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MANAGEMENT AND CONSERVATION OF WETLANDS AND WATER RESOURCES IN SLOVENIA WITH REGARD TO THE NEW EUROPEAN WATER LEGISLATION

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ABSTRACT

The European Union Water Framework Directive (WFD) is considered as a major contribution to the European environmental legislation. It also provides important implications for the implementation of the EU directives for nature conservation, namely the "Birds" and the "Habitats" Directives which forms a legislative framework for the network of protected areas, known as Natura 2000. The consequences for nature and especially wetland conservation in the framework of the Natura 2000 network after adoption of the WFD are analysed. A short description of water management and wetland conservation planning and management is presented, together with a brief presentation of the extent of wetland types in Slovenia.

Key words: water management, nature conservation, wetlands, European Union, Water Framework Directive, Birds Directive, Habitats Directive, Slovenia

GESTIONE E TUTELA DELLE ZONE UMIDE E DELLE RISORSE IDRICHE IN SLOVENIA ALLA LUCE DELLA NUOVA LEGISLAZIONE EUROPEA

SINTESI

La direttiva sul patrimonio idrico dell'Unione Europea "Water Framework Directive" (WFD) viene considerata il contributo più importante alla legislazione ambientale europea. Il documento fornisce importanti implicazioni per l'adempimento delle direttive EU per la tutela della natura, in particolare degli uccelli e degli habitat. Le direttive formano una cornice legislativa per la rete delle aree protette, conosciuta come Natura 2000. Nell'articolo vengono analizzate le conseguenze per la tutela della natura ed in particolare delle zone umide nella cornice della rete Natura 2000 dopo l'adozione della WFD. Gli autori presentano inoltre una breve descrizione della gestione del patrimonio idrico e dei progetti di conservazione e gestione delle zone umide, con una concisa presentazione dell'estensione dei tipi di zone umide in Slovenia.

Parole chiave: gestione del patrimonio idrico, tutela della natura, zone umide, Unione Europea, direttiva sul patrimonio idrico, direttiva sugli uccelli, direttiva sugli habitat, Slovenia

INTRODUCTION

Water Management in Slovenia

Slovenia is rich in water resources, with 80% of them within the Danubian and 20% within the Adriatic watersheds. The country borders Italy, Austria, Hungary and Croatia and consequently there are numerous trans-border river crossings. All water management issues (including trans-border) are under the domain of the Ministry for the Environment, Spatial Planning and Energy.

The changes in water management policy that have occurred since 1981 (when the previous Water Act has been adopted) resulted in the recently adopted Water Act (2002). These can be divided into two major groups:

- changes due to updating of the currency values (during the high rate of inflation period) and
- changes due to the new political system (changes in institutional and other water management system).

The water management area, with its broad effect on several sectors and individuals, intensively interacts with other legislations. One of these is the Environmental Protection Act, adopted in 1993. It was supposed to be the general framework for all later environmental and natural resource legislations. It is focused especially on the improvement of water, soil and air quality. The result of this is the fact that the monitoring of emissions, taxation for wastewater and air pollution taxation are already well under way.

The majority of water management related activities are under competence of the Ministry of the Environment, Spatial Planning and Energy (MOP). There are also seven units working within the MOP. Within the Environmental Agency of the Republic of Slovenia the Water Management sector performs most water management activities. It has eight regional offices close to the river basin scale, which deal almost exclusively with these issues. At the state level eight water management companies and one company for torrent areas management perform public services – maintain watercourses and manage the state owned water management infrastructure.

The MOP along with public services deal predominantly with the quantity of water resources, flood and erosion control, and the quality of the water environment protection and wastewater emission taxations, as well as monitoring responsibilities.

The responsibilities that are under the jurisdiction of local communities, according to the Water and the Environmental Protection Act are:

- the management and maintenance of drinking water supply facilities,
- the management and maintenance of wastewater collection and treatment facilities,
- waste collection, treatment and disposal.

Local communities may join to form interest-based associations in cases where systems for providing the

services mentioned above would involve several of them. The provision of public services is controlled by the local community, the associations of users and the state inspectorate. Public service providers also have to perform the prescribed self-monitoring.

The most urgent and critical issue to be solved is water management planning. The new Water Act provides legal basis specifically for this purpose. Recent work in water management is catchment oriented. Catchment management plans have already been prepared for some catchments, i.e. for the Kokra, Dragonja, Drava, Idrijca, Kolpa, Krka, Badaševica and Rižana rivers etc. These plans are an important step towards gaining experience how to prepare river basin characteristics and river basin management plans, and especially how to involve the public in this process.

