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ZASNOVA VODNOGOSPODARSKIH STROKOVNIH PODLAG ZA POTREBE USKLAJEVANJA PROSTORSKEGA RAZVOJA THE CONCEPT OF WATER MANAGEMENT STUDIES AND PLANS TO BE USED IN THE HARMONIZATION PROCESS IN SPATIAL PLANNING

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Postopek prostorskega planiranja in načrtovanja je eden najpomembnejših segmentov operativnega izvajanja politike varstva voda ter vodnega in obvodnega prostora, kakor tudi zagotavljanja uveljavljanja načel trajnostno uravnoteženega gospodarjenja z vodami. Zato so za potrebe prostorskega planiranja ustrezno pripravljene vodnogospodarske strokovne podlage nujna naloga vodarske stroke. V prispevku je podana zasnova vodnogospodarskih strokovnih podlag za potrebe usklajevanja prostorskega razvoja tako na nivoju države kot lokalne skupnosti. Pri tem je podana navezava teh strokovnih podlag na sam postopek usklajevanja prostorskega razvoja, saj namreč ni vseeno, kako, kdaj in s kakšno težo posamezne vodnogospodarske vsebine vstopajo v sistem prostorskega usklajevanja. Podana je tudi navezava teh strokovnih podlag na sistem vodnogospodarskega planiranja in načrtovanja. Vodnogospodarske strokovne podlage za potrebe usklajevanja prostorskega razvoja naj bi namreč ne bile posebne vodnogospodarske strokovne podlage, temveč sestavni del načrta upravljanja povodja (NUP). To pa pomeni, da mora biti NUP zasnovan tako, da bo, kot temeljni vodnogospodarski akcijski načrt, lahko tudi strokovna podlaga za medsektorsko usklajevanje in prostorsko planiranje tako na lokalni kot na državni ravni.

Ključne besede: gospodarjenje z vodami, prostorsko planiranje.

The process of spatial planning and design is one of the most important elements for the implementation of water policy (protection of water and aquatic environment), as well as for asserting the principles of sustainable water management into the every day praxis. Therefore, water management studies and plans, prepared in a way that is understood by regional planners and developers, is currently one of the most important tasks for those in the water profession. The paper gives the basic scheme of those water management studies and plans which have been developed to be used in the harmonization process in spatial planning on state and/or local levels. Besides that, the paper focuses on the process of decision making in spatial planning, and on the role various water related issues play in such a process. In other words, the issues related to water conservation should be included as a restrictive criteria very early in the process of spatial planning. The paper also gives the basic idea of how these water management studies and plans should be included into the system of water management planning and design. Nevertheless, water management studies and plans, which are developed to serve in the harmonization process in spatial planning, should be the integral part of River Basin Management Plans. A River Basin Management Plan, however, should be designed in a way that can serve as a basic water management action plan, as well as a basis for adjustment of stand-points among various users of the physical environment in the process of spatial planning on a local, as well as on a state level.

Key words: water resources management, physical planning.

1. UVOD

V Sloveniji se trenutno pripravlja več, za gospodarjenje z vodo ter vodnim in obvodnim prostorom, ključnih zakonov (Zakon o vodah, Zakon o urejanju prostora itd.). Hkrati z zakonom se vzpostavlja nov sistem gospodarjenja z vodami, ki temelji na izhodiščih najnovejših spoznanj stroke, ki jih uokvirja nova evropska zakonodaja v "Direktivi o okvirni politiki za področje voda Evropske zveze". Vzporedno z zasnovo novih vodnogospodarskih dokumentov se pripravlja tudi nov prostorski plan RS. To je ključni medsektorski dokument, ki določa politiko rabe prostora in gospodarjenja z naravnimi viri.

Treba se je zavedati, da je postopek prostorskega planiranja in načrtovanja verjetno najbolj pomemben segment operativnega izvajanja politike varstva voda ter vodnega in obvodnega prostora, kakor tudi zagotavljanja uveljavljanja načel trajnostno uravnoteženega gospodarjenja z vodami. Zato so za potrebe prostorskega planiranja ustrezno pripravljene vodnogospodarske strokovne podlage nujna naloga stroke. Še bolj pomembno kot same strokovne podlage pa je način, kako te vsebine vstopajo v proces medsektorskega usklajevanja pri pripravi prostorskega plana države.

2. OBSTOJEČE VODNOGOSPODARSKE STROKOVNE PODLAGE ZA PRIPRAVO PROSTORSKIH DOKUMENTOV

2.1 VODNOGOSPODARSKE OSNOVE SLOVENIJE

Strokovno navodilo za izdelavo vodnogospodarskih osnov (Ur. list SRS, št. 27/1984) navaja, da vodnogospodarske osnove, na podlagi prikaza danosti vodnega režima in kakovosti vode v povodju, dajejo izhodišča in možnosti prihodnjega vodnogospodarskega razvoja. Hkrati pa so

1. INTRODUCTION

Slovenia is currently preparing several important documents that are relevant for management of water and aquatic environments (Water Act, Spatial Planning Act, etc.). At the same time, Slovenia is trying to implement a new system of water management that is based on the latest findings in the field of water management, which are incorporated into a new EU legislation in the proposed Water Policy Framework Directive. Parallel to new water management documents, Slovenia is preparing a new Spatial Master Plan of Slovenia, which is a key document that defines the policy of land use and the management of natural resources.

The process of spatial planning and design is probably the most important element for the implementation of water policy (water conservation and the conservation of aquatic environments), as well as for asserting the principles of sustainable water management into the every day praxis. Therefore, preparing water management studies and plans in a way that is understood by regional planners and developers, is currently one of the most important tasks for those in the water profession. More important than water management studies and plans themselves, is the way topics related to water management enter the harmonization process in preparing the State Spatial Master Plan.

