Troubled Danube's waters, not up to standards yet

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The water quality of the Danube river has improved since measures to reduce pollution have been implemented in1995, but there are areas where the toxic waste loads are still high.

There are 19 countries in the catchment area of Danube River. The extensive use of water resources in that area has not been without consequences on its water quality. Let alone on the riverside's biodiversity and environment. A lot of inadequately treated waste water used to find its way to the Danube. This practice was putting the drinking water supply for millions of people at risk. It also led to problems for irrigation, industry, fishing and tourism. In 2009, scientists came up with a computerised tool addressed to the national water authorities.

The tool stems from an EU funded project called SOCOPSE. "The [tool] is a kind of a handbook, based on the common sense, which was designed for the environmental management not only of the Danube River, but for all the rivers in Europe," says Jaroslav Slobodnik, coordinator of the Danube River case study within the project. "[It] provides a set of recommendations for water managers on how to remove [pollution], alongside with [an estimate of] the associated cost and a time horizon", comments Slobodnik, who is also the director of the Environmental Institute in Okruzna, Slovak Republic.

The project tool also sets the basis of the River Basin Management Plan. It has been jointly elaborated by the countries of the Danube River Basin

and is designed to ensure that all waters of the basin reach good quality by 2015. It also helps to bridge the gap between measures on the national level and their agreed coordination on the basin-wide level, set in the EU law.

In particular, it is designed to help authorities control the most prevalent polluting substances. The main pollutants monitored in the Danube under the project included heavy metals, such as cadmium and mercury, DEHP plasticiser, detergents composed of nonylphenols and disinfectants made of tributyltin compounds. Such monitoring acts like an alert system when pollutants' concentrations in the environment exceed the threshold set by the Water Framework Directive, which entered into force in 2000.

"Since the Water Framework Directive entered into force, we can have a kind of a profile of the Danube every six years. We go by ships from Germany to the Black Sea, collecting the water samples and analysing them for all possible parameters," notes Jaroslav Slobodnik. The first survey was done in 2001, the second in 2007. The third large scale river survey is due to be done in September 2013. "In 2007 we already concluded that quality of the Danube water was generally improved. And I hope that this trend has been maintained," he says.

Some experts believe that the Danube's water quality improvement is due mainly to the economic downturn. "In the lower Danube river and its main tributaries there are now less heavy metal pollution, fewer emissions from petrochemical industry and lower loads of organic pollution and nutrients from agriculture, " comments engineer Liviu Popescu, member of the Regional Council of Global Water Partnership for Central and Eastern European Region, a non-governmental organisation based in Stockholm, Sweden.

What is more, "in the upper Danube's stretches, the heavy rain falls in the past two years led to the dilution of the concentrations of the

chemical waste," he tells youris.com. To maintain the sustainability of the Danube river water, he suggests a more efficient use of the pesticides in agriculture and investment to upgrade waste water treatment plants or for building new ones, as required.

Despite the recent improvement of the Danube's water quality, experts admit that a number of surface water areas in the Danube have not reached a suitable cleanliness levels yet. "Large number of waste water treatment plants (WWTP) have been built in the Danube River Basin," explains Igor Liska, technical expert in water management and quality at the inter-state cooperation body ICPDR, the International Commission for the Protection of the Danube River, in Vienna, Austria. "But there are still many of those to be constructed especially in the lower Danube area as well as on its tributaries," he points out.

He talks about the necessity of connecting the new built sewerage collecting systems to newly built plants in order to insure waste waters treatment. "A further area of importance is the input from urban areas via storm water overflows," he tells youris.com. "Here, the reduction of emissions requires improved storm water management."

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