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This policy brief is intended for public policy makers and practitioners; it will also be useful for those groups and individuals seeking to influence the policymaking processes.

This policy brief is also available in Georgian.

WATER RESOURCES MANAGEMENT: CHALLENGES TO IMPLEMENTING THE WATER FRAMEWORK DIRECTIVE

1. Introduction

On 27 June 2014 Georgia signed an Association Agreement with the European Union and laid the foundation for a new legal framework of cooperation. Under the agreement, Georgia agreed to implement reforms within a particular timeframe in different areas, including water resources management, according to which the country should switch from a centralised management system to an integrated water resources management system.

Along with other measures to be implemented in the sector, Georgia committed to move towards a river basin management plan in line with one of the major requirements of the Water Framework Directive. The agreement allows ten years for the complete move towards a river basin management plan, but considering the complexity of the issue (the absence of relevant legal framework and a system of monitoring water bodies, faulty systems for ensuring public information and participation, and so on), it is important that essential steps in this direction are made today.

It is welcomed that after signing the Association Agrement, the Ministry of Environment and Natural Resources Protection of Georgia began to work in this direction: a draft law on water resources management was developed[1]; a network of monitoring surface water quality was expanded[2] and hydrobiological and hydromorphological monitoring of water quality was launched. In addition, the ministry developed a road map[3] for water resources and determined a number of actions[4].

According to the road map, one of the major steps is connected with the development of a pilot draft plan for the Chorokhi-Adjaristskali River Basin Management, which was prepared within the framework of an EU-funded project. Given its relationship to hydropower resources in the country, a comprehensive preparation of this plan is of the utmost importance.

The purpose of the present paper is to determine whether the Chorokhi-Adjaristskali River Basin Management pilot plan has been prepared in line with requirements of the EU Water Framework Directive and if so, how much it responds to the challenges facing the country[5].

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[1] Although the draft law was planned to be approved in 2015, it has not be approved so far; p.10; http://moe.gov.ge/files/PDF%20%20qartuli/Angarishi/angarishi_saboloo.pdf

[2] A guidance document on delineation of surface water bodies, reference conditions and classification systems in Georgia; USAID; p.15: "The National Environmental Agency has already launched monitoring of over 140 testing sites;"

[3] A total of 9 road maps were developed in the part of actions related to the environmental protection and climate; http://moe.gov.ge/files/news_img/2015/ivnisi/sagzao_ruka/AA-DCFTA_Roadmap_GEO.pdf

[4] A total of 27 activities; p.12 http://moe.gov.ge/files/news_img/2015/ivnisi/sagzao_ruka/AA-DCFTA_Roadmap_GEO.pdf

[5] In the process of preparing this paper, we used the information provided by the Ministry of Environment and Natural Resources Protection of Georgia on the activities carried out by the ministry in the sphere of water resources management; in addition, we analyzed the obligations undertaken in the water sector under the Association Agreement, as well as the Pilot Chorokhi-Adjaristskali River Basin Management Plan, EU Water Framework Directive and various guidance documents developed to implement it.

2. The EU Water Framework Directive

The EU Water Framework Directive officially entered into force on 22 December 2000, and it represents the most important legislative document for protecting water resources. The key objective of the Water Framework Directive is to ensure and protect water resources based on river basin management principles[6].

The directive clearly establishes the objectives for all water bodies existing in the territory of the EU (rivers, lakes, ground waters, transboundary or territorial waters), and their fulfillment is obligatory for all Member States. According to the directive[7], the countries have to ensure:

- "good water status[8]" for all waters in the country by 2015; and
- Rational use of water resources throughout Europe.

To achieve the objectives, a three-step planning process was defined for the Member states[9]:

1. At the first stage, Member States shall divide all water resources into river basin districts[10] and carry out preliminary assessments based on geographical, hydrological and qualitative parameters. Following this process, water bodies in the river basin districts shall be divided into "endangered[11]", "potentially endangered[12]" and "safe[13]" categories;

2. The second stage envisages the creation of a monitoring network relevant to the Water Framework Directive, and based on the results of monitoring, all water categories should be divided into water bodies and relevant statuses should be granted to them based on biological, physical-chemical and morphological data. According to the Directive, a water body may be granted high, good, moderate, poor and bad ecological status[14];

3. At the final stage, the state is obliged to prepare a river basin management plan for each river basin, including relevant measures and programmes aimed at defining the environmental goals and tasks for each water body in order to achieve a good ecological status or a good ecological potential (for heavily modified or artificial water bodies).