2. CURRENT WATER MANAGEMENT STUDIES AND PLANS THAT SERVE AS A BASIS FOR THE PREPARATION OF SPATIAL PLANNING DOCUMENTS

2.1 WATER MANAGEMENT MASTER PLAN OF SLOVENIA

The Expert Guideline for the Preparation of the Water Management Master Plan (UL SRS, 1984) says that a Water Management Master Plan (WMMP) gives the basic information about the possibilities of future development of water management on the basis of the water regime and water quality in a river basin. At

vodnogospodarske osnove strokovna osnova za pripravo prostorskih planskih aktov.

V tem strokovnem navodilu je bilo tudi opredeljeno, do kdaj morajo biti izdelane posamezne vodnogospodarske osnove. Vodnogospodarske osnove vodnih območij v M - 1:25.000 bi morale biti izdelane do konca leta 1991, Vodnogospodarske osnove RS v M - 1:250.000 pa leto dni kasneje. Delno so se nove Vodnogospodarske osnove Slovenije izdelale, do njihove popolne realizacije pa ni prišlo zaradi dveh glavnih razlogov. Prvič, zaradi pomanjkanja sredstev in drugič, zaradi razveljavitve planiranja v vodnem gospodarstvu s črtanjem poglavja "Planiranje" iz Zakona o vodah (Uradni list SRS, št. 29/86). Tako so zadnje uradne Vodnogospodarske osnove Slovenije v M - 1:400.000 še iz leta 1978. Žal so te Vodnogospodarske osnove Slovenije predvsem v tistih segmentih, ki obravnavajo razvojno planska izhodišča, že povsem zastarele: (1) doktrina v vodnem gospodarstvu se je v zadnjih 20 letih močno spremenila; (2) podatkovne baze, na katerih temeljijo veljavne vodnogospodarske osnove so v marsičem zastarele; (3) merilo 1:400.000 ni operativno.

2.2 VODNOGOSPODARSKE SESTAVINE PROSTORSKEGA PLANA RS

Leta 1986 je bil, v skladu s takratno novo prostorsko zakonodajo (Zakon o urejanju prostora itd., Uradni list SRS, št. 18/84) in v skladu s takratno doktrino ter vlogo vodnega gospodarstva v sistemu družbenega planiranja, pripravljen Dolgoročni plan vodnega gospodarstva Slovenije za obdobje 1986 - 2000. Sektorski dokument je bil hkrati strokovna podlaga za pripravo prostorskega dela republiškega dolgoročnega plana, kjer so te vsebine prikazane na treh kartah: (I.4) Zasnova vodnih virov in oskrbe z vodo, (I.5) Zasnova vodnogospodarskih ureditev in (V.14) Zasnova sanacije naravnih virov ter razmestitve čistilnih naprav. Karte so bile izdelane v merilu 1:250.000 in leta 1989 dopolnjene.

Doktrina v vodnem gospodarstvu se je v

the same time, WMMP represents the basic analytical studies for preparation of spatial planning documents.

The expert guideline also defined the date by when the WMMP should be prepared. WMMP for river basins in the scale of 1:25.000 would have had to be prepared by the end of the year 1991, while the WMMP of Slovenia would have to be prepared a year later. The new WMMP of Slovenia was partly realized, but it was never completed because of two main reasons. The first reason was the lack of funds, and the second was the invalidation of planning in the field of water management with the abolishment of the chapter "Planning" from the Water Act in 1986 (UL SRS, 1986). Therefore, the last official WMMP of Slovenia in the scale of 1:400.000 is still from the year 1978. Unfortunately, the official WMMP of Slovenia is, in the segments that relate to developmental planning guidelines, already completely out of date: (1) the doctrine of water management has changed dramatically in the last 20 years; (2) the data base, on which the official WMMP is based, has become obsolete; (3) the scale 1:400.000 is not operative.

2.2 WATER MANAGEMENT COMPONENTS OF THE LONG- TERM PLAN OF SLOVENIA

In 1986, a long-term Water Management Plan of Slovenia for the period of 1986-2000 was prepared, in accordance with (at that time the new) spatial planning legislation (Spatial Planning Act and others, UL SRS, 1984) and in accordance with the current doctrine in water management. The branch document also served as a basis for the preparation of the spatial segment of the Long-Term Plan of Slovenia (LTPS). The water management elements are included in three maps entitled: (I.4) The Concept of Water Resources and Water Supply, (I.5) The Concept of Water Resources Development Projects, and (V.14) The Concept of Sanitation of Natural Resources and Placement of Water Purifying Plants. The maps were made on a scale of 1:250.000, and were supplemented in the year 1989.

The doctrine in water management has

zadnjih 15 letih močno spremenila. V 80-tih letih je vodno gospodarstvo služilo predvsem potrebam drugih sektorjev, kot so kmetijstvo, poselitev in drugi. V zadnjem obdobju pa postaja varovanje okolja in naravnih virov ena najpomembnejših nalog tudi za vodno gospodarstvo (Direktiva o okvirni politiki za področje voda EZ). Nov način razmišljanja je našel svojo pot tudi v Dolgoročnem planu Slovenije. Z zadnjo spremembo in dopolnitvijo Dolgoročnega plana RS (Ur. list RS, št.11/1999) zapisane v besedilu novega člena pod točko 3.1.39., je poudarek na varovanju vodnega sistema in trajnostno uravnoteženi rabi vode in vodnih ter obvodnih ekosistemov.

