

Implementation of the basic measures within the River Basin Management Plan. Approach, challenges and implementation assessment Romanian experience

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Basic Measures

Measures required under the following Directives:

- **Bathing Water Directive**
- Birds Directive
- **Drinking Water Directive**
- Major Accidents (Seveso) Directive
- Environmental Impact Assessment Directive
- Sewage Sludge Directive
- **Urban Waste-water Treatment Directive**
- Plant Protection Products Directive
- **Nitrates Directive**
- Habitats Directive
- Integrated Pollution Prevention Control Directive .

Approach on basic measures

- Include the implementation plans for Urban Waste Water Directive, Drinking Water Directive and Nitrate Directive
- Take into account the other directives outside the water sector (IPPC, EIA, Seveso, Sewage Sludge, Plant Protection) and included in the Program of Measures
- Considering the Bathing Directive, Birds Directive and Habitat Directive as a protected areas and included measures in order to allow the achievement of their objectives

Challenges related to the urban wastewater collection and treatment (1)

- About 50% of population have access to centralized water/wastewater services
- Most of the existing water infrastructure – in poor status due to long term under-investments
- Excessive fragmentation of water sector systems and services
- Inappropriate maintenance and operating services in most small and medium agglomerations

Challenges related to the urban wastewater collection and treatment (2)

- Lack of capacity to attract substantial funding for investment needs in majority of small and medium agglomerations
- Private sector – not interested to invest in short term
- High specific water consumption –more than 350 l/inhabitant and day
- Willingness/capacity to pay low in the rural area

Challenges related to the drinking water

- About 63% of population is connected to a centralized water supply network with a very low level of connection in the rural area (less 30 %). Very difficult to ensure a proper drinking water quality
- Obsolete infrastructure particularly the distribution network with high level of leakage
- Limited capacity to monitor the drinking water quality in the rural area.
- Not all parameters of the Drinking Water Directive is monitored
- Willingness/capacity to pay low in the rural area

Challenges related to the nitrate pollution coming from agricultural sources

- Large number of very small farms (3 millions farms with 0.5 ha and 1 cow)
- Lack of capacity to develop Action Programs for all farms (taking into account the specific soil and water conditions)
- Low capacity for monitoring and assessment of the implementation measures at the farm level
- Establishment of the Nitrate Vulnerable Zones
- Financial capacity to implement the measures
- Difficulties to delineate from the pollution due to the lack of sewage

Measures under UWWTD

- Collection and treatment of waste water in all agglomerations of >2000 population equivalent (p.e.);
- Secondary treatment of all discharges from agglomerations of > 2000 p.e., and more advanced treatment for agglomerations >10 000 population equivalent in designated sensitive areas and their catchments;
- A requirement for pre-authorisation of all discharges of urban wastewater, of discharges from the food-processing industry and of industrial discharges into urban wastewater collection systems;
- Monitoring of the performance of treatment plants and receiving waters; and
- Controls of sewage sludge disposal and re-use, and treated waste water re-use whenever it is appropriate

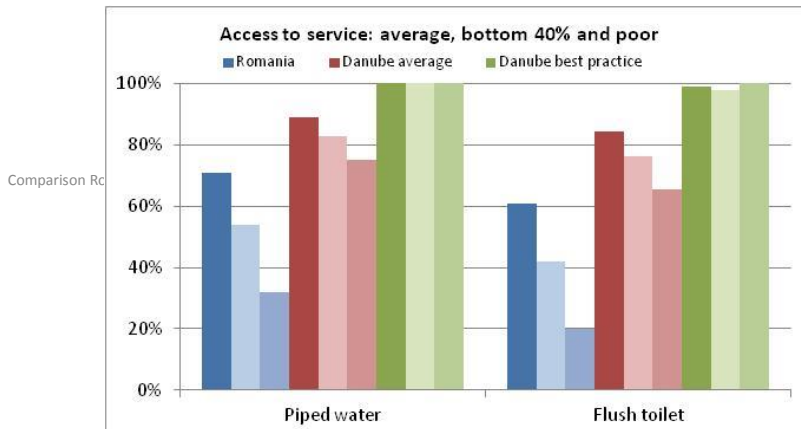
Measures under the Drinking Water Directive

