European Union Network for the
Implementation and Enforcement
of Environmental Law

Integrated Water Approach – Urban Water Reuse

TARGET GROUP

- Irrigation sector
- Water industry sector
- Water related permitters
- Regulatory and enforcement authorities

EU LEGISLATION

- Water Framework Directive (2000/60/EC)
- Urban Waste Water Treatment Directive (91/271/EEC)
- Groundwater Directive (2006/118/EC)
- Circular Economy Action Plan
- Industrial Emissions Directive (2010/75/EU)

PUBLICATION DATE

October 2019

Introduction

More than 15 years after the emanation of several major Directives, their objectives remain to be fully achieved in many Member States. In particular the implementation of EU legislation on water and land has been identified as one of the top challenges in recent IMPEL research, because of problems at several levels such as the transposition of EU legislation into national laws; the setting of environmental objectives and plans in Member States; the enforcement of the requirements, for example through permitting and inspection regimes.

The objective of this project is to identify, both from the regulatory and technological point of view, how the water resource is managed today in the industry sector subject to the Integrated Environmental Permitting (IEP) regulation. New approaches for reducing fresh water consumption and over-abstraction of water are to be identified, enhancing water reuse through process analysis, water balance and utilities optimization.

On the other hand, in the urban water cycle, the reuse of treated wastewater is an important tool to contribute as a local solution to achieving the objectives of the Water Framework Directive (WFD) and to contribute to a more resource efficient economy as well as to adapt to climate change, namely in cases where water scarcity is identified as a significant pressure.

Content

The reuse of treated wastewater has been highlighted within EU water policy as one possible alternative water source in water-scarce regions which may be appropriate to consider within water-scarcity planning.
A "Proposal for a regulation on minimum requirements for water reuse" has been adopted by the European Parliament and the Council of the European Union on 28th of May 2018.
The Water and Land Expert Team delivered the report Integrated Water Approach – Urban Water Reuse 2018 which has several conclusions and recommendations on the exchange of information regarding best practices, safe uses and the permitting process, contributing to better compliance of water related regulations and to the increase of confidence of water reuse, in particular for agriculture irrigation practices.

Conclusions

Among others, the results showed that use of reclaimed water is increasing its importance in Europe and therefore a better understand of the practice is needed to avoid direct and indirect risks for human health and environment. However, from the collection of results on practical cases, site-visits and meeting discussions, it is clear that some data are missing and further research should be developed. A deeper understanding of the existent practical solutions, in terms of risk assessment, would be useful to clarify the realist risk level currently in place.
Critical aspects identified are linked with the current use of fit-all-approaches where projects are defined by the level of the treatment facility, which may jeopardize the current trend for the use of fit-for-purpose approaches in which treatment requirements combined with preventive measures or barriers are defined to meet the end-users and surrounding environment requirements.

A follow up report will be produced in the course of 2019.

LINKS

- Water and Land Expert Team
- Integrated Water Approach project
- Integrated Water Approach – Urban Water Reuse Report 2018

KEY WORDS

- Urban water reuse
- Water Framework Directive
- Climate change and water scarcity
- Best practices
- EU top challenge