2.3 TEŽAVE OBSTOJEČIH VODNOSPODARSKIH STROKOVNIH PODLAG ZA POTREBE PROSTORSKEGA USKLAJEVANJA

Težave obstoječih vodnogospodarskih strokovnih podlag za potrebe prostorskega usklajevanja so dvojne. Prvič gre za težave plansko razvojnih vsebin in nosilca priprave teh vsebin, drugič pa za težave pri ustrezni, predvsem pa jasni in drugim strokam kot uporabnicam teh strokovnih podlag razumljivi predstavitvi vodnogospodarskih vsebin, pomembnih za prostorsko planiranje in načrtovanje.

Medtem ko je bilo poglavje "Planiranje" leta 1986 črtano iz Zakona o vodah (Ur. list SRS, št.29/86), pa Zakon o urejanju prostora (Ur. list SRS št. 18/94, 15/89 in Ur. list RS št. 71/93) zahteva, da so v prostorskih vsebinah opredeljene temeljne usmeritve in globalna zasnova dejavnosti v prostoru, ki se med drugim nanašajo na pomembnejše vodne vire ter pomembnejša omrežja in naprave za vodooskrbo s pitno in tehnološko vodo ter za odvajanje in čiščenje odplak. Kot sta zelo dobro izpostavila avtorja članka "Trenutna institucionalna ureditev gospodarjenja z vodami v RS in trendi nadaljnega razvoja" (Umek & Banovec, 1998), se postavlja vprašanje "kako naj se vodno gospodarstvo vključi v proces prostorskega načrtovanja, če

changed a lot in the last 15 years in Slovenia. In the 1980's, water management predominately served the needs of other branches, such as agriculture, urbanization and others. In the last years, the protection of the environment and natural resources in general has also become one of the most important tasks for water management (EU Water Policy Framework Directive). The new way of thinking has also found its way into the Long-Term Plan of Slovenia (LTPS). With the last change and supplementation of the spatial segment of the LTPS (Ur. list RS, No.11, 1999) presented in the new article 3.1.39, the main emphasis is given to water system conservation and to the sustainable use of waters and aquatic environments.

2.3 THE PROBLEMS OF CURRENT WATER MANAGEMENT PLANS AND THE STUDIES USED IN THE HARMONIZATION PROCESS IN SPATIAL PLANNING

The problems of the current water management plans and studies used in the harmonization process in spatial planning are of two different origins. Firstly, the official holder responsible for the preparation of developmental planning documents has not been defined. Secondly, there is the problem of the proper graphical presentation of all water management related topics that are important in the process of harmonization in spatial planning. Users from other professions should easily understand them.

While the chapter "Planning" was abolished from the Water Act (UL SRS, 1986), the Spatial Planning Act (UL SRS 1984; 1989; 1993; 1994) requires that spatial planning components of Long-Term Plans define the basic guidelines and the concept of land use, which includes important water resources, water supply, and wastewater treatment. As has been well pointed out by others (Umek & Banovec, 1998), the question is "how can water management be included in the process of spatial planning, if the chapter *Planning* is abolished from the basic act that defines the roles of water management?" Because of the discontinuation of planning in water

so temeljnemu zakonu, ki določa pogoje za gospodarjenje z vodami, črtali zelo pomembno poglavje?" Zaradi diskontinuitete planiranja v vodnem gospodarstvu so tudi strokovne podlage s tega področja dostikrat zastarele, predvsem pa nesistematične, kljub številnim poizkusom preseči nastalo zakonsko in s tem tudi institucionalno praznino.

Vodnogospodarske strokovne podlage, kot so Vodnogospodarske osnove Slovenije (1978) in vodnogospodarske sestavine prostorskega dela Dolgoročnega plana RS (grafične priloge so iz leta 1989), niso najustreznejša strokovna podlaga za uresničevanje varstva hidrosfere, ki je ena izmed temeljnih nalog vodarske stroke in s tem tudi vodnega gospodarstva. Prostorski planer si namreč z nekaterimi, za prostorsko planiranje pomembnimi vodnogospodarskimi podatki, težko pomaga, saj niso predstavljeni na način, da bi jih nevodarske stroke lahko preprosto uporabile in pravilno razlagale. Zato smo si postavili cilj, da bi zasnovali takšno grafično predstavitev vodnogospodarskih strokovnih podlag (Načrt upravljanja s povodji...) za potrebe prostorskega usklajevanja, ki bo jasna, transparentna in jo bodo lahko neposredno uporabili kot podlago za sprejemanje odločitev v prostoru (Steinman & Vahtar, 1996; Kompare et al., 1997; Vahtar et al., 1998).

3. ZASNOVA VODNOGOSPODARSKIH STROKOVNIH PODLAG ZA POTREBE USKLAJEVANJA PROSTORSKEGA RAZVOJA

3.1. KONCEPT VODNEGA SISTEMA

Pri zasnovi vodnogospodarskih strokovnih podlag za potrebe vključevanja v procese medsektorskega usklajevanja smo izhajali iz upoštevanja dvojnosti vodnega sistema in iz tega izhajajoče dvojne vloge vodnega gospodarstva (Kompare et al., 1997; Vahtar et al., 1998).

V prvi vlogi vodno gospodarstvo skrbi za varstvo stabilnosti in dinamike naravnih sistemov. Gre torej za **ekosistemski pristop**,

management, water management plans and studies are often out of date, or non-systematic, regardless of many attempts to bridge the resulted legal and also institutional gaps.

