Abstract

In 1992, the EU initialised a concept for the protection of biodiversity by creating a network of valuable habitats called Natura 2000. This is based on the Birds and the Habitats Directive. Sweden as well as the other member states is obliged to protect species and habitats that are included in this network. A monitoring system for the Natura 2000 sites has to be set up and running by 2004 to answer the tasks of the directives.

The aim of this study was to investigate how Natura 2000 freshwater habitats can be monitored on a regional scale in Sweden. Adequate parameters and methods were investigated and a preliminary monitoring program for Natura 2000 lakes and watercourses in the County of Jönköping has been suggested. Next to parameters such as water quality, phytoplankton, and fishes, which are often included in existing monitoring programs, elements as aquatic vegetation, water level and shore structure will get a new importance. Additionally, indicator species will have a very strong meaning for an effective monitoring. Swedish standard methods cover almost all suggested basic parameters; some have to be adapted to the needs for a more extensive monitoring of protected sites. Methods for e.g. structure elements and water level have to be added.

The outcome of this case study shows that there is a high variability between the single sites concerning the conditions, threats, and existing monitoring. Basic information and more frequent monitoring will be necessary in the beginning; especially for the sites that are not subject to running monitoring today. For every site specific objectives have to be formulated, which should be part of the conservation plans and related to the existing monitoring. The results of the monitoring will either have to be set in relation to earlier data or evaluated with help of assessment instruments.

The costs of the suggested monitoring program were calculated for the County of Jönköping. Existing monitoring covers around half of the costs for a basic monitoring program. However, a coordination of existing monitoring programs may help to keep the costs down. There is currently no extra financial support for the monitoring of Natura 2000 sites.

The result of the present work indicates that monitoring of Natura 2000 freshwater habitats can be combined with monitoring programs that are done to fulfil the Water Framework Directive and the National Environmental Objectives.