These documents were prepared on the basis of Slovenia's international obligations as part of the pre-accession activities to the European Union and on the basis of the EC Water Framework Directive.

Wetland Conservation in Slovenia

The Ministry of Environment, Physical Planning and Energy is responsible for nature conservation in Slovenia. Its administrative and technical advisory body is the Institute of the Republic of Slovenia for Protection of Nature. The seven regional units for protection of nature act as technical supervisory bodies at the local level.

The Environmental Protection Act passed in 1993 represents the regulatory system for both environmental protection and nature conservation. A Nature Conservation Act was adopted in 1999, which, among other provisions, established a legal basis for integration of nature conservation principles into other sectors.

National Biodiversity Strategy (ARSO, 2001) is considered as part of the obligations of the Republic of Slovenia to the implementation of the Convention of the Biological Diversity (CBD), National Programme for Environment and Nature Conservation Act and it is under the auspices of the Slovenian Ministry of Environment, Physical Planning and Energy. Preparation of the National Wetland Conservation Strategy is understood as an appropriate tool for effective wetland conservation in Slovenia.

INVENTORY OF WETLANDS AND WETLAND CONSERVATION IN SLOVENIA

The inventory of wetlands and rivers in Slovenia was prepared in 2001 (Sovinc, 2001). The database contains information on 3525 wetland sites, which are distributed over 31 catchment areas.

The total area of recorded wetlands, including flood zones is 98,758.93 ha (or 4.87% of the territory of Slovenia). In Slovenia, there are 19 (of 40) types of wetland

according to the classification of wetlands in the Ramsar Convention (Fig. 1). The most common wetland type in Slovenia are "ponds" which include characteristic Karst waterholes; there are 1517 such wetlands, spread over 134.38 ha. "Excavations" (gravel/brick/clay pits; borrow pits, mining pools, etc.) are recorded in 584 sites with a total area of 363.438 ha. Then follows "Aquaculture (e.g. fish/shrimp) ponds" (312 sites, total 225.308 ha) "Seasonally flooded agricultural land" with 304 sites on 18,079.597 ha, which is also the largest extent of an individual type of wetland in Slovenia. Only in fifth place by number of sites is the first type of "natural" wetland (the first four most frequent types are all "man-made wetlands"); there are 279 recorded wetlands of "Permanent freshwater marshes/pools; ponds (below 8 ha), marshes and swamps on inorganic soils; with emergent vegetation water-logged for at least most of the growing season" which cover 168.692 ha.

NEW APPROACH IN WATER MANAGEMENT

The Water Framework Directive (WFD), adopted by the European Community on 23 October 2000, is con-

sidered as a major contribution to the European environmental legislation. It is especially important for all types of aquatic and wetland ecosystems, as this is the first time that the protection of these ecosystems is dealt with by one legal instrument at the European level. In addition, WFD brings important implications for the implementation of the Natura 2000 network, based on the implementation of the EU Birds and Habitats Directives.

EU Directives constitute the basic legislation for EU member states. Once Slovenia becomes a member of the European Union (2004), these Directives will become obligatory and will be considered as the basis legislative tool at the national level.

WFD provides an obligation, but also an opportunity for EU member states to adopt a more global approach to conservation by developing a programme of measures at the river basin level. Political or administrative stages must be overlooked.

Member states must take the following steps to meet the requirements of WFD:

- to assign the individual river basins to a river basin district (RBD; going across the national borders if the river crosses them),