- Monitoring of the drinking water quality according with provisions of the Directive
- Construction, rehabilitation and/or extension of the distribution network and purification plant
- Ensuring the protection of the water intakes areas (very strict area, strict area, and hydrogeological perimeter)
- Improving the operation and maintenance of the water supply infrastructure

Measures under Nitrate Directive

- Interdiction periods for applying manure based on the interval between earliest freezing of the soil (autumn) / latest freezing (spring)
- Evaluation of minimum storage volumes based on animal type, grazing conditions and interdiction period for applying manure
- Application of the Code of Good Agriculture Practices
- Evaluation of the land for manure spreading from animal complexes (if any)
- Evaluation of grass strips area along/around the surface waters
- Measures to prevent soil erosion and run-off differentiated accordingly
- Maximum nitrogen amount applied with livestock manure: 210 kg/ ha on the first Actions Plans and 170 kg / ha on the next vegetations cover in winter periods

Access to water and sanitation



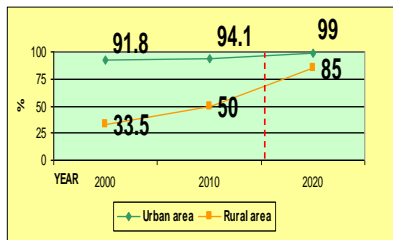
Source: DWP elaboration

Basic measures for human agglomerations

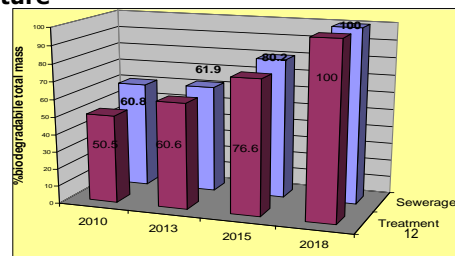
Implementation period

EU Directive	Transition period	Associated costs (billion EURO)
<i>Drinking Water Directive 98/83</i>	2015	5.6
<i>Waste Water Directive 91/271</i>	2018	12,8

