strategy and action program strategic analysis and strategic choice based on the earlier work done with the Barents environmental co-operation is presented. Very important part of the program is the strategy implementation, which is written down in the action plan.



## **State of the natural waters in the Barents region**

Where the state of natural waters is concerned, the most important environmental issues are acidification, heavy metals and POPs (Persistent Organic Pollutants) in the Russian Barents region. All these threats are connected with industrial emissions. Because of insufficient purification of municipal wastewaters, eutrophication and hygienic pollution also cause severe problems. In the Nordic part of the Barents region, purification of wastewaters and industrial emissions is quite effective and environmental problems are usually very local. In practice non-point loading is the most challenging problem in the area. The state of the waters is considered to be mostly good or excellent, although in some small areas it can be worse. The drinking water systems are also in a good state and safe.

There have been several studies and publications in the AMAP process concerning acidification (AMAP assessment Report: Arctic Pollution Issues, 1998), heavy metals and POPs (Arctic Pollution, 2002). A number of northern research projects were also implemented in the late 1990s. The results of the monitoring and research carried out in the 1980s and in the beginning of 1990s in freshwater ecosystems showed that pollution causing biological damage would continue if emissions were not reduced. However, a general decrease in sulfur dioxide and heavy metal emissions has been observed in the Barents region and in Europe after the 1990s, though with occurrences of some hot spots where the general trend on decreasing heavy metal emissions is not seen, rather the opposite. The process of acidification has been slowed and even stopped in some areas (e.g. Finnish Lapland) in recent years, but there are still acidified lakes in the region and episodic acidic pulses occur during the spring flood period.

There is evidence to confirm that the inhabitants of many parts of the Russian Barents are exposed to hazardous pollutants in drinking water. The availability of good drinking water is an important consideration. In the Russian Barents, drinking water is usually taken from the surface water and purification is often limited to chlorination. Many surface-water supplies are clearly influenced by air- and water-borne pollution. Another important question is the replacement of drinking water piping systems. Improved drinking water quality would very quickly improve the health of most of the region's population. Infants and small children are the most vulnerable groups.

At the moment, the mining industry in the Barents Region is developing. Growing demand has increased the production rates at many sites and new technologies enable short-term operations and the extraction of relatively small deposits. Many companies pay more attention to environmental issues by introducing environmental management systems, or even making investments to reduce discharges into water. Meanwhile, other mines are closed down, leaving open wounds in the bedrock where natural processes cause unnatural migration of substances, threatening sensitive eco-systems. The closure of old or unprofitable mines is a growing problem in the Barents region and deserves attention from both the legislative and technological point of view.

Because of the evident ongoing climate change, the risk of severe flooding is increasing in the whole Barents area. River valleys are traditional places for settlements in all northern areas, whereby the risk of flood damage, especially in the future, is more and more obvious. The benchmarking and harmonization of hydrological monitoring and forecasting methods could be very fruitful. The exchange of information about flood control and prevention practices will also be important.

Transboundary water bodies and water management issues in the area are also important questions. The Barents region consists of 13 different regions. Some of the worlds most important salmon rivers are shared water bodies between the co-partners in the region.