The current water management plans, such as the Water Management Master Plan of Slovenia (1978) and the water management section of the spatial components of the Long-Term Plan of Slovenia (the graphical part is from 1989), are not the best guidelines for the implementation of the protection of the hydrosphere, which is one of the basic tasks of water management. It is very difficult for spatial planners to use some of the important water management data in the process of spatial planning, if they are not presented in a way that can be easily used and properly interpreted by non-water professionals. Therefore, we have set a goal to develop such a graphic presentation of Water Management and River Basin Management Plans, that will be clear and easy to understand for non-water professionals. At the same time, the presentation should be prepared in such a way that it can directly serve as a basis for making decisions in the process of harmonization in spatial planning (Steinman & Vahtar, 1996; Kompare et al., 1997; Vahtar et al., 1998).

3. THE CONCEPT OF WATER MANAGEMENT EXPERT GUIDELINES USED IN THE HARMONIZATION PROCESS IN SPATIAL DEVELOPMENT

3.1. THE CONCEPT OF THE WATER SYSTEM IN THE HARMONIZATION PROCESS OF SPATIAL PLANNING

The concept of water management expert guidelines used in the harmonization process in spatial development is based on taking into consideration the double nature of the water system and from that, proceed to the double role of water management (Kompare et al., 1997; Vahtar et al., 1998).

The first role is the protection of the stability and dynamics of natural systems - the

ki smo ga imenovali sistem "okolje". To vključuje ohranjanje zdravega vodnega okolja oziroma vse tisto, kar vpliva na funkcijske povezave znotraj vodnega sistema in nanj vezanih ekosistemov. Gre torej za najnujnejše robne pogoje, ki jih je treba upoštevati, da še ohranimo stabilnost naravnega sistema. To pa so tako pomembni pogoji, da jih je kot omejitvene razvojne dejavnike potrebno že zelo zgodaj vključiti v proces prostorskega usklajevanja interesov različnih sektorjev.

V drugi vlogi gre za načrtovanje gospodarske rabe vode ter vodnega in obvodnega prostora, kjer je vodno gospodarstvo, razen vodooskrbe in odvoda odpadnih voda, predvsem v službi drugih sektorjev, kot so energetika, turizem, kmetijstvo, urbanizacija in drugi. **Antropocentrični pristop**, ki smo ga poimenovali sistem "raba", skuša zadovoljiti človekove potrebe po vodi. Pri tem pa, v skladu z novo doktrino v stroki (Direktiva EZ), to ni več klasičen koncept rabe oziroma izkoriščanja. Gre namreč za zadovoljitev človekovih potreb po vodi v najširšem pomenu, kar predstavlja integralen in holističen pristop rabe v smislu trajnostno uravnoveženega razvoja (sustainable development). Stanje voda in vodnega okolja opredeljeno v sistemu "okolje" torej podaja omejitve razvojnih možnosti sistemu "raba".

ecosystematic approach, which we call a system "environment". It includes the protection of healthy water environments, together with everything that has an impact upon vital functional connections within the water system and connected ecosystems. These are, actually, the minimum requirements that one has to take into consideration in order to protect the stability of natural systems. These requirements, however, are so important, that one has to use them as restrictive developmental criteria very early on in the process of the harmonization of developmental goals among various users.

The second role is the economic use of waters and aquatic environments. In this context, other branches of the economy, such as energy, tourism, agriculture, urbanization and others, employ water management, with the exception of water supply and wastewater treatment (the basic tasks of water management). The anthropocentric approach, that we call a system "use", tries to satisfy human needs for water. In accordance with the new doctrine in the water profession (EU Directive) this, however, is no longer a classical concept of use. It means the satisfaction of human needs for water in a broad sense, which represents the integral and holistic approach to use in the sense of sustainable development. The conditions of water environments as defined in the system "environment" represent the restrictions of developmental possibilities to the system "use".

OKOLJE		RABA	
URESNIČEVANJE CILJEV VARSTVA OKOLJA varstvo stabilnosti in dinamičnosti naravnega sistema (direktive EZ, nac. program varstva okolja, nac. program gospodarjenja z vodami...)		URESNIČEVANJE PLANSKIH RAZVOJNIH CILJEV SEKTORJA varstvo potencialov prostora za rabo / protection of potentials for use srednjeročne in kratkoročne naložbe / long-term and short-term investments (nac. program gospodarjenja z vodami)	URESNIČEVANJE PLANSKIH RAZVOJNIH CILJEV DRUGIH SEKTORJEV varstvo potencialov za rabo srednjeročne in kratkoročne naložbe (nac. programi drugih sektorjev)
ODTOČNI REŽIM EROZIJA KAKOVOST površinskih in podzemnih voda KOLIČINE površinskih in podzemnih voda VODNO OKOLJE IN VODNI EKOSISTEMI		PRESKRBA Z VODO (pitna in tehnološka voda) ODVOD IN ČIŠČENJE ODPADNIH VODA (VARSTVO PRED POPLAVAMI)	HIDROMELIORACIJE KMETIJSKIH ZEMLJIŠČ (osuševanje in namakanje) GRADNJA ZADRŽEVALNIKOV za potrebe energetike, namakanja, in varstva pred poplavami VODNOGOSPODARSKE UREDITVE ZA POTREBE VARSTVA PRED VODO IN EROZIJO (urbaniziranih in intenzivnih kmetijskih površin ter infrastrukturnih objektov) DRUGE VODNOGOSPODARSKE UREDITVE (turizem, ribištvo...)

Slika 1. Delitev vodnogospodarskih vsebin za potrebe prostorskega usklajevanja na sistem "okolje" in sistem "raba".

