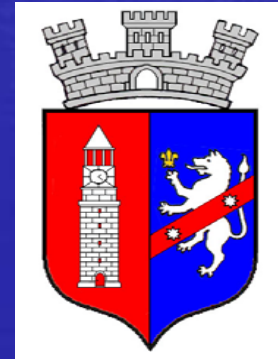


"Wastewater Management in Albania & pilot projects in Tirana"

Workshop on " Urban wastewater management, with a focus on rainwater systems".

Plock, Poland (30 November -2 December 2010)

Eliona Shkurta
Municipality of Tirana, Albania



Overall view of the current situation

- The growth of the population and the economic development of our days in Albania is accompanied with major challenges in providing sufficient access to sanitation, particularly wastewater treatment, although considerable legal and sector-policy reforms accompanied with appropriate technologies in the water supply and sewerage sector are gaining in importance, especially in the approximation of legislation based on EU Water Framework Directive, EU Wastewater Directive and with respect to environmental standards.

Stabilization & Association Agreement and EPD

- In accordance with the Articles 70, 86 and 108 of SAA, actions have been undertaken for the upgrading of sewerage physical infrastructure and the provision with technical assistance for the sustained management of such utilities in the coastal areas.
- According to the European Partnership Document, approved in January 2006, is foreseen an action to further develop and implement the National Water and Sanitation Strategy and the Rural Strategy for Water Supply and Sewerage; as well to develop and start implementing a strategy for progressive alignment to the *acquis communautaire* in the area of water supply and sanitation.

Ratified conventions & agreements

On the international level:

- Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar);
- the Convention for the Protection of the Marine Environment and Coastal Region of the Mediterranean (Mediterranean Action Programme).

On the regional level:

- a bilateral Memorandum of Understanding on Cooperation with Greece and FYR of Macedonia in order to improve joint environmental protection, including here water and wastewater treatment.

Municipal Water and Wastewater Project

This project, financed by the World Bank is focused in two perspectives:

- Wastewater treatment in coastal cities (building of constructed wetlands for wastewater treatment, improved management of an existing protected marshland and a public communication program).
- Improvement of the sanitation services as well the achievement of the financial viability in the water utilities by introducing a new incentive, based on multi city management approach.

Wastewater Entities

- The General Directorate of Water Supply and Sewerage is responsible for the management of:
 - Annual investments from the state budget;
 - Annual operating and maintenance subsidies in the sector;
 - Local costs on foreign investment.
- In the administrative territory of Albania today operate 55 Waste and Wastewater companies, that are responsible for the administration of these services within their territory.

Reference to national legal framework

- DCM No. 177 dated 31.03.2005 "On the Allowed Norms for Liquid Emissions and the Criteria for Water Environment Zoning";
- DCM No. 775 dated 28.10.1996 "On the Establishment of a National Water Council";
- Law No. 890, dated 06.06.2002 "On the Protection of Coastal Areas from Pollution and Damage".

National Environment Agency

National Environment Agency (NEA) is comprised of five directorates:

- Air, Water Quality and Waste Management;
- Nature Conservation and Soil Rehabilitation;
- Project Implementation;
- Service Organization; and Human Resources;
- Unit on Legislation, Foreign and Public Relations.

Sewage and drainage in the local units

- The local governments units - according to the Article 10.3 (I) (a) of law no.8652 "On Organization and Functioning of Local Governments"-, exercise their function on the infrastructure and public service (own function of these units), including here the sewage and drainage system and flood protection canals in the residential areas.

Tirana sewer system

- The Municipality of Tirana maintains a 540-kilometer wastewater collection system. Pipes collecting wastewater from the periphery are connected with the municipal system.
- But the public sewer system does not cover the suburban areas. For peri-urban as well as rural areas the most important means of sewage disposal are seepage pits.

The project in the SOS Children's Village

- First research and demonstration wastewater treatment system in Albania using constructed wetlands and reuse technologies has been built in the SOS Children's Village located in Sauk, a suburb of Tirana, that had no access to the municipality sewerage system.
- This first plant-based wastewater treatment that served for training and research purposes, was set up in order to develop appropriate decentralized wastewater technologies.

The project in the SOS Children's Village

- To upgrade the existing treatment unit, GTZ, the SOS Children's Village and Directory no.2 of Tirana Municipality agreed to start piloting a constructed wetland system on the village's premises under technical guidance of Oekotec GmbH and in collaboration with the Polytechnic University of Tirana. The idea was to improve the environmental sanitation of the village while at the same time raising awareness for decentralized sanitation technologies to relevant stakeholders.

Arial view of SOS Children's Village



(source: Google Earth)

Project methodology

- Being the first system of its kind in Albania, the construction provides for an applied science perspective on extensive wastewater treatment methodology which uses a combination of both vertical and horizontal flow through reed bed filters. The application of this technology demonstrates an appropriate way to establish sanitary environments which protect natural resources and promote sustainability. It is aimed to be used as a model treatment plant by the main sectoral actors for training, demonstration, research and replication in periurban and rural areas of Albania.

