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HIDROLOŠKI LETOPIS SLOVENIJE 2009

THE 2009 HYDROLOGICAL YEARBOOK OF SLOVENIA

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PREDGOVOR

Leta 1995 smo izdali prvo številko hidrološkega letopisa v samostojni državi Sloveniji. To je bil Hidrološki letopis Slovenije 1990. Pred tem so bili podatki za Slovenijo objavljeni v Hidrološkem godišnjaku Jugoslavije, ki ga je izdajal tedanji Zvezni hidrometeorološki zavod v Beogradu. Tokrat je pred vami 20. številka letopisa, ki ga izdaja Agencija RS za okolje. V njej so zbrani podatki meritev iz hidrološke merilne mreže Agencije RS za okolje za leto 2009 in pregled hidroloških razmer v tem letu. Prikazane so vse hidrološke spremenljivke, ki so bile izmerjene v državni mreži hidroloških postaj na površinskih in podzemnih vodah, na izvirih in v morju. Ena glavnih nalog državne hidrološke službe je, da vsem zainteresiranim zagotavlja obdelane podatke iz mreže opazovalnih postaj.

Namen hidrološkega letopisa ni samo objava podatkov, ampak je vse večji poudarek dan strokovnim in analitičnim vsebinam, s katerimi zaokrožujemo področja dela v sektorjih, ki zajemajo naloge državne hidrološke službe. Poleg pregleda hidroloških razmer v obravnavanem letu želimo bralce seznaniti z razvojnimi nalogami s področja hidrologije na agenciji ter z nadgradnjo in posodobitvijo merilnih mest. Tako kot že v prejšnji tudi v tej številki letopisa nismo natisnili razpredelničnih letnih pregledov hidroloških parametrov, saj so podatki hidrološkega arhiva v celoti dosegljivi na spletni strani agencije http://www.arso.gov.si/vode/podatki/.

Kot že nekaj zadnjih let si bomo tudi leto 2009 zapomnili po obsežnih poplavah v decembru zaradi močnih padavin in taljenja snega. Visoke vode so bile pogoste tudi čez leto in v celoti gledano je bilo leto 2009 nadpovprečno vodnato. Tudi višine morja so v opazovalnem obdobju dosegle najvišje vrednosti. Zaloge podzemnih voda so bile povprečne do nadpovprečne. Leto 2009 se uvršča med deset najtoplejših let v Sloveniji, saj so bile temperature rek in jezer na večini merilnih mest nad obdobnim povprečjem.

Razvojne naloge in posodobitev hidrološke merilne mreže potekajo v sklopu projekta Nadgradnja sistema za spremljanje in analiziranje stanja vodnega okolja v Sloveniji, poimenovanega BOBER (kratica za Boljše Opazovanje za Boljše Ekološke Rešitve), ki je financiran s sredstvi kohezijskega sklada EU in lastnimi sredstvi RS. Temeljni cilj projekta je zagotoviti zanesljive, kakovostne in prostorsko reprezentativne meteorološke in hidrološke meritve, ki bodo omogočile celovito spremljanje in analiziranje stanja vodnega okolja v Sloveniji ter natančnejše napovedovanje hidroloških izrednih pojavov. Celoten projekt je naravnan k zmanjšanju škodljivega delovanja voda ter vzpostavljanju trajnostnega razvoja vodnega okolja na ravni celotne države. V sklopu projekta je bil v 2010 in 2011 vzpostavljen prognostični sistem za napovedovanje poplav na porečjih Save in Soče, zdaj pa poteka operativno preizkušanje sistema, ki bo v

FOREWORD

In 1995, we published the first issue of the hydrological yearbook in independent Republic of Slovenia: The 1990 Hydrological Yearbook of Slovenia. Prior to 1990, the hydrological data for Slovenia were published in the Hidrološki godišnjak Jugoslavije (Hydrological Yearbook of Yugoslavia), which was issued by the former Federal Hydrometeorological Institute in Belgrade. We would now like to introduce to you the 20th issue of the Hydrological Yearbook, published by the Environmental Agency of the Republic of Slovenia. It contains the collected measurements from the agency's network of hydrological gauging stations for 2009 and an overview of the hydrological conditions observed in the same year. It also presents all hydrological variables measured within the national network of surface water and groundwater gauging stations, and at spring and sea-level monitoring stations. One of the main tasks of the national hydrological service is to provide all interested parties with the processed data from the network of gauging stations.

The purpose of the Hydrological Yearbook is not only to publish data but also to pay greater attention to expert and analytical topics that round off the different areas of work in the various sectors of the national hydrological service. In addition to reviewing hydrological conditions in the observed year, our purpose is also to familiarise readers with the tasks of hydrological development at the agency and with the upgrading and modernisation of gauging sites. As with the 2008 yearbook, this issue does not include printed tabular annual reviews of hydrological parameters, because the data from the hydrological archives is available in its entirety on the website of the agency:
http://www.arso.gov.si/vode/podatki/.

As in recent years, the year 2009 will be remembered for the extensive floods in December caused by extensive precipitation and melting snow. High waters were common throughout the year and on the whole the year 2009 was an above-average water abundant year. The sea level, too, reached its maximum values in the observed period. Groundwater reserves were average to above average. The year 2009 ranks among the warmest years in Slovenia, because the river and lake temperatures measured at the gauging stations were above average.

Development tasks and the upgrading of the hydrological gauging station network are carried out within the Project BOBER (an acronym for Better Observation for Better Environmental Response) an upgrade of the system for monitoring and analysing the water environment status in Slovenia, which is financed by the EU Cohesion Fund and from Slovenia's own resources. The primary objective of this project is to provide reliable, quality and spatially representative meteorological and hydrological measurements, which will enable the comprehensive monitoring and analysing of the water environment conditions in

prihodnje omogočal spremljanje in napovedovanje vodnih količin na vodomernih postajah Save in Soče.

dr. Mira Kobold,
glavna urednica

Slovenia and more accurate forecasts of extreme hydrological events. The entire project is aimed at reducing the hazardous effects of water and establishing sustainable development of the water environment across the country. Within this project, a flood forecasting system in the Sava and Soča river basins was set up in 2010 and 2011, the operation of which is currently being tested. In the future, the system should facilitate the monitoring and forecasting of water quantities at water gauging stations on the Sava and Soča rivers.

Mira Kobold, PhD
Chief Editor