ENVIRONMENT		USE	
REALIZATION OF ENVIRONMENTAL PROTECTION GOALS: Protection of stability and dynamics of the natural system (EU directive, national program of environmental protection, nat. program of water management...)		REALIZATION OF PLANNED DEVELOPMENTAL GOALS IN THE FIELD OF WATER MANAGEMENT: protection of potentials for use long-term and short-term investments (national program of water management)	REALIZATION OF PLANNED DEVELOPMENTAL GOALS IN OTHER ECONOMIC FIELDS: protection of potentials for use long-term and short-term investments (national programs of other economic fields)
RUN-OFF REGIME SOIL EROSION QUALITY of surface and ground waters QUANTITY of surface and ground waters AQUATIC ENVIRONMENTS		WATER SUPPLY (drinking and technological waters) WASTEWATER DISPOSAL AND TREATMENT FLOOD PREVENTION	LAND RECLAMATION AND IRRIGATION in agriculture CONSTRUCTION OF WATER RESERVOIRS to use in energy, flood prevention and irrigation WATER RESOURCES DEVELOPMENT PROJECTS FOR FLOOD AND EROSION PREVENTION (of urbanized and intensive agricultural areas, and infrastructural objects) OTHER WATER RESOURCES DEVELOPMENT PROJECTS (tourism, fishing...)

Figure 1. The division of water management topics used in the harmonization process in spatial planning on the system "environment" and the system "use".

3.2 KONCEPT GRAFIČNE PREDSTAVITVE VODNO-GOSPODARSKIH VSEBIN

Novi prostorski plan države (2000-2020) bo opredeljeval predvsem politiko prostorskega razvoja. Z opredelitvijo pogojev prostorskega razvoja bo predvsem usmerjevalne narave. Izhodišča za urejanje prostora tako predstavljajo: (1) zavarovana območja s pravno zagotovljenim varstvom (varstvena območja vodnih virov itd.); (2) varovana območja kot rezervacije prostora za izvedbo pomembnih gospodarskih naložb (državna infrastruktura itd.); in (3) prostorski redi, to so prostorski standardi in normativi, s katerimi država varuje javni interes (varovanje okolja, varovanje kakovosti kulturnih krajin itd.).

Da bi dosegli kar najučinkovitejši in najbolj razumljiv prenos informacije s področja vodnega gospodarstva na področje prostorskega planiranja, je potreben ustrezen način grafične predstavitve vsebine. Tako je vsaka vsebina predstavljena na dva načina. Prvi način oziroma prva plast so inventarizacijske karte, ki celostno in zelo jasno opišejo pojav oziroma težavo. Druga plast pa je nadgradnja inventarizacijskih kart v obliki opozorilnih in usmerjevalnih kart za potrebe prostorskega planiranja in načrtovanja, s katerimi se bo varovala kakovost naravnih danosti, izraženih v okviru javnega interesa.

V sklopu zakonodaje, ki ureja področje normativov in drugih regulativnih mehanizmov, ki so podlaga za izdajanje

3.2 THE CONCEPT OF THE PRESENTATION OF WATER MANAGEMENT TOPICS TO BE USED IN THE HARMONIZATION PROCESS IN SPATIAL PLANNING

The new Spatial Plan of Slovenia (2000-2020) will define the policy of spatial development. With determination of restrictions for spatial development, it will predominately serve as a directive. The bases for spatial development are: (1) protected areas with legal acts of protection (protection of drinking water resources etc.); (2) protected areas as reservations for important state investments (state infrastructure etc.); and (3) spatial orders, which are spatial standards and regulations, which are used to protect the public interest (protection of the environment, protection of the qualities of cultural landscapes etc.).

To achieve an effective and easily understandable system of transferring information from the field of water management into the field of spatial planning, we need a suitable method for graphic presentation. Therefore, each topic is presented in two layers. The first layer consists of basic analytical maps that, in an integral and very clear way, present the natural phenomena and/or problem. The second layer is an upgrade of the analytical maps in the form of warning maps and guidelines for spatial planning and design. Through implementing

dovoljenj za različne posege v prostor, je prostorski plan še posebej pomemben. S prostorskim planom je namreč moč uveljaviti vrsto imisijskih okoljskih normativov (kakovost okolja), ki jih s še tako dobrim uveljavljanjem emisijskih normativov ne moremo doseči. Prostorski plan je namreč tisti instrument, ki lahko uveljavi vrsto okoljskih kriterijev tako, da opredeljuje območja s posebnimi varstvenimi režimi.

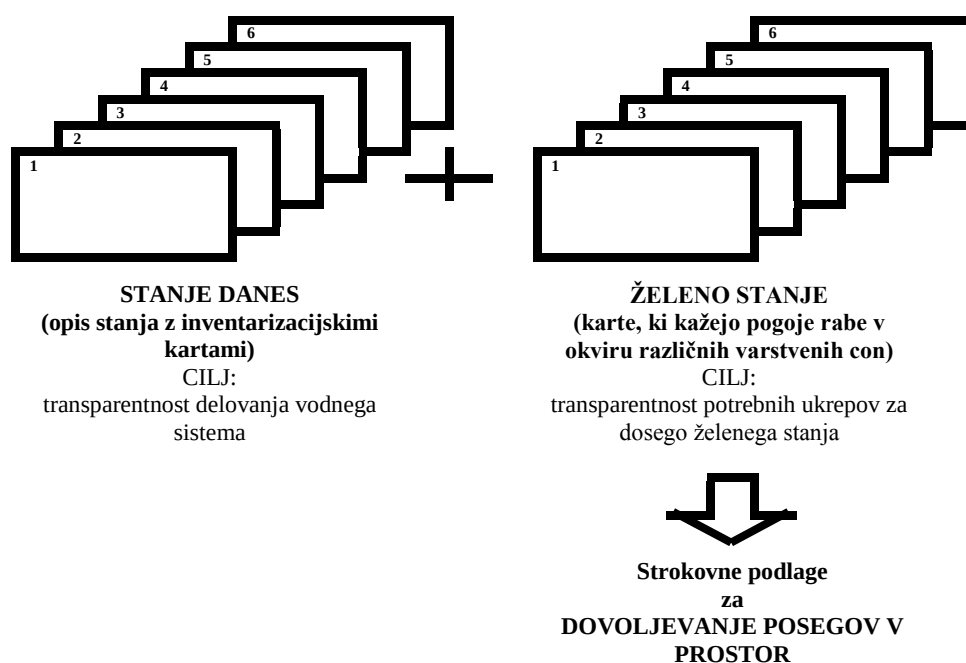
Vodnogospodarske strokovne podlage morajo tako z vidika varstva okolja, poleg opisa stanja okolja, vsebovati predvsem opozorilne karte z režimi varovanja vodnega sistema. Ti režimi varovanja morajo biti usklajeni z zahtevami po doseganju ciljnega stanja voda ter vodnega in obvodnega prostora, kot jih določajo mednarodni sporazumi in nacionalna politika varstva okolja.