Connecting rate to water infrastructure



Water supply infrastructure

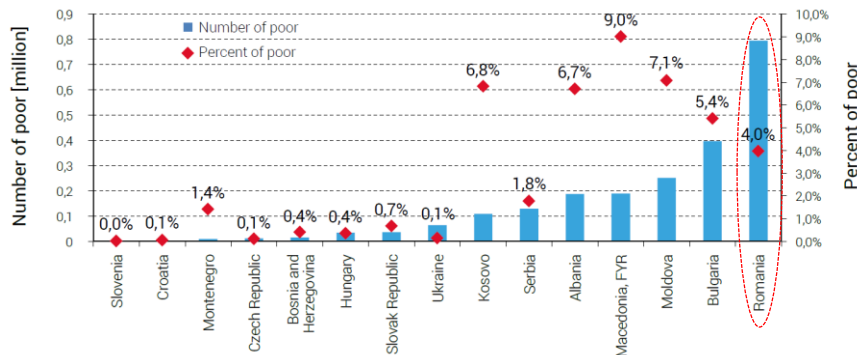


Waste water infrastructure

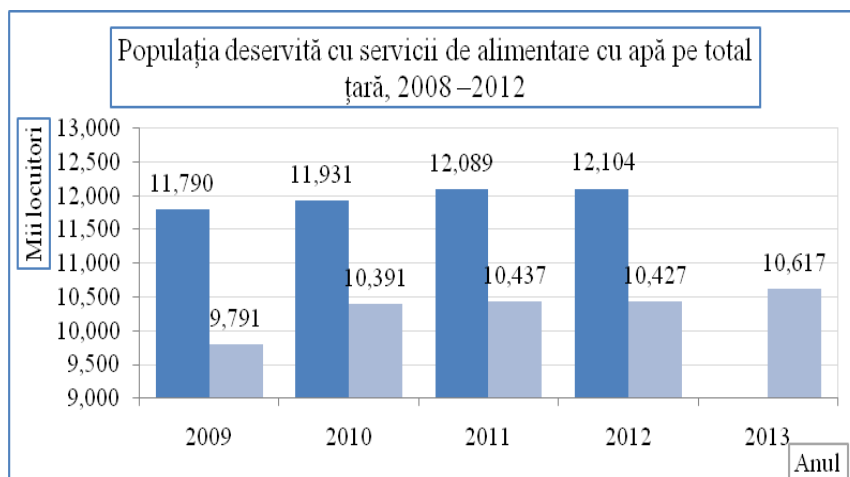
2.3 M poor in the region

Important rural population in Romania compared to the region

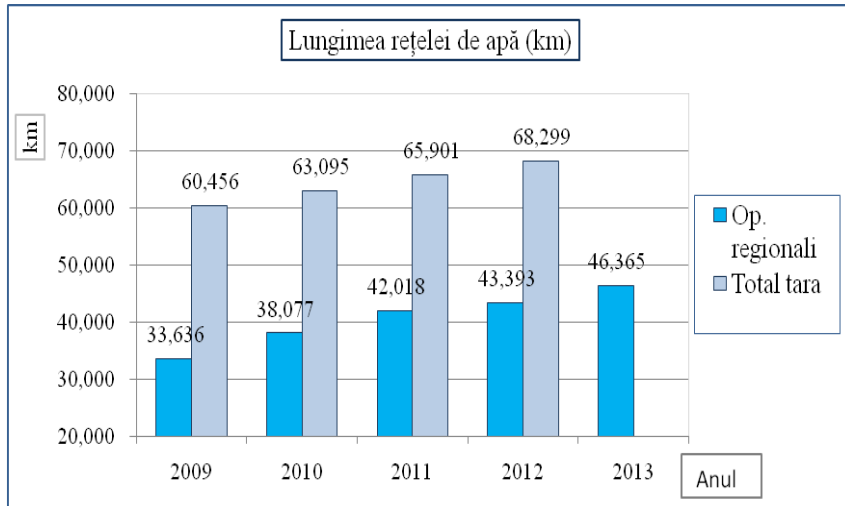
2.3M poor in the region, 30% in Romania



Population provided with water supply

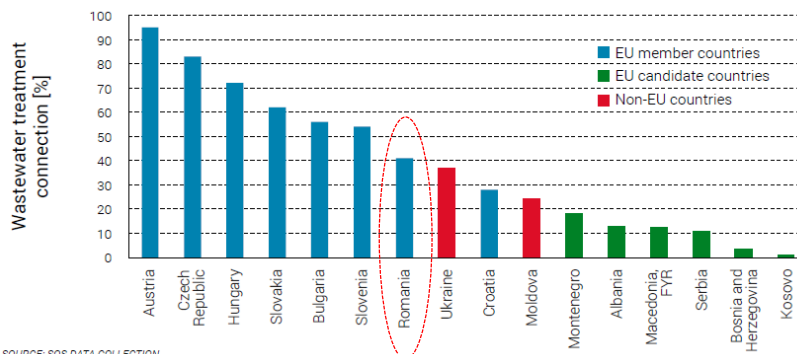


Length of the water supply network

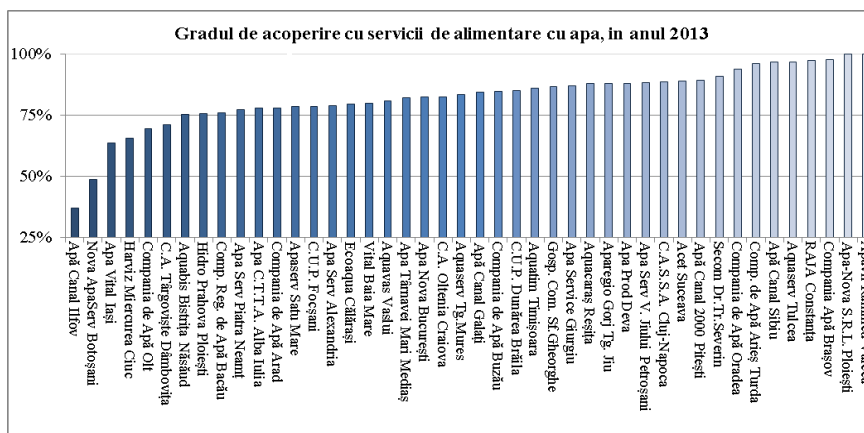


Wastewater Treatment

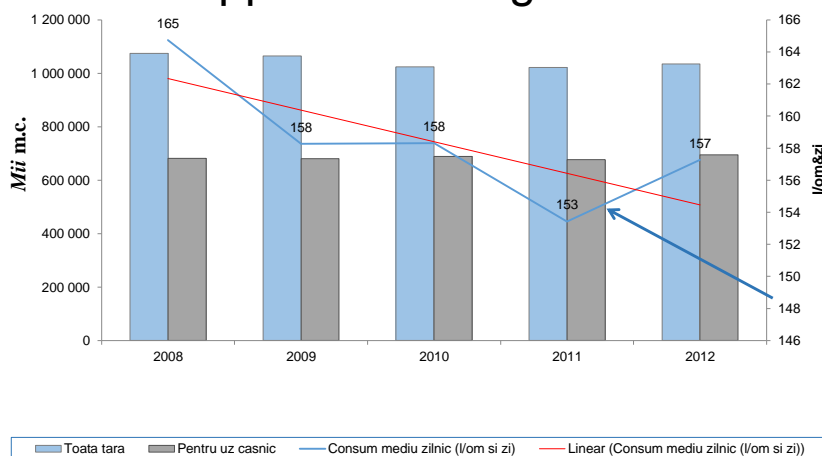
Lower than other EU members (but transition period in Romania) but increasing



Degree of covering with water supply services (%) by regional operators in 2013



Supplied Drinking Water



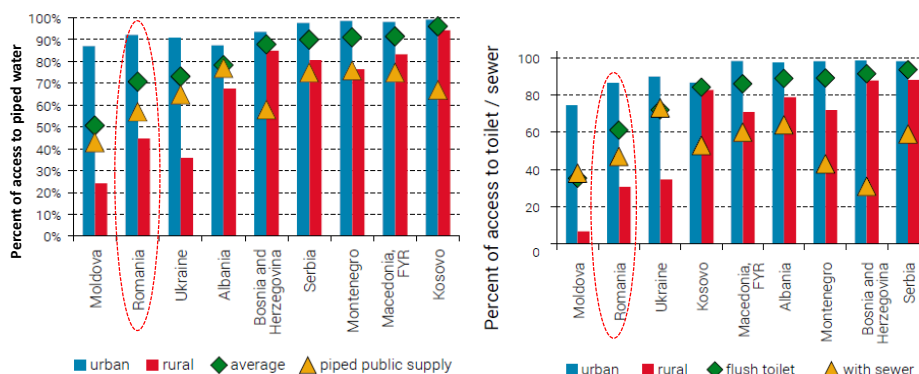
Population provided with water supply per Km of distribution network

Populația deservită per kilometru de rețea de distribuție în 2013



Service Quality / vulnerability

- Rural population with lower access to piped water and flush toilets



Status of implementation of measures related to the urban waste water treatment

- Degree of connection to the sewage in 2015 was 63,27%
- Degree of connection to the waste water treatment plant 53,8 %
(comparing with 57,37% in 2014 due to the rehabilitation/modernization of some waste water treatment plants)
- Only 7 agglomerations are considered in conformity with the directive
 - 4 with more than 10.000 inhabitants
 - 3 between 2000 and 10.000 inhabitants

Status of implementation of measures related to the drinking water

- Most of the localities with centralized water supply are in conformity with the parameters monitored by the Health Authority
- Health Authority is not performing monitoring for all parameters of the directives (some pesticides, synthetic chemicals)
- A number of 513 small localities has higher values for some parameters (nitrates)
- Mostly the drinking water and waste water are dealt in the joint projects

