

ACTION E.2:
PROJECT MONITORING AND EVALUATION

Description (what, how, where and when):

Monitoring and evaluation of the success of field actions on conservation status of targeted species and habitats is an essential part of each project. In order to be able to evaluate the effects of the management on conservation status of species and habitats suitable practical indicators, standardised field methods and the evaluation criteria must firstly be clearly defined.

Limited or no scientific data are currently available on status of habitat types and species of Community interest on chosen project areas. Initial surveys of fauna, flora and habitat types will be carried out in order to be able to assess current status of species and habitats on project areas.

There are two aims of the initial surveys:

- a.) One part, which can be considered to be preparatory, is that the Initial survey reports will indicate:
- possible timetables for the improvement of hydrological conditions taking into account specific ecological demands of species and habitats. These will be combined with the data of the actual hydrological conditions of every area, to choose the optimal time interval for field activities.
 - possible timetables for the removal of overgrowth field actions. The exact timing of the field action will be chosen on the basis of hydrological conditions of the areas.
 - possible timetables for the fish-out of invasive fish species. They will take into consideration species' and habitats' ecological demands and hydrological conditions of the area
 - reference values of the favourable conservation status, indicators of the favourable conservation status of habitats/species and all aspects related to the management of project areas (e.g. area description, historical land use analysis, statement of objectives, long term and short term goals, feasibility, constraints, identifications of the stakeholders involved, list of management measures, cost estimates).
- b.) In addition the initial surveys of status of project areas (hydrology, water quality) as well as status of fauna, flora and habitat types (see detailed list below) will provide reference data to which the data of the standardized field surveys (carried out after the realization of every concrete field action) can be referred to. This is crucial for the assessment of the effects of field actions on targeted species and habitats. The later is the part of the aim to monitor the effect of project field actions' (C actions) on targeted species and habitats and asses their effectiveness.

Surveys will be orientated and conducted in a way which will enable us to later identify suitable practical indicators, standardised field methods and the evaluation criteria. These will be identified in series of preparatory workshops for each project area. The working groups (for each project area) will consist of habitat and species specialists as well as land management experts. The knowledge will be joined from three different viewpoints. Working groups will meet at 3 workshops which will be held in office as well as at project areas in field. The working groups will identify indicators of favourable conservation status for targeted species (population and habitat of a species), habitats (structure, function and typical species) and set standardised field methods and relevant evaluation criteria for the assessment of the effects of field actions on targeted species and habitats.

The monitoring of the effect of project field actions' (C actions) on targeted species and habitats (repeated assessments) will be later carried out on the basis of the outcome of the preparatory series of workshops. The monitoring will evaluate the effectiveness of the concrete conservation actions.

At least one standardised field survey will be carried out at each project area after the realisation of every concrete field action. After the survey, the members of working teams for each project area will meet again and discuss their observations and assessments at two training workshops. The aim is to link separate assessments from different fields of expertise in an overall conservation assessment for the effect of the management. The final outcome of this action will be an assessment of the project field actions effectiveness on conservation status of targeted species and habitats for all project areas. The best practices on sustainable management for conservation of wetlands species and habitats will be identified, which has an invaluable impact for future management of wetland Natura 2000 sites in Slovenia.

A detailed list of planned surveys:

Pohorje bogs:

- Forest birds species: Black grouse (*Tetrao tetrix*) and Capercaillie (*Tetrao urogallus*),
- Active raised bogs 7110*,
- Bog forest (*Sphagnum* spruce woods) 91D0*,
- Natural dystrophic lakes and ponds 3160,

Zelenci:

- Water analysis,
- Alkaline fens 7230,
- Transition mires and quaking bogs 7140,
- Depressions on peat substrates of the *Rhynchosporion* 7150,
- Hydrology study;

Vrhe:

- Alkaline fens 7230,
- Fen Orchid (*Liparis loeselii*),
- Hydrology study;

Planik:

- Fen Orchid *Liparis loeselii*;

Gornji kal:

- European Pond Turtle (*Emys orbicularis*),
- Hydrology study,
- Fish species;

Mura Petišovci:

- European Pond Turtle (*Emys orbicularis*),
- White-faced Darter Dragonfly (*Leucorrhinia pectoralis*),
- European Mudminnow (*Umbra krameri*),
- European Fire-bellied Toad (*Bombina bombina*) and Italian Crested Newt (*Triturus carnifex*),
- Natural eutrophic lakes 3150,
- Hydrology study.

The monitoring activities and the conservation assessments will be carried out by the coordinating beneficiary, the associated beneficiaries, and the contracted external experts.

The monitoring of the effect of the project action on the status of species and habitats will be carried out by different parties:

- monitoring of bird species at the Pohorje bogs project area will be conducted by The Institute of the Republic of Slovenia for Nature Conservation
- The monitoring of invasive fish species and of *U. krameri* will be carried out by the associated beneficiary Fishery Research Institute of Slovenia.
- The monitoring of the extent and the ecological conditions of bog forests will be made by Slovenia Forestry Service.
- The hydrology monitoring will be made by the Institute for Water of the Republic of Slovenia which is an associated beneficiary.
- The monitoring of water quality in the Zelenci project area will be carried out by a subcontractor, in order to determine the success of fertilizers pollution reduction.
- The monitoring of other targeted species and habitats will be carried out by contracted experts.

All costs for monitoring on effectiveness of C actions were calculated with help of potential external providers. The potential providers on the basis of which the preliminary costs of the external costs of the monitoring surveys (initial and the survey after the filed action take place) were calculated: Forestry Institute of Slovenia-GIS (bogs, mires and fens), Centre for Cartography of Flora and Fauna-CKFF (pond turtle, water habitat, amphibians), Slovenian Academy of Science and Arts-SAZU (pond turtle, water habitat, amphibians, fens). The lower costs were later included into the action costs calculations. Prices for water analysis were checked with the Institute for Health Protection of the Republic of Slovenia. These external costs are urgently needed if we're to assess the effectiveness of the project field action on the field.

The initial survey activities will begin in 2011. The initial report will be elaborated to the end of March 2012. The monitoring activities will be carried out from the beginning of March 2013 and till the end of August 2014 at all six project areas, for the listed species or habitats:

The equipment necessary to carry out this action will be purchased by coordinating beneficiary in the beginning of the project: 1x car, 4x binoculars, 3x digital camera with tripod, one telescope, 6x GPS with software (digital cartography).

Reasons why this action is necessary:

No or limited data are currently available on status of species and habitats of Community Interest for each project area. In addition there are currently no standardised field methods available for the assessment of the effect of the management on the status of the habitats and species.

In order to identify suitable management practises monitoring of the effect of project action on favourable conservation status of targeted species and habitats of Community Interest for each project area will be carried out.

Beneficiary responsible for implementation:

Institute of the Republic of Slovenia for Nature Conservation

Expected results (quantitative information when possible):

1. Up-to-date status of selected habitats and species for project areas will be evaluated,
2. Standardised field methods and evaluation criteria set for the assessment of the suitability of the site management,
3. Monitoring of the effects of field actions on targeted species and habitat will be carried out on the basis of the standardised method,
4. Project actions will be evaluated to assess the suitability of the site management, and assure the favourable conservation status of targeted species and habitats.