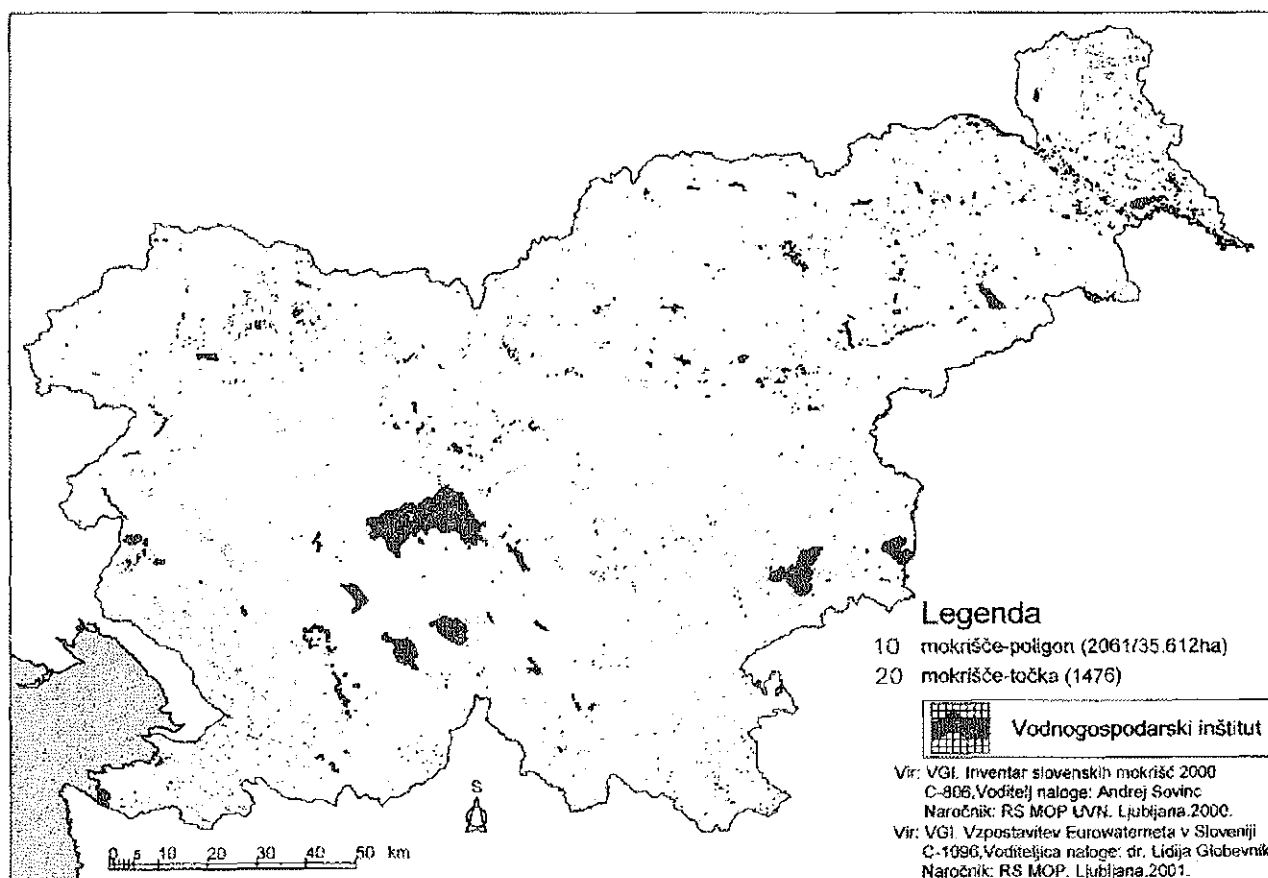


Fig. 1: Wetlands of Slovenia (Water Management Institute, 2001).
Sl. 1: Slovenska mokrišča (Vodnogospodarski inštitut, 2001).

- to identify the competent authority responsible for the application and implementation of WFD,
- to collect information and categorise different water bodies within each RBD,
- to undertake an analysis of the human impact on water bodies,
- to prepare a programme of measures, taking into account the provisions of all other EU Directives (11).

Integrated approach to the water management issues is yet to be established in Slovenia. It is important to emphasise that the new Water Act provides the legal basis for implementation of the Water Framework Directive.

One of the most important tasks regarding the Water Framework Directive and the tool for implementation of the Natura 2000 network (see below) is the preparation of a management plan. This has to be produced for each river basin district and it must cover the entire area. The division into sub basin survey areas is also allowed and it is a matter for national authorities that share the control over a river basin. In accordance with Water Framework Directive, Article 3 (Directive 2000/60/EC) all the river basins have to be assigned to an individual river basin district. It is also allowed that smaller river basins may be combined with larger river basins or joined with neighbouring small basins to form an individual river basin district where appropriate. River basins exceeding national boundaries have to be assigned to an international river basin district (Fig. 2).

In Slovenia, the Danube and Adriatic river basin districts have been included in the new Water Act and declared part of the international river basin district.

WATER MANAGEMENT AND NATURE CONSERVATION

The EU's policy on nature conservation is made of two Directives: Council Directive 79/409/EEC (the Birds Directive) and Directive 92/43/EEC (the Habitats Directive).

Together, these Directives form a legislative framework for the protection of Europe's plants, animals and habitats. The creation of the ecological network of protected areas - known as Natura 2000 - is emerging from:

- Special Protection Areas (SPAs) to conserve 182 bird species/sub-species (listed in Annex I to the Birds Directive) and migratory birds, and
- Special Areas of Conservation (SACs) to conserve more than 250 habitat types, 200 animal and more than 430 plant species (listed in Annexes to the Habitats Directive).

