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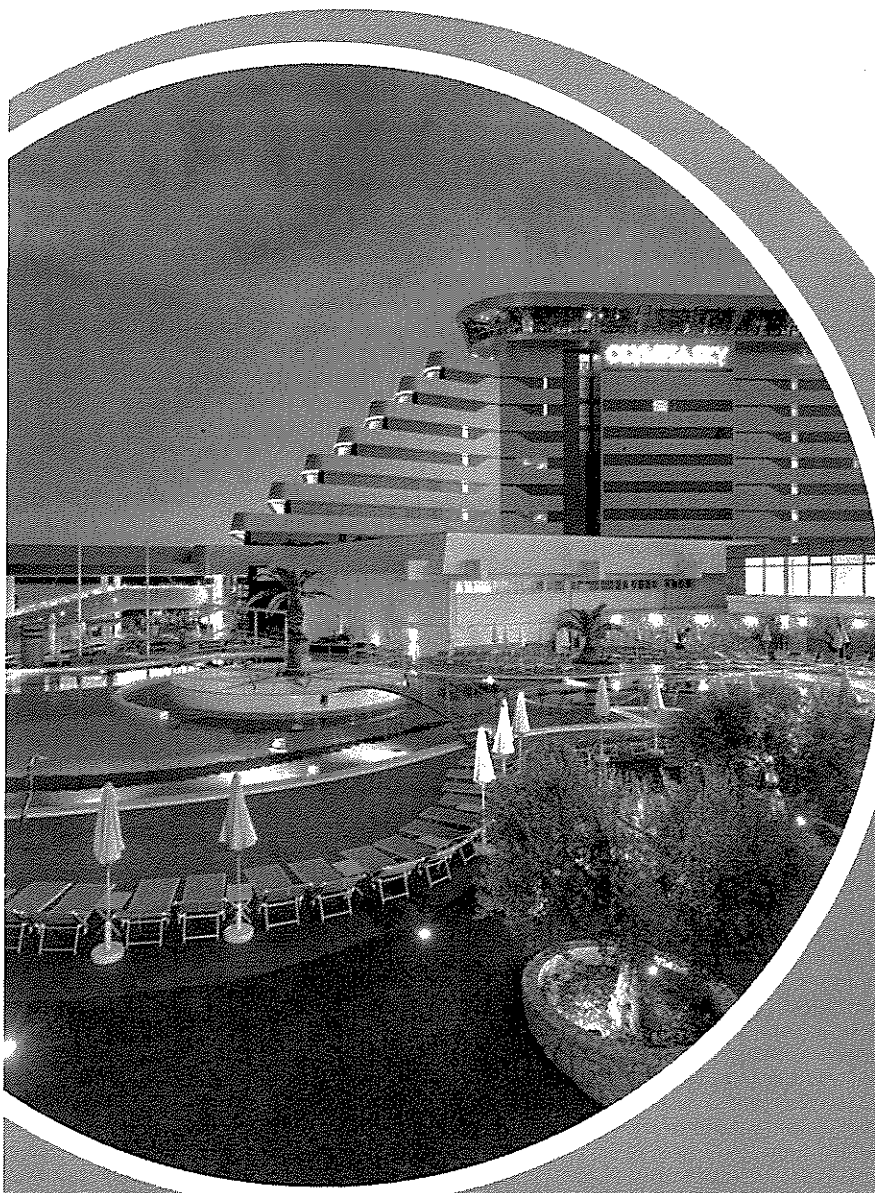


