

## 4. Water Quality

### OVERVIEW

Water management is still recognized as one of the most challenging aspects in the whole process of accession. First of all, improvement of the water quality is dependent on large infrastructural investments (sewage systems) which largely exceed capacities of national economy. The other very important reason is the sole nature of water management, namely its overreaching scope which cannot be easily put in a single, rigidly defined sector. It seems that the first reason is, although present and relevant, often overestimated by the representatives of the Government and used as an alibi for slow progress in water management sector. Statements that not much can be done with water quality without large financial support are often heard. This is partly true but the problem is that the other challenging aspect mentioned above is largely underestimated or just formally considered.

Large infrastructural investments will for sure need decades to be implemented, but in order to implement them a comprehensive, coherent, integral, participative and multidisciplinary system for water management has to be established. This system is not that much dependent on budget but more on organizational capacities. Some progress is evident in terms of strategic and legal documents. Government has shown strong incentive for development of new strategic document but the old practice of centralistic approach is still present. Much more could and should be done in terms of integration of different aspects of water management, cooperation with other sectors relevant for water management (forestry, nature conservation, energy), building capacities and enabling participation of all relevant stakeholders. It is unacceptable that such a challenging and complex issue as water management, is so underrepresented in public, media and political programs. The Government and the ministry responsible for water management have to seriously increase their efforts to bring the topic of water, as one of the most important natural resources, in focus of the society.

### RATIONALE

Strategic and legal documents subdivide the water management sector in Serbia in three main sections: water utilization, water protection and protection from waters (flood prevention).

Water utilization besides water supply for individuals and industry includes also use of water for irrigation (agricultural production), energy production, navigation, aquaculture and sport and recreation.

According to the newly drafted strategic documents status of water supply in Serbia differs significantly among the regions. In general water supply is on a satisfactory level (over 80% of the population has organized water supply). Recognized problems are high losses of water in distribution networks, low quality of distributed water (mainly in Vojvodina), overexploitation of ground waters and weak protection of water catchments. Unfavorable situation with water quality in Vojvodina is long lasting problem and no significant improvements have been made in past years. Many large aggregations like the City of Zrenjanin don't have regular supply with drinkable water. There are many reasons behind, but weak or even absence of control of polluters is for sure one of the main among them. Recent events in Novi Sad, in July 2015, where polluted waters (intensively red colored) were spilled directly into the Danube clearly depicts the situation with control of pollution of waters in Serbia. Although the case raised big public concerns, polluters have not been identified and it ended only as political fuss with

unidentified responsibilities. Lack of the control of water quality in rural areas, which use local supply systems pose a huge health and safety risk, as considered by experts from the Public health institute. Additional problem is lack of comprehensive monitoring and control system for use of ground waters. Governmental bodies admitted in the recently developed documents that they don't actually have record of all ground water wells which are used. At the same time they missed to propose sound system for overcoming this situation.

Water prices are still unacceptably low in Serbia, far lower than an economic price. Such artificial price development, driven only by political means not by actual market conditions, leads to irrational use and deterioration of all water resources and continual disintegration of water management sector. Shortage of water management funds, as a consequence of low water price, has effects on all aspects of water management (water protection, as well as on flood management and regulation of water bodies).

Improving irrigation systems in Serbia is one of the topics which have been often mentioned in the past year. It was recognized as one of the necessary prerequisites for development of agriculture. It is obvious that irrigation systems are underdeveloped but intensive campaign on rapid enlargement of such systems while neglecting potential environmental impacts raises many concerns.

Hasty and reckless mini-hydropower development (MHE), is an issue already recognized by many environmental organization and local communities. Unfortunately, the sector for water management keeps a very passive position against these developments and allows it to be driven and prioritized by the energy sector. One of the examples for neglecting of high potential risk of purely planned MHE is the reluctance for adoption of the Rulebook for defining minimum environmental flow. This Rulebook is defined by the article no. 81 of the Law on waters (2010) but there are still no signs of its adoption or even draft proposals. Due to that environmental flow is defined analogically, by use of old and incomplete hydrological data and without any consideration of ecological aspects.

It is emphasized by Progress Report 2015 (pg. 42) that any further development of hydropower should be in line with EU environmental legislation.

Tourism and recreation developments are not seriously considered as potential threats for water protection. But safe solutions are available. Despite very bad examples of tourism developments in terms of water management like Kopaonik and Stara Planina (ski resorts developed in high elevations, almost on top of the mountains) responsible institutions in water management sector are still reluctant to more intensively take part in planning of these areas and to try to prevent solutions which are of high environmental risks.

Wastewaters treatment is without any doubt the biggest challenge in water management sector in Serbia. The level of processed wastewaters is very low (below 10%). Funds needed for improvement of water sewage systems make the biggest portion of the estimated amount of money needed for approximation in the whole water management sector. These amounts are huge challenge even for much larger economies but very slow development of waste water treatment facilities in Serbia should not be assigned only to financial constraints. Namely, lack of systemic approach and prioritization has resulted in unacceptable long projects implementations. For example, plans for the Belgrade sewage system (interceptor+ wastewater treatment facility) appeared for the first time in 1980's. Nowadays, only 50% of the interceptor has been built, although its funding was supported by international funds (Government of Japan). Again, the whole process of development is strongly affected by political disputes and lack of continual policy. Another issue which depicts institutional causes off weak wastewaters treatment is low functionality and poor maintenance of existing sewage systems. Most of them do not work in full capacity or do not work at all.