The purpose of Natura 2000 is to maintain or restore the habitats and species at a favourable conservation status in their natural range.

WHAT ARE THE CONSEQUENCES FOR NATURE, AND ESPECIALLY WETLAND CONSERVATION, AND THE NATURA 2000 NETWORK AFTER ADOPTION OF THE WFD?

- There is now a clear legal link established between the EU protected area legislation (Natura 2000) and protection of river basins. The requirements of the birds and the habitats directives have to be taken into consideration when planning and implementing actions to improve water quality.

- The diction of "good water status" in the WFD provides opportunity for wetland restoration. If a restored wetland will contribute towards the enhancement of the water status, this should be indicated in the programme of actions at the river basin level.

- WFD established the link between the waters and their ecological state in terms of biological diversity, structure and function and special attention is put on the fulfilment of the needs of the wetlands to maintain their character.

- The list/inventory of Natura 2000 sites (and other protected areas) have to be prepared and regularly updated as required in the Article 6 of the WFD. In other words, maintaining of the ecological character of Natura 2000 sites has to be stated as a clear aim when devising actions at the river basin level. In practice, this means that the management plans for Natura 2000 sites should form an integral part of the catchment planning process.

- All Natura 2000 sites have to be mapped out (this is also true for all other water bodies!) and these maps should be incorporated into management plans.

- WFD also provides an opportunity to ensure effective monitoring of Natura 2000 locations, including other wetland and water sites. WFD requires that "A good water status" is to be achieved in all European community waters: inland surface waters, transitional waters, coastal waters and groundwater. In the case of surface waters, this state should be achieved through measuring of "ecological status" (according to the quality of water ecosystems) and of "chemical status" (by the levels of specific pollutants present) for ground waters, the monitoring system is based both on core parameters of water chemistry and on the "quantitative status" of groundwater.

- As part of the monitoring requirements under the WFD, the impacts of pressures have to be assessed as part of the human impact analyses.

- The requirement of the river basin management plan is to undertake an economic analysis of water use. Although this statement might appear tricky in some cases (Article 4, No 4.a), Member States determine that all necessary improvements in the status of bodies of water cannot reasonably be achieved within the time-scales set out in the paragraph for at least the following reason: "completing the improvements within the time