Implementation Issues (1)

- Dynamic of the changes in delineation of the agglomerations
- Decreasing of the population number, including migration (23 million in 1990, around 20 million in 2014)
- Decreasing of the economic activities
- No legal obligation to connect for the existing households

Implementation Issues (2)

Water and wastewater investments co-funded by SOP Environment 2007-2013:

- Implementation delays
- Low absorption rates (~50%)
- Investments not systematically prioritized for environmental impact or financial rentability

Expenditure for UWWd compliance 2007 – 2013 assessed to 5 billion EUR

Implementation Issues (3)

Under the Rural Development Program significant investments

- Rural development purposes not clearly linked to environmental objectives but access to piped drinking water and waste water
- But typically in agglomerations < 2,000 p.e.
- Operational and sustainability issues in rural areas (low affordability / low connection level to collecting and treatment systems)
- Low capacity to develop and implement projects
- Low capacity for operation and maintenance

Regionalisation

- Regionalisation of water services - mainly driven by pre-accession programmes (FOPIP and ISPA)
- Slightly different approach, but the same final objective
- Intend to best use of available resources

Targets of Regionalization

- Limitation of political involvement in the supply of water and wastewater services
- Regional Operator as the mechanism for provision of service to small communities
- Availability of more similar companies for benchmarking comparisons

Overall target – to provide that 2600 agglomerations of more than 2000 p.e. meet 2018 targets

Advantages of regionalization

Improved technical capacity
 Improved financial capacity
 Improved lending capability
 Improved investment planning
 Optimization of available resources
 Capacity to operate of existing regional systems
 Capability to meet EU W & WW Directive
 Tariffs leverage around the region

Harta Operatorilor Regionali de Servicii de Apa



Basic measures for agriculture (Nitrate Directive)

- ✓ NVZs were designated in 2005 - 6.94% of country surface and then revised in 2008 and enlarged - 58% of the surface. Since June 2013, **whole territory approach** is applied



Measures generally refer to :

- implementation of the provisions of Good Agriculture Practices Code and APs
- construction of manure storage and waste water storage facilities
- construction/upgrading waste water treatment plants
- implementation of BAT

Status of implementation of measures related to the Nitrate Directive

- The Directive is fully implemented in the large farms (usually IPPC units)
- Romania decided to apply Action Programs for the entire territory
- Actions Programs have been developed for the entire country
- More than 100 manure platforms have been built for communes with significant number of animals
- Code of Good Agricultural Practices has been developed and distributed
- Still needs for improving monitoring and assessment and training capacity

Best Agricultural Practices

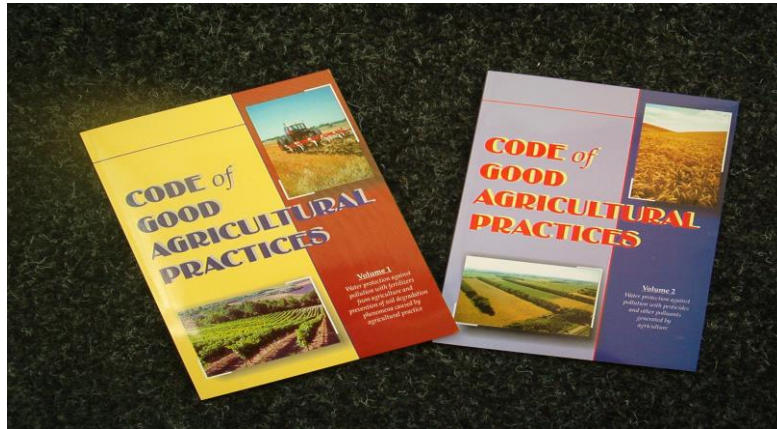
So called "Manure Platform"



Finalized Manure Storage platform



Strengthening the National Policy and Regulatory Capacity



Suprafata plantata cu arbori – comuna Independenta,
August 2003



Thank you for attention !