**SWOT-analysis for water issues in Barents region**

<p style="text-align: center;"><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Good ecological status of the waters in most parts of the Barents Region</li> <li>• Positive trend of a general decrease in emissions in recent years</li> <li>• AMAP has produced and will produce information and reports on the state of the environment in the Barents Region</li> <li>• Existing commissions for international border rivers and transregional rivers</li> <li>• Many problems related to the state of surface waters are already known and have been studied</li> <li>• Existing collaboration in many water projects in the Barents Region</li> <li>• National and EU monitoring systems for water data collection as a base for decision making</li> </ul>	<p style="text-align: center;"><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• Sensitivity of the environment in the North</li> <li>• Heavily polluted areas in the Barents Region</li> <li>• Industrial emissions</li> <li>• Lack of continuous information for the general public and the lack of continuous dissemination strategies</li> <li>• Different labeling systems for water quality</li> <li>• Lack of money for monitoring activities in the participating regions</li> <li>• Information on water quality is spread over too many databases</li> <li>• Differences in legislation and standardisation between countries</li> </ul>
<p style="text-align: center;"><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Sensitivity of the environment in the North</li> <li>• Emission loads <ul style="list-style-type: none"> <li>▪ Heavy metals</li> <li>▪ POPs, PAHs and dioxines</li> <li>▪ Acidic pollution</li> </ul> </li> <li>• Wastewaters from agriculture, peat production and municipalities</li> <li>• Expansion of the forest industry, increased runoff and emissions</li> <li>• Expansion of the mining industry</li> <li>• <i>Gyrodactylus salaricus</i> and other parasites and introduced/ alien species</li> <li>• EU financing tools are changing, which can make project implementation much more difficult, and periodically without financing instruments</li> <li>• Climate change</li> <li>• Floods</li> </ul>	<p style="text-align: center;"><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Good ecological status of the Barents Region</li> <li>• “Cleaner production” work decreases industrial emissions and encourage local inhabitants to make changes</li> <li>• Water Frame Directive provides a common approach to improvements in the state of the waters in EU countries and EU border areas</li> <li>• Industry has an interest in international progress and environmental standardisation</li> <li>• Increased ecological efficiency in industrial processes and waste handling</li> <li>• Environmental information can be spread by a transfer of knowledge and educational activities.</li> <li>• International Working Groups for environmental questions</li> <li>• International cooperation in the fields of research and management</li> </ul>

## **STRATEGIC FOCUS FOR THE SUBGROUP ON WATER ISSUES**

The mandate and main missions were given for the water subgroup activity in the Declaration of the Ministers of the Environment on 9<sup>th</sup> of November 2007. The main missions for the subgroup work are as follows:

- Sustainable management of water resources and water use
- Transboundary water bodies
- Improvement of drinking water quality
- Study of the correlation between climate change and the condition of water bodies and wetlands
- Other projects on mitigation and adaptation to climate change
- Projects on prevention and reduction of pollution in water bodies and marine environments originating from land based sources.

The main target of the subgroup is to improve the environmental situation of surface and ground waters in the Barents Region. Sustainable use of waters is important with industry and drinking water issues for keeping of the good status of waters.

### **ACTION PLAN**

The action plan is naturally problem oriented and aimed at water issues essential within a relatively short time frame. The plan therefore involves choices and a focus on the most urgent problems. At the same time, long-term objectives must not be forgotten.

### **Realization**

Concrete projects on focused environmental issues should be implemented in the overall Barents program. Projects may be bilateral or multilateral. There are special agreements on bilateral cooperation on both the national and international levels. Project financing is very important part of the implementation process and a wide scale of financing instruments should be used for the implementation.

### **Activities**

Considering that environmental pollution poses a health risk to the population in the Russian Barents, it is necessary to reduce emissions to a level below the critical loads and continue the positive progress of decreasing emissions; this is the only way to improve the state of the environment. Reducing acidifying emissions will alleviate several other environmental problems, e.g., heavy metal pollution, and the impact would stabilize at a safe level vis-à-vis the actual rate of acidification.

The ground water project already launched must be enlarged into a full-scale study dealing with the supply of drinking water to a small town. The first part of the study should include a technical and financial survey and suggest a suitable site. The second phase should be aimed at the full-scale implementation of the project and an assessment of its effects. Project promotion and implementation with a drinking water quality and waste water management both at industrial and municipal level are needed. Clarification of permission systems as well as capacity building to improve safe drinking water supply and implementing high standard sewage treatment is stressed.

Special needs for small scale projects on improving water quality in scattered settlements in the Barents region, as well as pilot projects and dissemination of results and activities at a local scale

Further cooperation on management of transboundary waters and monitoring of water bodies for improving the information bases for decision-making and improving the state of water bodies is needed. Also harmonisation and standardisation of monitoring and assessment methodology, encourage further cooperation in this field.