Z vidika rabe pa morajo vodnogospodarske strokovne podlage na podlagi opisa obstoječega stanja in identifikacije razvojnih smernic posameznih sektorjev pripraviti prostorsko zasnovo vodnogospodarskih aktivnosti. Za zagotavljanje varstva razvojnih potencialov bo treba tudi za nekatere teh vsebin izdelati opozorilne karte z režimi varovanja.

these guidelines, one can protect the qualities of the natural elements expressed through the general public interest.

In the context of legislation that discusses the area of regulations, which are the basis for legal permission for various spatial operations, spatial plans are very important. With a spatial plan, it is possible to enforce many of those environmental quality objectives that are hard to achieve even with very strict implementation of the emission controls. The spatial plan is one of the key instruments that can enforce environmental quality objectives through definition of the areas with special protection. In the context of the environmental protection, the water management guidelines have to define the areas with special protection in accordance to various international environmental agreements and the national environmental policy.

From the point of view of economic use, the water management guidelines have to define the spatial organization of water management activities that follow developmental trends in other branches of the economy. In some cases, the areas with special protection will have to be defined, to protect some key environmental potentials for possible future use.



Slika 2. Delitev vodnogospodarskih strokovnih podlag za potrebe prostorskega usklajevanja na: (1) temeljne inventarizacijske karte (stanje danes) in (2) karte zelenega stanja, izražene skozi prizmo ukrepov (pogoji rabe).

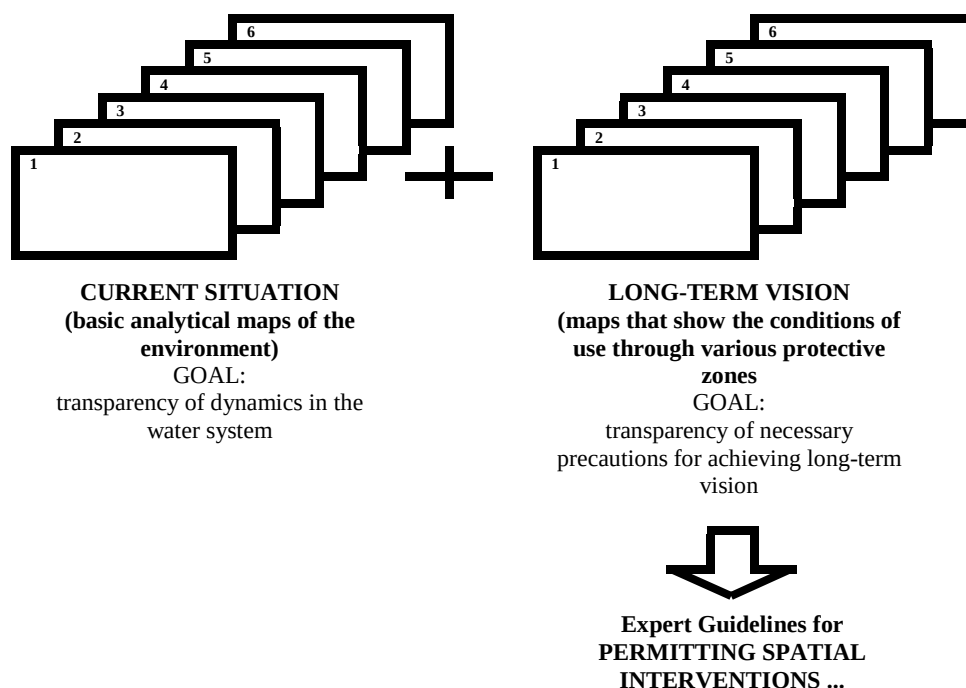


Figure 2. The division of water management guidelines (used in the harmonization process in spatial planning) on: (1) basic analytical maps of the environment (current situation) and (2) maps that show the conditions of use expressed through the necessary precautions for achieving long-term vision.

