



“Gheorghe Asachi” Technical University of Iasi, Romania



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## WATER FOOTPRINT AND CHALLENGES FOR ITS APPLICATION TO INTEGRATED WATER RESOURCES MANAGEMENT IN ROMANIA

Simona-Andreea Ene\*, Carmen Teodosiu

*“Gheorghe Asachi” Technical University of Iasi, Faculty of Chemical Engineering and Environmental Protection,  
Department of Environmental Engineering and Management, 700050 Iasi, Romania*

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### Abstract

This paper analyses and discusses the concept of water footprint, developed in order to have an indicator of water use in relation to consumption of people. The water footprint of a country is defined as the volume of water needed for the production of the goods and services consumed by the inhabitants of the country. The use of water resources comprises water use in the agricultural, industrial and domestic sectors.

The overall objective of water management, which adopts integrated water resources management (IWRM) approaches is to satisfy the freshwater needs of all countries for their sustainable water management.

The concept of water footprint has introduced a new and wider dimension in integrated water resources management. The analysis of water footprint trade is providing new perspectives for global water strategies and policies. Water footprint can provide complementary roles in the context of integrated water resources management (IWRM), due to the fact that the water footprint data raises awareness among the general public, government and stakeholders as to the environmental impact of societal activities. This paper discusses the various water problems such as (a) increasing water shortages, (b) deterioration of water quality and (c) stresses on water supplies and the challenges they represent to integrating the approaches of water management to ensure sustainability of the resource.

The water footprint concept is relatively new in Romania and it has not been introduced in relationship to IWRM. In Romania the IWRM concept is associated with the EU Water Framework Directives, although it is not considered as being fully covered by the present water and environmental sector policies.

This study is to be included in a complex research assessing the possibilities of application of the water footprint concept in Romania, especially by providing an assessment for its application in the North Eastern part of the country, i.e. to the Prut river basin.

*Key words:* integrated water resource management, water demand and supply, water footprint

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\* Author to whom all correspondence should be addressed: e-mail: [ene.simona@ch.tuiasi.ro](mailto:ene.simona@ch.tuiasi.ro)