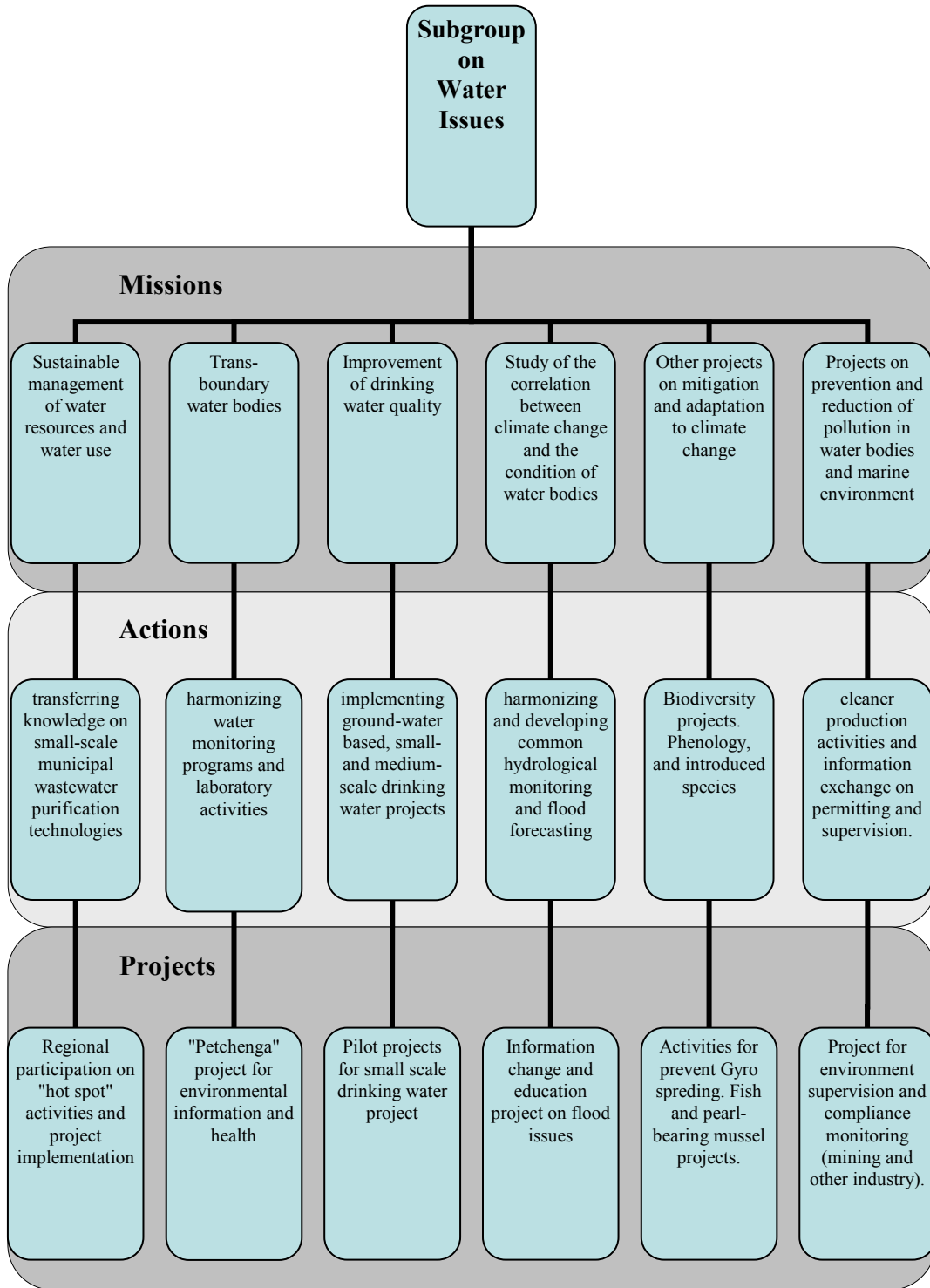
Because of the climate change a need for cooperation on flood management activities with a development of measures and adaptation, information exchange and flood risk assessments/ forecasting will be promoted.

The most important areas of the cooperation are:

- Implementation of the Hot spot projects
- harmonizing water quality and water ecology monitoring programs, especially in transboundary areas (also water framework directive implementation)
- harmonizing and developing common hydrological monitoring and flood forecasting methods in the Barents
- implementing ground-water based, small- and medium-scale drinking water projects in the Russian Barents
- increasing the quality assurance level of the water quality monitoring laboratories and methods in the Barents
- transferring knowledge on small-scale municipal wastewater purification technologies to the Russian part of the Barents
- gathering of data on important ground and surface water resources as well as on important environmental sites along watercourses that might be impacted by industry.
- Disseminating information on a regular basis to the general public (dissemination strategy).



**Action plan chart**



## **References**

1. Arctic Pollution 2002.
2. AMAP assessment Report: Arctic Pollution Issues, 1998
3. Barents 2010; WP 4 Strategy for WGE
4. Action program for the RWGE 2007-2010