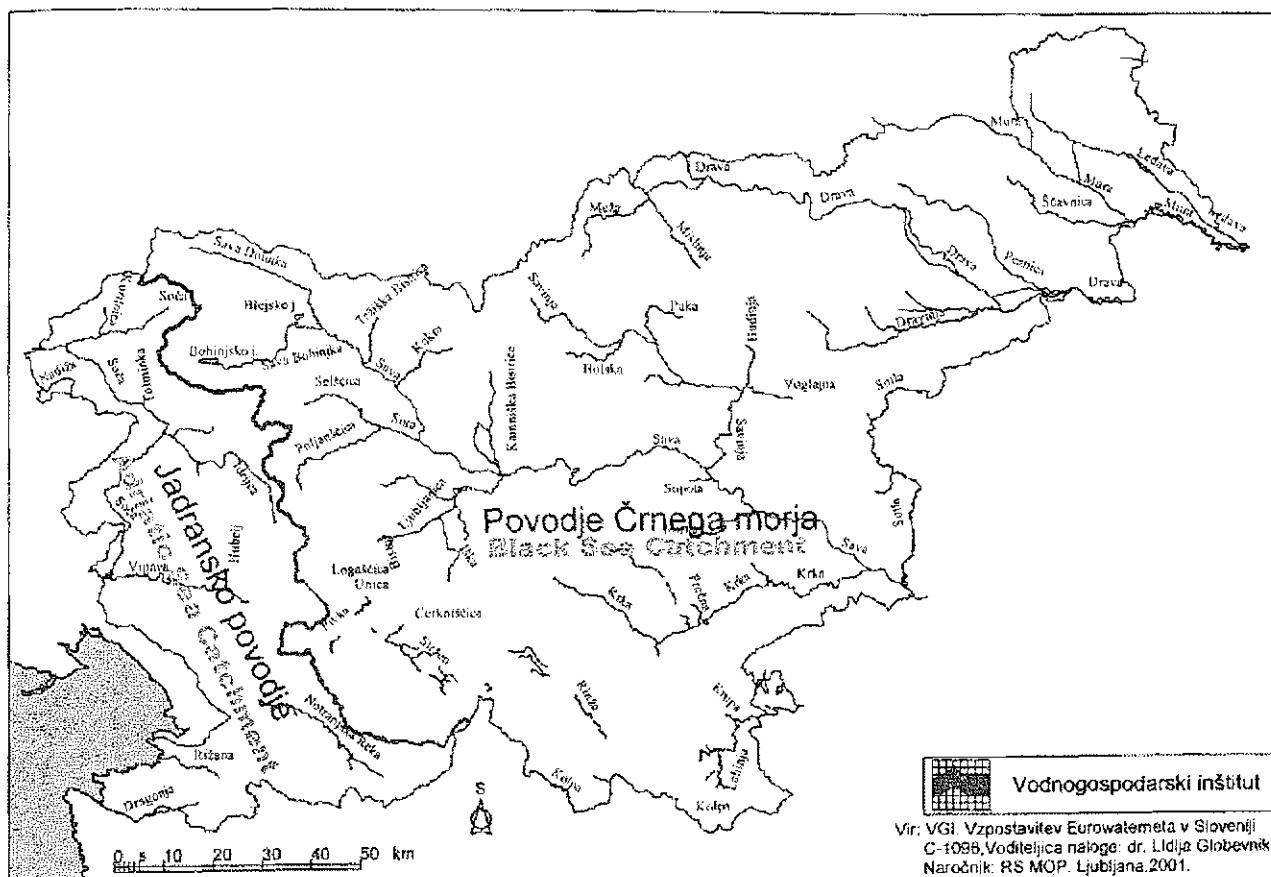


Fig. 2: Transboundary character of rivers in Slovenia (Water Management Institute, 2001).

Sl. 2: Čezmejni značaj slovenskih rek (Vodnogospodarski inštitut, 2001).

scale would be disproportionately expensive". It is however hoped that economic arguments for restoring wetlands (water purification, natural retention areas, recreation...) will be considered as prevailing when assessing cost effective solutions to obtain good water status.

CONCLUSIONS

New approach to water and wetland conservation in Slovenia is based on the implementation of the European Union Directives: the Water Framework Directive, the Birds Directive and the Habitats Directive. Water catchment approach is used to respond to the questions of planning and management of water and wetland resources. Efforts are made to adopt national legislation and preparatory steps to correspond to the above EU legislation, which will also become obligatory for Slovenia, once it joins the European Union.

UPRAVLJANJE IN VARSTVO MOKRIŠČ TER VODNIH VIROV V SLOVENIJI V OKVIRU NOVE EVROPSKE ZAKONODAJE

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POVZETEK

Smernice Evropske zveze o skupni politiki do voda (*Water Framework Directive*) so pomemben prispevek k evropski okoljski zakonodaji. Posamezna določila smernic vplivajo tudi na uresničevanje naravovarstvenih smernic Evropske zveze, t.j. "ptičjih" in "habitatnih" smernic. Te so pravni okvir za razglasitev omrežja zavarovanih območij v državah Evropske zveze, ki se imenuje Natura 2000.

V prispevku je opravljena primerjava posledic za varstvo narave, še posebej varstvo mokrišč v okviru omrežja Natura 2000, po sprejemu smernic Evropske zveze o skupni politiki do voda:

Vzpostavljena je jasna povezava med naravovarstveno zakonodajo in predpisi s področja porečij.

Smernice Evropske zveze o skupni politiki do voda (*Water Framework Directive*) povezuje tudi ekološko stanje voda v pogledu biotske raznovrstnosti (in ne le kakovosti in vodnih količin).

Inventar območij v omrežju Natura 2000 in vzdrževanje njihovega ekološkega značaja je predpogoj pri načrtovanju ukrepov na ravni porečja.

Smernice Evropske zveze o skupni politiki do voda zahtevajo učinkovito spremljanje stanja v omrežju Natura 2000.

Zahteva smernic Evropske zveze o skupni politiki do voda po "dobrem ekološkem stanju voda" ponuja možnosti za ekološko obnovo mokrišč (v smislu samočistilne sposobnosti mokrišč in možnosti naravnega zadrževanja voda).

Pri pripravi načrta upravljanja porečja smernice Evropske zveze o skupni politiki do voda zahtevajo tudi ekonomske analize rabe vode; ta ukrep naj bi pripomogel tudi k obnovi naravnih procesov v mokriščih, saj je to najbolj učinkovita rešitev zagotavljanja "dobrega ekološkega stanja voda".

V prispevku je podan tudi kratek opis organiziranosti vodnega gospodarstva in varstva mokrišč v Sloveniji, skupaj s kratkim pregledom obsega in tipov mokrišč.

Ključne besede: vodno gospodarstvo, varstvo narave, mokrišča, Evropska zveza, smernice Evropske zveze o skupni politiki do voda, ptičje smernice, habitatne smernice, Slovenija

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