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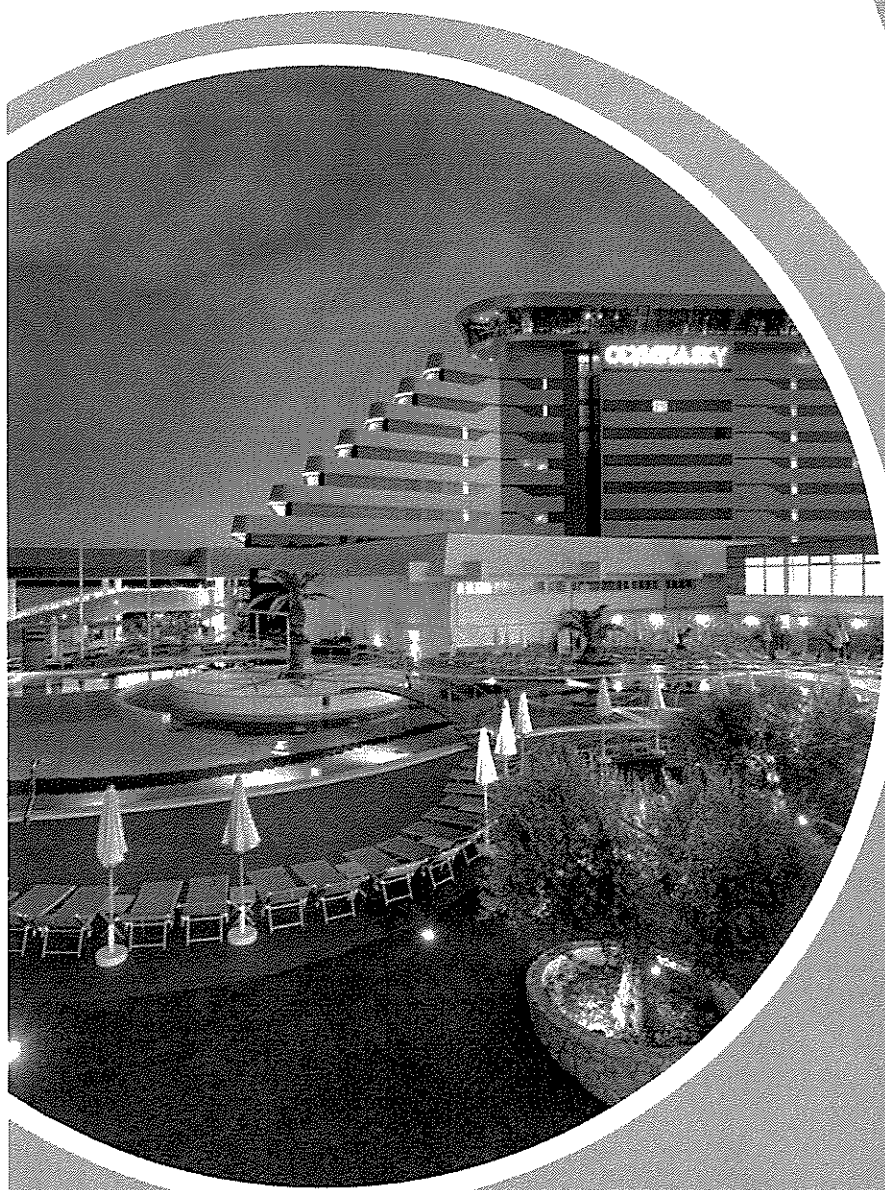


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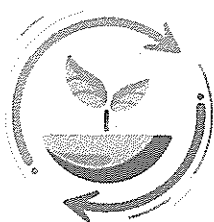
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Occurrence of persistent organic pollutants in the Neretva River sediment, Croatia

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Abstract

The Neretva River (230 km) is the largest river in the Eastern Adriatic watershed, originating in Bosnia and Herzegovina, but with the last 20 km of its waterflow in Croatia. A total river basin of 5581 km² represents a significant input to coastal seawater affecting wildlife. Besides that, the river water is used for crop irrigation, fishing and recreation. It is thus important to highlight sources of pollution to prevent pollutant transport. The occurrence of persistent organic pollutants (POPs) in the Neretva River can be expected due to industrial facilities and five hydroelectric power plants situated along the river's upstream and middle course. Fossil-fueled ship traffic can impact the lower course river. The Neretva delta is well-known by fruit plantations and many other agricultural products seasonally treated with pesticides. All these air and water contaminants can be deposited into the river sediment for a long time. This study is the first evidence of the levels and distribution of the priority POPs (11 PAHs, 20 PCBs, DDX, total HCH, HCB) in the Neretva River sediments collected at four sites in Croatia, indicating a different pollution entry point that should be systematically explored by further studies.

Keywords: polyaromatic hydrocarbons, organochlorine contaminants, river sediment, Adriatic Sea, Neretva