4. KONCEPT VKLJUČEVANJA VODNOGOSPODARSKIH VSEBIN V SISTEM PROSTORSKEGA PLANIRANJA

Zaradi narave vode in njene splošne prisotnosti v prostoru je gospodarjenje z vodami v interesu številnih sektorjev, kot so energetika, turizem, kmetijstvo, industrija in drugi. Pri tem se dostikrat pojavlja velika neusklajenost sektorskih interesov s prostorskimi danostmi. Zaradi nerazumevanja dinamike vodnega sistema se interesi drugih sektorjev pogosto kažejo kot enostranske zahteve do vodnega gospodarstva v obliki ustreznega varstva pred vodo, zadostnih količin vode idr.. Na srečo imamo v Sloveniji sorazmerno dovolj vode, vendar se vse premalo zavedamo, da je zdrava pitna voda omejen naravni vir. Zato je zelo pomembno, da vodnogospodarski pogoji in omejitve rabe prostora (ki izhajajo iz varovanja vode, vodnega ciklusa in vodnega ekosistema) že zelo zgodaj in z zadostno težo v obliki omejitev in pogojev rabe vstopijo v proces usklajevanja prostorskega razvoja. To je

4. THE CONCEPT OF THE INCORPORATION OF WATER MANAGEMENT TOPICS INTO THE SYSTEM OF PHYSICAL PLANNING

Because of the nature of water and its general presence in the environment, water management is in the interest of many economic branches, such as energy, tourism, agriculture, industry and others. Often, we can notice an enormous disagreement between the interests of various branches and spatial possibilities. Because of the non-understanding of the dynamics of the water system, the interests of the other branches are often expressed as one-sided demands toward water management in the form of proper flood prevention, assuring enough good quality water and other demands. In Slovenia we are quite rich in water resources; however, we are not conscious yet of the fact that healthy drinking water represents a limited natural resource. Therefore, it is very important that water management conditions and limitations of land use (deriving from water conservation, water dynamics and aquatic environments) are included in the harmonization process in spatial planning very early on, and that they

verjetno najpomembnejši način, kako preprečiti takšno rabo prostora, ki vodno gospodarstvo sili v izvajanje vodnogospodarskih posegov, ki niso v skladu z načeli trajnostnega gospodarjenja z vodami.

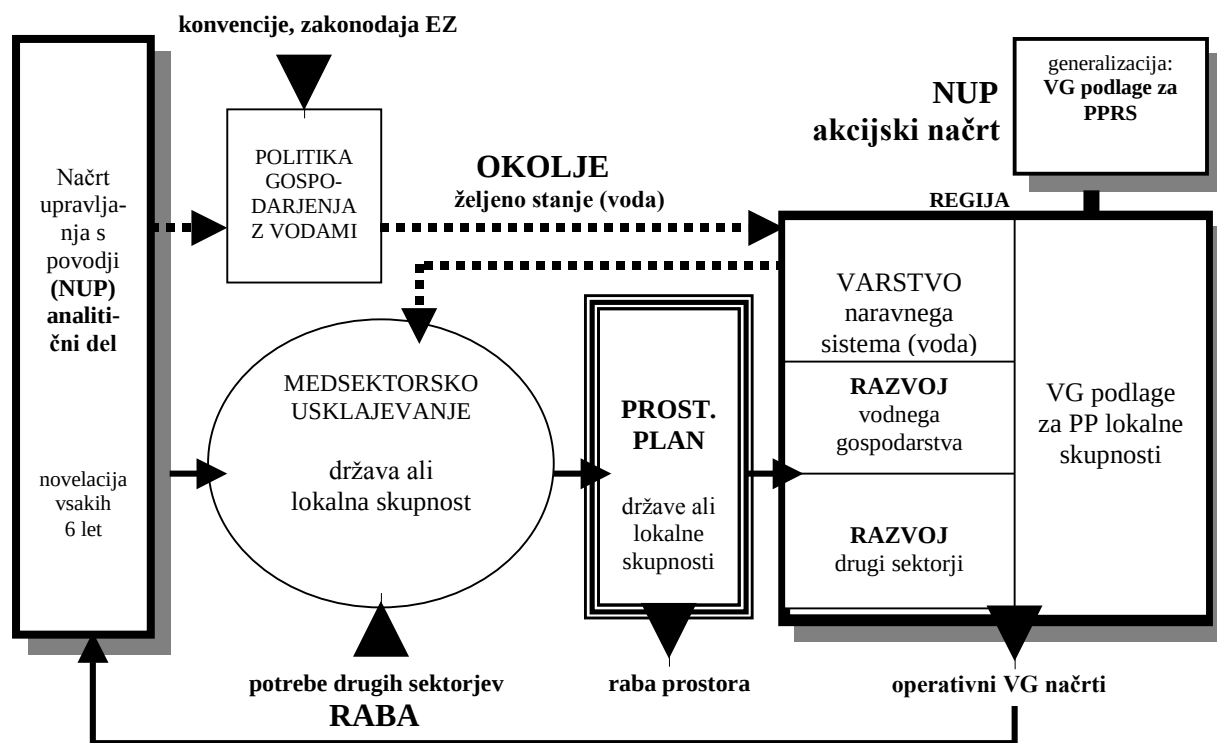
Strokovne podlage, ki jih razvijamo za potrebe prostorskega planiranja, naj ne bi bile posebne strokovne podlage, temveč sestavni del načrta upravljanja povodja (NUP). Ta se v Sloveniji pripravlja na regionalni ravni v merilu M - 1:25.000. NUP naj bi bil v svoji končni obliki medsektorsko usklajen in verificiran akcijski plan za področje gospodarjenja in upravljanja s povodji.

Slika 3 podaja temeljni koncept umestitve NUP v širši kontekst prostorskega planiranja in načrtovanja. Shema hkrati podaja jasno sliko načina, kako se vsebine, ki smo jih opredelili znotraj sistema "okoljske", neposredno vključujejo kot omejitve in pogoji rabe v NUP in tudi v sam postopek prostorskega usklajevanja, medtem ko se vsebine, ki smo jih opredelili znotraj sistema "raba", v NUP vključujejo po dolgotrajnem postopku preverjanja in medsektorskih usklajevanj znotraj procesa prostorskega planiranja.

are really considered as limitations. This is probably the most important possibility to prevent land use which forces water management into building structures that are not in accordance with the principles of the sustainable management of waters.

