Convention on Protection and Use of Transboundary Watercourses and International Lakes
Working Group on Monitoring and Assessment
Helsinki 2 – 3 October, 2002

WGMA/2002/6

DEVELOPMENT OF INFORMATION SYSTEM ON NATURAL RESOURCES AND ENVIRONMENT

PROPOSAL FOR A CASE-STUDY ON TWO TRANSBOUNDARY LAKES

INTRODUCTION

The Working Group on Monitoring and Assessment (WGMA) has prepared the guidelines for Transboundary and International lakes so, that all the three volumes concerning monitoring aspects of lakes will be published during this autumn. Also the implementation of EU Water Framework Directive has progressed so, that the first official draft of monitoring guidelines for EU Member States can be given possibly before the end of 2002.

On the other hand, discussions of the role of monitoring as an important key element of whole water management procedure, not only as a separate phase of implementation of e.g. the water protection measures, have significantly increased.

The pilot projects of WGMA have earlier focused only to test in a co-operative way the guidelines on some transboundary waterbodies, rivers or groundwaters. In this project we now propose a little bit different standpoint. The testing of the new technical guidelines for monitoring of transboundary and international lakes will be carried out as a part of wider perspective. The final target will be to improve the whole information system of natural resources and the environment on a wider river basin area. This means, that the testing of the new guidelines is only one, even if a very important phase in the project.

The following draft proposal is prepared by the Finnish Environment Institute (SYKE) after several discussions with the representatives of the Ministry of Natural Resources of the Russian Federation (Valeri Kukosh) and the Estonian Ministry of Environment (Tiina Nöges and Ülo Sults). It will be discussed in details in the October 2002 meeting of WGMA in Helsinki. The implementation timetable and the responsibilities will hopefully also decided.

THE OBJECTIVES OF THE PROJECT:

The project is focused on two transboundary lakes and primarily their monitoring programmes, but in implementation of the project also monitoring data of other relevant compartments (especially hydrological characteristics, different types of waste water loading, use of water and watercourses, and other pressure factors) of the whole river basin is needed. The idea is to combine the targets of testing of guidelines for transboundary and international lakes and the development of the practical information system needed in water management especially according to the EU Water Framework Directive together.

The main objectives of this pilot project will be connected with the both themes, and they can be divided into the following sub-projects:

- The implementation and testing of the Guidelines for transboundary and international Lakes prepared by the WGMA.

- The investigation of the possibilities to make step-vise modifications to the present monitoring programmes to better fulfill the obligations of EU Water Framework Directive in monitoring the ecological and chemical status of the transboundary lakes concerned, including the economical aspects.
- To improve and harmonise the reporting practise of the state of environment (SOE-reports) using modern information technologies.

As the final result there will be good regional SOE-reports of both lakes for decision makers concerned. The preparation of these reports will give relevant information of the usability of the Guidelines for monitoring purposes.

Proposal: The meeting of the WGMA will discuss about the objectives, and make decision of the general content and the defining of the pilot project.

TESTING AREAS:

This project will be carried out in praxis on two northern European transboundary lakes, namely the Lake Peipsi and the Lake Pyhäjärvi. The descriptions of these lakes are presented in the Background paper prepared by WGMA and published by Finnish Environment Institute (2002).

Lake Peipsi is situated on the border of Estonia and Russian Federation. Lake Peipsi/Chudskoe is the fourth largest lake in Europe and the biggest transboundary lake in Europe. Lake Peipsi belongs to the watershed of the Narva River, a 77 km long watercourse, which connects L. Peipsi with the Gulf of Finland of the Baltic Sea. The biggest problem of the Lake Peipsi is the increasing eutrophication process. Lake Peipsi has a long history in monitoring. Regular water chemistry monitoring on L. Peipsi started in 1950. Hydrobiological investigations had been carried out since 1962.

Lake Pyhäjärvi is situated on the border of Finland and Russian Federation. The lake is slightly polluted by non-point and point source loading. A gradual but slow deterioration has been observed during the 1990s. However, the overall water quality of the lake is still classified as excellent. L. Pyhäjärvi belongs to national and regional monitoring programme networks since the early 1960s. From 1998 onwards the lake has been included in a nation-wide algae monitoring network with a weekly voluntary algae monitoring in summer in one observation point. From 2000 onwards one station has been in the Finnish Eurowaternet monitoring network. The lake is also monitored for scientific purposes on both national and international (bilateral) basis. Statutory monitoring, based on the Water Act, is performed in the loaded areas of the lake. National and regional monitoring programmes are revised/renewed every three years.