Extraction of river sediments has for a long time been one of the serious challenges for water protection. It has mainly been considered as a tool for water regulation and flood prevention and environmental impacts has never been comprehensively considered. Such practice has resulted in sincere deterioration of riverine habitats, especially on river Drina and Morava (Južna, Zapadna and Velika). Current situation of these rivers shows that hardly any regulation and control has been implemented in use of river sediments.

Policy and practice of flood protection in Serbia mainly remains focused on technical, constructional measures for regulation of water bodies. Of course, those kinds of measures are necessary for efficient flood protection system but at the same time they are not sufficient and they have to be supported by strong integration with natural solutions for mitigation of high waters risks. After catastrophic floods in 2014 the Government has mobilized its resources for better planning and implementation of flood protection measures but, again, natural potentials and possible environmental impacts are mainly neglected.

At the end, climate change, as the main global challenge, remains mostly unrecognized in the current water management policy in Serbia. However, many studies have shown scenarios which deserve particular consideration but adequate reaction from policy developers is still missing. Having in mind current problems in Serbia like high losses in distribution of drinkable water, low prices of supplied water, irrational use, low percentage of treated wastewaters, passive approach in flood prevention and control with low integration of natural solutions, prompt and thoroughly planned actions for climate change mitigations are needed.

### Developments

The past period (since 2014) in the water management sector is mostly characterized by strong incentive for development of strategic and legal acts. Three relevant documents have been drafted: Strategy of water management in the Republic of Serbia, National Danube River Basin Management plan and Law on amendments of Law on waters.

The Strategy of water management in the Republic of Serbia is long awaited strategic document for water management. Legal frame for the Strategy was established 5 years ago in the Law on waters. The document was drafted by the Institute for Development of Water Resources Jaroslav Černi. The whole process of developing was mainly non-transparent and no clear evidence of structured negotiation process is shown, especially in the early stages. The draft was submitted for formal public consultation (defined by the law) but that was a final draft with already defined concept which was almost impossible to influence at that stage. The developers only formally stated in the draft that “many experts and institutions had been consulted”. Obvious sign of low intensity of the consultation process is almost complete avoidance of sector for environment (as stated by the representative of the Ministry for agriculture and environmental protection on the public discussion). The Coalition members took part in the public discussion and have sent written comments. There is no response on the comments yet.

In general some improvements in the concept of water management are visible in the new Strategy. Main improvements are made in the direction of the harmonization of a national concept with EU practice in water management. The developers try to focus on integral management but it was mainly done only formally without concrete actions and proposals. Inter-sectoral cooperation is recognized as challenge but not really operationalized. Focus to “traditional” aspects of water management is still clearly visible and overreaching issues have not been thoroughly considered. Overall assessment that the waters in Serbia are generally in good status raises some concerns. That good status is mainly explained by high natural potential for purification. Such statement doesn't provide incentive for active

management (water protection) and direct the management in more passive approach. Also, such consideration neglects specific ecological and regional features (i.e. overall status can be “good” but certain localities, water bodies, species or ecosystems can be strongly affected and endangered by low water quality). The Strategy is still in process of adoption and according to the plans it should be in power till the end of this year.

The National Danube River Basin Management Plan, has been obviously developed synchronously with the Strategy. The public discussion was held only a month after the discussion for Strategy. The consultation process was organized in a same manner as for the Strategy. Only final public consultations have been organized. The members of the Coalition have prepared and submitted comments. Overall comment is that the Plan is just a slightly modified Strategy. Objectives and measures are almost completely copied from the Strategy with only small changes related to time periods. The Plan has not defined responsible institutions or concrete measures. Coalition members propose redevelopment of the whole Plan since it misses many relevant parts and does not provide frame for concrete implementation. However, this is hard to be expected since the adoption is planned for this year.

The amendments on Law on Waters have also been prepared in the fall 2015 almost in the same time with the Strategy and the Plan. The amendments are mainly focused on harmonization with acquis. General impression is that the amendments significantly improve national legislation and bring it closer to WFD. However, frame for fully integral management with proper consideration of natural solution and ecosystem services is still missing. Draft Law on Water Management raises the question of integrated water management since it provides opportunity for establishment of private ownership over the water land.

Also, the amendments only vaguely tackle some burning challenges like mini-hydro power developments and river sediment extractions. It was planned the amendments be adopted by the end of 2015 but it was not a case. Ministry for agriculture and environmental protection has announced second round of amendments to be developed in 2017.

### Challenges

It is obvious that the water management sector is in unfavourable situation with many operational challenges. At the same time its capacities are continually weakening as it is also recognized in the recently developed strategic document. Improvements are prevented by very restrictive and rigid Government policy in regards to public sector. Much more support should be given to one of the most challenging sector in the whole process of accession.