The expert studies and maps that are to be developed for the needs of the harmonization process in spatial planning are not supposed to be special studies. They should be an integral part of the River Basin Management Plan (RBMP) that is, in Slovenia, prepared on a regional level at a scale of 1:25.000. The RBMP will, in its final form, be a cross-branch harmonized and officially ratified plan of action for the management of waters in the river basins.

Figure 3 gives the basic concept of incorporation of the RBMP into the wider context of spatial planning. The scheme also gives a clear picture of how the contents that we defined inside the system "environment" are directly included as limitations and conditions of use into the RBMP and also into the harmonization process within spatial planning, while the contents that we defined as system "use" are included into the RBMP after a long process of verification and harmonization inside the process of spatial planning.



Slika 3. Koncept zasnove vključevanja vodnogospodarskih vsebin, ki smo jih definirali kor sistem "okolje" in sistem "raba", v procese usklajevanja interesov v prostoru.

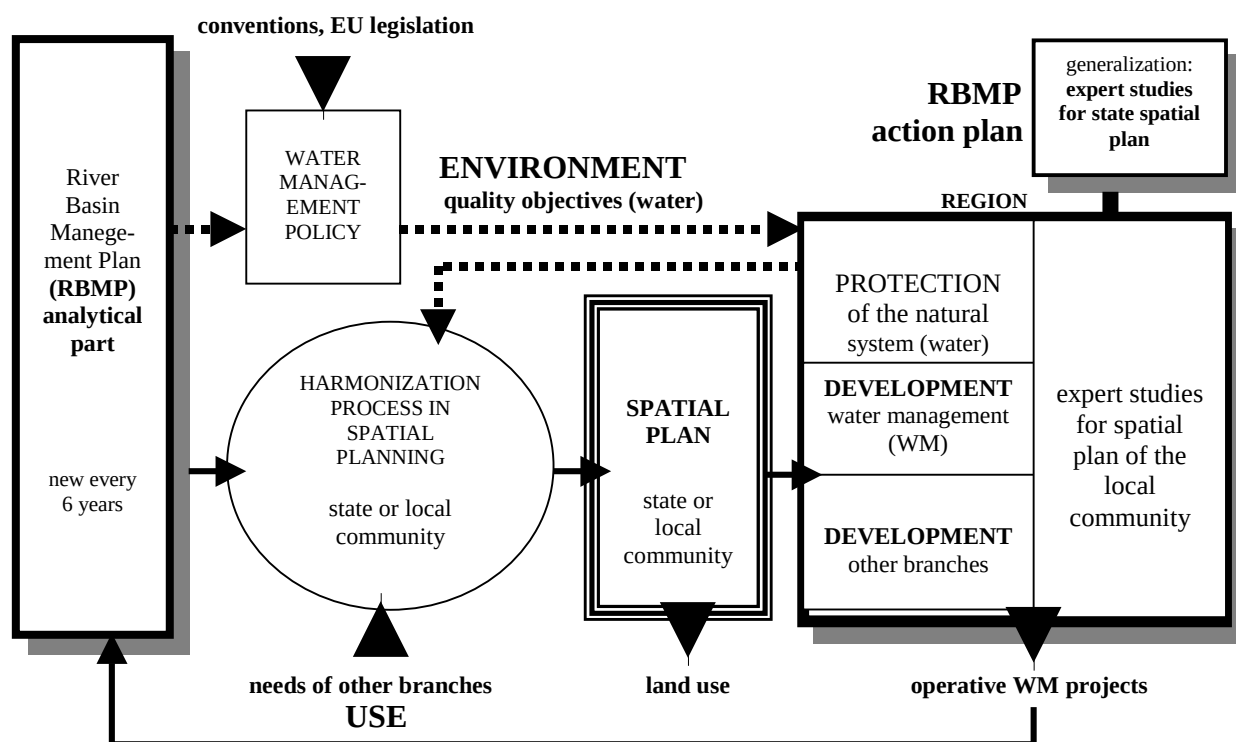


Figure 3. The concept of incorporation of water management topics that we defined as the system “environment” and the system “use” into the harmonization process within spatial planning.

5. ZAKLJUČEK

Da bi se politika varstva voda ter vodnega in obvodnega prostora lahko učinkovito izvajala, mora vodarska stroka pripraviti ustrezne strokovne podlage. Te morajo biti razumljive vsem, ki se vključujejo v procese odločanja, ki zadevajo okolje. Hkrati moramo zagotoviti, da bodo vodnogospodarske vsebine, ki smo jih definirali kot sistem “okolje”, že zelo zgodaj vključene v procese usklajevanja prostorskega razvoja kot omejitveni kriteriji. Le tako bo imelo varovanje hidrosfere, ki je ena temeljnih nalog vodnega gospodarstva, lahko zadostno težo v procesih usklajevanja z interesi drugih sektorjev po vodi in prostoru. Prispevek podaja koncept zasnove vodnogospodarskih strokovnih podlag za potrebe usklajevanja prostorskega razvoja in njihove umestitve v sistem prostorskega planiranja.

5. CONCLUSION

To have an effective policy for the protection of waters and aquatic environments, water professionals must develop expert studies and maps that are easily understandable by everyone who participates in the process of decision making that concerns the environment. At the same time, we have to make sure that those water management topics, which we defined as system “environment”, are included as restrictive criteria very early on in the harmonization process in spatial planning. Only in this way, will the protection of the hydrosphere, which is one of the basic tasks of water management, be able to be included into the harmonization process in spatial planning, and prevail in relation to the various interests for the economic use of waters and aquatic environments. This is probably the most important possibility for preventing such land use which forces water management into building structures that are not in accordance with the principles of the sustainable management of waters.

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