Proposal: The persons participating this project will give a short presentation of the lakes and especially of the monitoring activity. The need for other objectives (some other lakes) will be discussed.

THE PARTICIPANTS

The project will be carried out by the Ministry of Natural Resources of the Russian Federation, the Estonian Ministry of Environment, the Finnish Environment Institute and the North Karelian Regional Environment Centre, Joensuu, Finland.

The project will be chaired by the Finnish Environment Institute. The practical investigations on lakes will be carried in Finland by the North Karelian Regional Environment Centre, Joensuu.

The project will be linked to all the ongoing monitoring programmes and research projects of these lakes.

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FUNDING OF THE PROJECT

The main principle is that all the participants will pay their own expenses concerning the implementation of investigations on lakes, the data handling and the reporting. The co-ordination will be organized in meetings and symposiums. Finland is ready to take the lead of the coordination.

Proposal: The meeting of WGMA will discuss about the funding of the project and will make the decisions needed.

LIMNOLOGICAL INVESTIGATIONS

The Guidelines on Monitoring and Assessment of Transboundary and International Lakes**,** Part B, The Technical guidelines, contains the relevant practical guidelines which are needed and used in the monitoring and assessment of lakes and reservoirs. In these Guidelines the demands of different EU water directives, especially the Water Framework Directive from December 2000 have been taken into account already now as widely as possible. The technical guidelines should be tested in special pilot-projects, and on the other hand the development in the preparation of guidelines by the nominated EU expert group on monitoring (chaired by Italy) with the deadline of the end of 2002 (draft) must be taken into account.

At the moment the final Draft version of the Guidance on Monitoring for the Water Framework Directive has been published. The role of biological monitoring is significant. Therefore also in this project it is important to focus the investigations especially to those biological characteristics, which are most relevant concerning the eutrophication processes of lakes, e.g. phytoplankton.

Proposal: The meeting will discuss about the characteristics of the project. Also the practical questions, like the responsible institutes, will be discussed in this context.

THE INFORMATION SYSTEMS

The countries involved have their own data processing and information systems, which they are using in assessment of environmental data. The target of this project is to find new ideas on structural level to develop these systems especially in the monitoring cases, where data of transboundary watercouses is used.

In the first phase the lead country of this theme will be Russian Federation, which will prepare the first draft for the project. This draft will be discussed with other partners to improve the whole information system of natural resources and the environment on a wider river basin area.

Proposal: The meeting will discuss of different possibilities concerning the ideas of develop an information system, which could be used especially in cases of transboundary watercouses. Russian Federation is asked to prepare the first draft of this theme.

THE WORK PLAN FOR THE PROJECT

The preliminary work programme is presented in the following Table, where the topics are presented in a very common level. Also the time table is quite open and depends on the possibilities to fulfill this the programme in practice.

Topic	**Time**	**Responsible organization**	**Result**
1. An inception meeting of the project	JAN 2003	Finnish Environment Institute (SYKE)	Final programme of the project including the responsibilities of the partners, and proposal of funding.
2. Preparation/checking of the hydrobiological monitoring programme for summer 2003	JAN 2003	All	
3. Implementation of the monitoring programmes	Summer 2003	All partners	
4. Planning of the information system		Lead: Russia	
5. Assessment of monitoring data	Autumn 2003	All partners	
6. Expert meeting to discuss the results and draw the draft conclusions	December 2003	Lead:Finland	
7. Preparation of publications			
- SOE-report of L.Peipsi	?	Estonia	
- SOE-report of L. Pyhäjärvi	?	Russia/Finland	
- Summary of the testing of guidelines.	May 2004?	Lead:Finland	
8. Closing session including the recommendations	May 2004?	Finnish Environment Institute (SYKE)	

Proposal: The meeting will discuss of the details of the proposed work plan of the project and prepare the more detailed second version of the work plan including a time table, which could be discussed in participant countries before the end of 2002.

THE BEGINNING OF THE PROJECT

The project will be started with an inception meeting or an International workshop on Information System in the field of Natural resources and Environment, which will be organised by the Finnish Environment Institute in February 2002. Before this meeting a summary of monitoring activities in the lakes Peipsi and Pyhäjärvi shall be completed.

REPORTING

The aim is to produce from the results and activities three separate papers concerning the objectives of the project as follows:

- A structural state of environment (SOE) report of the Lake Peipsi. This paper consists of (Report 1 of the project).
- A structural state of environment (SOE) report of the Lake Pyhäjärvi. This paper consists of (Report 2 of the project).
- Summarized results of the testing of the Guidelines for Transboundary and International Lakes (including the comparison with the demands of WFD). (Report 3 of the project).