



**LIFE Nature project “Marine Protected Areas in the Eastern Baltic Sea”**  
Reference number: LIFE 05 NAT/LV/000100

**Action A6 – Elaboration of national  
GIS database/digital maps**  
Action leader P1, Baltic Environmental Forum – Estonia

**FINAL REPORT**

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Description of activities:

The aim of the action was:

- to create comparable GIS databases in Estonia, Latvia and Lithuania about project areas containing background data (depth, coastline etc.), data from inventory actions as well as from threat assessments;
- to generate secondary data, maps according to the needs of other project activities (threat assessments, developing management plans, protection rules, presenting project results);
- to fill in Natura 2000 data forms based on data gathered by the project.

**Activity 1 – GIS action meetings**

**1. GIS working group in the project Kick-off meeting (27-29 September 2005).**

- The agreement concerning roles and responsibilities, delegation of tasks and communication was made;
- The concept of GIS activity was agreed and communicated to other partners;
- General agreements about methodology were made;
- Next steps were planned.

**2. Expert meeting on Actions A6/A7 (11 January, 2006, Riga)**

- The envisaged outputs of A6 and A7 activities were reviewed and the information needed for achieving these outputs was discussed.
- Possibility to use the GIS tools for zoning was discussed, however, it was agreed that most probably the zoning will be first prepared manually, based on results of expert evaluations and stakeholders discussions.
- It was decided that all actions should send the already available data about project areas (processed information) to GIS experts to make it available for other actions as potentially useful background information.
- Types of data collected in different project activities were discussed and attribute structure of the common GIS database was agreed.
- The next steps were planned.

**3. Expert meeting on Actions A6/A7 (31 March, 2006, Jūrmala)**

The common database structure was presented and discussed. The next steps to finalize the common database structure were planned.

**4. Discussion of GIS-activity in the 3<sup>rd</sup> project partners meeting (26-27.09.2006 in Riga, Latvia).**

The overview on action progress was given and the next steps were planned.

**5. Discussion of GIS activity in the 4<sup>th</sup> project partners meeting (27-28.02.2007 in Riga, Latvia).**

The needs from GIS for management plans and species/habitats evaluations were discussed and further activities were planned (July 2006-Feb 2007)

**6. Discussion on GIS-activity in the 5<sup>th</sup> project partners meeting (5-6.11.2007).**

The overview on action progress was given and the next steps and occurred difficulties were discussed.

## **Activity 2: Development of the common database structure and data format**

The common structure for national GIS databases was developed to harmonize collection and storage of project data in Estonia, Latvia and Lithuania, and enable production of some joint outputs.

- Information about parameters and background info to be registered in the GIS database in frame of other actions was collected from the action leaders in October 2005 – January 2006.
- Initial database structure was prepared by March 2006.
- Excel table for inserting fieldwork data was prepared and sent to inventory experts by February 2007;
- Finalization of the common database structure took longer time than expected due to the delays in other actions (e.g. development of the habitat classification system). Also reaching agreements between experts of different countries required a lot of discussion and communication. The common database structure was finalized by spring 2008 (after the finalization of the classification of benthic habitats developed by the project). However, harmonization of data/results was important and using common database structure in 3 countries is an additional value of this project.
- Information about database development was shared also with Russian project partners.

## **Activiy 3: Inserting project data into national GIS databases**

- The background data (information about economic activities, existing data about project areas etc) were collected and inserted into project databases in Estonia, Latvia, Lithuania.
- Data from project inventories and other actions were inserted into national GIS databases in 2007-2009.
- Project databases were handed over to the competent authorities in Estonia (Ministry of the Environment and its subordinated institutions Estonian Environment Information Centre and Environmental Board), Latvia (Ministry of the Environment) and Lithuania (Ministry of the Environment).

## **Activity 4: Producing maps according to the needs of other project actions (threat assessments, management plans, protection rules, presentation of project results)**

- Background cartographic information to be included in the management plans was discussed at the national partners meetings and collected by responsible partners/ experts involved in A6 action. The main information layers collected for the management plans included bathymetry, sediment structure/geology, various economic activities (harbour territories, shipping routes, dumping sites, etc.), military activities.
- This information has been used also for producing background maps for the workshop on “Stakeholder interests and involvement in management planning and management of marine protected areas” (8-9.02.2007, in Palanga, Lithuania).
- Maps were produced for management plans, stakeholder communication, public meetings, website, info stands, and presentation of project results.

## **Activity 5: Filling in Natura 2000 data forms based on data gathered by the project**

- Natura 2000 data forms were filled in based on information gathered in the frame of the project in Estonia, Latvia and Lithuania and handed over to the Ministries of the Environment.

### Methodology

Separate databases in Estonia, Latvia and Lithuania were created but common database structure and data format was developed to make the databases comparable and enable producing some joint outputs. ESRI – platform for software and the coordinate system WGS 84 were used.

The agreed accuracy was 1:10 000 for the coastline and 1: 50 000 for marine areas. In case of joint inventories in transboundary marine areas (Irbe Strait) the data were separated by countries.

### Results

- Valuable work on harmonization of data collection and storage in Estonia, Latvia and Lithuania was done:
  - Common database structure was developed;
  - A format for inserting inventory data was developed;
- Necessary background information was collected and maps needed for other project activities – management plans, stakeholder communication, presentation of project results, website and info stands - were produced;
- Data gathered and produced by the project were inserted into project databases in Estonia, Latvia and Lithuania and handed over to national competent authorities;
- Natura 2000 data forms were filled in based on project data and handed over to national competent authorities.

#### **Main lessons learned:**

- GIS activity is a supporting action for other project actions;
- It takes a lot of time and efforts to harmonize data collection and database structure in 3 countries where different institutions and authorities are using different GIS programmes and database structures. However, harmonization is worth efforts because it enables creation of joint maps or joint databases and comparison of data/results if needed.
- The main difficulty in this project was related to the frequent changes of GIS experts in Latvia and Lithuania.

### Deliverables and products of the action

- Reports from meetings;
- Common data base structure and data format;
- Maps made for stakeholder communication and management plans;
- GIS databases with project data in Estonia, Latvia, Lithuania;
- Natura 2000 data forms filled about project areas in Estonia, Latvia, Lithuania;
- Maps on info stands;
- Map of Baltic marine protected areas;
- Maps of proposed new Natura 2000 sites in Latvia and Lithuania.