Site View from the project



Results of the project

- The treatment plant treats the wastewaters of 500 inhabitants with a low operating cost and with the contribution of a small number of workers.
- Currently the total wastewater generation flow rate is calculated at $16.8\text{m}^3/\text{d}$, having a per capita generation rate at 76.36 L/cap/day .
- The constructed wetland system and reuse system demonstrates the appropriateness and potential of the technology to be used in similar projects in the future.

National Strategy Aims

The national strategy on wastewater consists in:

- Sustainable and Controlled Treatment Strategy: Technical support of authorities for the implementation of the appropriate technologies for treatment and technical support of authorities for the control and monitoring of the wastewater treatment plants .
- Sustainable Wastewater Reuse Strategy: Technical support of authorities for the orthodological utilization of treated wastewater in the agricultural production and for the maximum utilization in a safe way of the treated effluents, development of guidelines for the safe reuse.

National Strategy Aims

- Best Practices and Effective Policies Promotion Strategy: Acquisition of knowledge and experience of scientifically sound and effective practices on urban wastewater treatment and reuse implemented in countries facing the similar problems and having similar characteristics, through compilation of useful material in a report and also through selected site visits. In addition effective socio-economic and legislative instruments applied elsewhere will be examined and success stories will be promoted.
- Education/Awareness Strategy: Training/Educating support of all actors involved in the wastewater treatment and reuse cycle.

Priorities in the wastewater management

The highest priority in the wastewater management sector in Albania, especially in the city of Tirana, for the time being is facing problems to setting up an effective wastewater management system which will include:

- Maximization of collection of wastewater;
- Upgrading the existing wastewater collection systems;
- Rehabilitation or upgrading of existing wastewater treatment plants or the construction of new treatment plants;
- Establishment of proper standards for influent and effluent wastewater quality.



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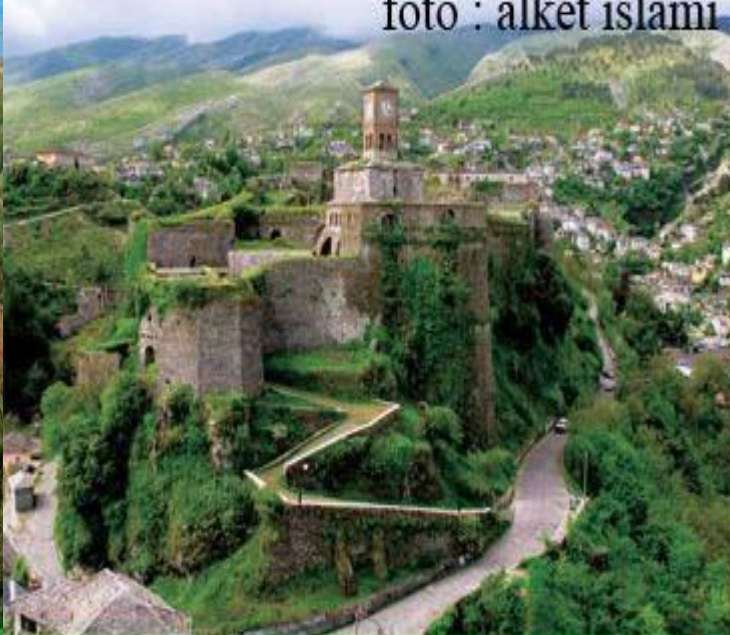


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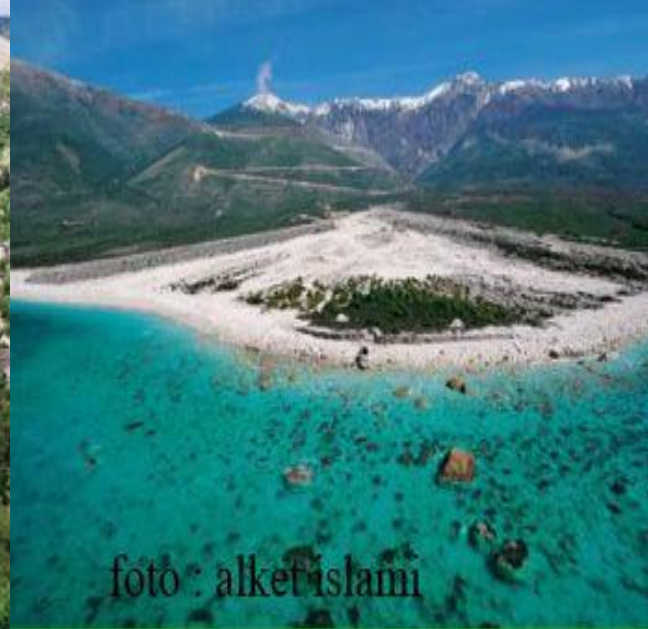


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