Integration of other sectors and structured and well-organized cooperation of all relevant stakeholder is an unavoidable prerequisite for sound water management. Some improvements have been made in that sense in Serbia but it is still far from sufficient. Particularly challenging is the integration of other sectors and establishment of integral water management systems. The water management is divided in couple of ministries and obviously their joint work is not on a satisfactory level. There is still overlapping of responsibilities or even conflicts in management principles. Probably most challenging is the integration with spatial planning and energy sector.

The Law on waters from 2010 has established National council for waters and National conference for waters. Both of these bodies are almost invisible in current water management practice and public. It is almost impossible to find any sign of their activities (reports, statements, decisions) in public media.

The concept of the Council and the Conference is needed for sound water management but it should be much more supported and facilitated.

## RECOMMENDATIONS

Having in mind the aforementioned challenges in the water management sector in Serbia, the following general recommendations should be considered:

- *Capacity development and consolidation of public institutions for water management*- all relevant strategic documents (NEAS, Strategy for water management) underpin low capacities of public bodies (both on national and local level). The number and scope of the challenges demand a much more effective and organized public sector. A responsible institution should analyze existing capacities and develop a plan for their improvement as soon as possible.
- *Putting forward a “water issue”*- the topic of water management is underrepresented both in the public sphere and on political agenda. The relevance of water as a critical resource is somehow not publicly or officially recognized; more efforts should be made to address that. For efficient awareness raising, the public sector must develop ways to improve cooperation with non-governmental actors and local communities. These efforts are a prerequisite for achieving the first recommendation. Public and political acceptance of additional capacity building can be assured only by better recognition of the relevance of water issues.
- *Effective collaboration with other sectors*- water management issues are spread in many governmental sectors and therefore they are very challenging in terms of governance. It is obvious that inter-sectorial cooperation in the field of water management does not function properly. Better engagement of other sectors in policy development of the water management sector should be assured; as well the public institution should make more efforts to influence policies of other sectors in case, they are affecting water management. The existing Council for waters represents a good opportunity for integration among sector, but its functioning has to be significantly improved.
- *Improvement of public participation in policy development in water management sector*- the recent process to develop the Strategy for water management shows a pattern of only formal public participation. The public sector, not just the responsible ministry but also other institutions engaged as developers, should enable more insight in the process of policy development, especially in the early stages. The National Conference for Waters could be a very efficient tool for fostering public consultations but, as in case of the Council, its functioning needs to be redesigned.

Beside above mentioned general and organizational recommendations, water management should focus more on the following, more specific issues:

- *Integration of natural solutions in water management and better consideration of ecological services*- this is particularly important for flood protection and water protection. The concept of water management is still mainly founded on intervention and constructional measures. An approach which accepts the natural values and natural potentials and which supports protection of natural ecosystems should be developed and promoted. For this purpose the water sector needs to improve cooperation with environmental sector.

- *More decisive approach in water price policy* - all analysis agrees that the water price in Serbia is below any rational level but concrete actions are still missing or are very slow. These activities are of high importance for efficiency of all other aspects in water management, especially water protection.
- *Concrete planning and measurements to improve the monitoring of waters according to the WFD requirements* - both the Strategy for waters and the Plan for the Danube River Basin have recognized many weaknesses in monitoring, especially of biotic features, but they didn't provide any actions for overcoming that situation. Stronger cooperation with the environmental sector, both public and scientific institutions, is crucial for achieving of efficient monitoring.
- *Incentive for active management in water protection (improvement of status of waters)* - general and frivolous assessments that the status of Serbia is "satisfactory" have negatively affected integral and active management of waters. In the situation where almost all waste waters are untreated, official policy must not focus on passive management and natural potential for purification. Local and regional specifics should be considered and evaluated, and specific measures should be planned. Establishing a sound monitoring system is a prerequisite for this set of actions.
- *Integration of nature directives (Birds and Habitat Directive) in water management*- European ecological network Natura 2000 network is the main mechanism for conservation of species and habitats in EU. Many of the future Natura 2000 sites in Serbia will include different types of water habitats. Therefore, sound water management integrated with conservation objectives would be necessary to achieve favourable status of species and habitats in those areas. Nature directives could be also used as an efficient tool to support objectives defined in WFD and other national objectives for protection of waters. Responsible institutions in water management should mobilize their capacities and proactively participate in the development and management of future Natura 2000 network.
- *More decisive policy in regards to development of mini-hydro power plants* -the water management sector should be proactive and should try to define sensitive areas (water bodies) which should be preserved and criteria for selection of appropriate locations for MHE. Rulebook on environmental flow should be adopted as soon as possible.
- *Environmental impacts of certain water management measures should be considered more thoroughly*- this is especially the case for flood protection, regulation of water bodies and development of irrigation systems.
- *Water protection measures should be better implemented in spatial planning*- this is especially the case for tourism development and for regulation of settlement sprawl around rivers.
- *Extraction of river sediments should be more restrictive and better controlled*- new Law amendments have ensured some progress in this issue but additional actions, together with other sectors, are urgent. Annual plans for sediment extraction are very good idea but they have to be followed with strong organizational, logistic and expert support on all levels (national and local).