In addition, before approval of the final version of the river basin management plan and its submission to the European Commission, a Member State has to ensure the dissemination of information and the involvement of all stakeholders in discussions.

The river basin management plan should provide a detailed description of all those measures and programmes through implementation of which the predetermined environmental goals for all water bodies will be achieved.

No doubt that against the background of the potentially-intense use of hydropower in Georgia, it is important to move towards the river basin management plans in order to ensure the sustainable use of water resources and the conservation and restoration of biodiversity. Therefore the comprehensive preparation of the pilot plan for the Chorokhi-Adjaristskali River Basin Management in line with the requirements of the Water Framework Directive is extremely important.

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[6] http://ec.europa.eu/environment/water/water-framework/index_en.html

[7] http://ec.europa.eu/environment/water/water-framework/objectives/index_en.htm

[8] According to the EU Water Framework Directive, "good status" means both "good ecological status" and "good chemical status". They are defined through an intercalibration method in order to rule out different interpretations of objectives defined by the Directive (Annex 5, subchapter 1.4.1); http://ec.europa.eu/environment/water/water-framework/objectives/status_en.htm

[9] http://goo.gl/cLahBq

[10] In accordance with technical specifications provided in Annex II of the Water Framework Directive http://eur-lex.europa.eu/resource.html?uri=cellar:5c835afb-2ec6-4577-bdf8-756d3d694eeb.0004.02/DOC_1&format=PDF

[11] "Endangered" category involves such water bodies, which suffered important changes of ecological quality as a result of anthropogenic impact.

[12] "Potentially endangered" category involves such water bodies, on which there is no information available to define the level of modification caused by anthropogenic impact.

[13] "Safe" category involves such water bodies, which have not suffered and slightly suffered the modification of ecological quality.

[14] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/485389/LIT_5769_ed4e2b.pdf

3. Pilot management plan for the Chorokhi-Adjaristskali River Basin

The Chorokhi-Adjaristskali River Basin Management pilot draft plan was prepared by the Regional Environmental Center for the Caucasus (RECC) in cooperation with GREENTECS, via an EU-funded Environmental Protection of International River Basins Project.

According to the draft, the Chorokhi-Adjaristskali River Basin, including its surface waters, ground waters and coastal waters, was considered a "river basin district", a territorial unit within which environmental and chemical status of the water bodies has to be determined, environmental objectives set, and an action plan developed and implemented, with further monitoring and evaluation.

A long-term objective of the plan is to protect surface and ground waters of the Chorokhi-Adjaristskali River Basin District against risks that undermine its ecological status by reducing risk factors and/or where possible, eradicating them.

The plan focuses on the pollution of surface waters from industrial and urban wastewater discharge, municipal waste and sand and gravel extraction. In order to reduce pollution from these sources, the plan defines structural and demonstrative measures (for example, the restoration of the drainage system, installation of autonomous fecal matter cleaning systems), as well as non-structural measures (the improvement of legislative-regulatory and law enforcement measures). The only hydropower plant for which the plan defined an environmental objective is the 16MW Ats HPP on the Adjaristskali River. According to the plan, ecological flow and fish passage should be defined and arranged for the HPP.

Given that construction works are planned or ongoing on eight medium and large hydropower plants[15] on the Georgian section of the Chorokhi-Adjaristskali River Basin, it is clear that these facilities alone represent the major threat for the pilot river basin. Add to that the 8 HPPs on the Turkish section[16] of Chorokhi river and the threat is even greater.

Thus one of the main priorities of the present pilot plan should have been the ongoing and planned hydropower projects in the pilot river basin and first and foremost, setting environmental objectives and tasks for these plants.

Regretfully, the river basin management plan calls these plants exceptions. Since the draft plan names them as "an important hindering factor for achieving a good status in the pilot river basin"[17], no environmental objectives have been defined for them. Making such exceptions represents violation of the requirements of the Water Framework Directive[18] and generally questions the reliability of the planning process.

4. Transboundary impact

The draft plan considers the eight hydropower plants construction which are ongoing on the Turkish section of the River Chorokhi as another exception because of their transboundary impact. As such, neither the environmental objectives nor tasks were defined for these facilities, which also represent a rough violation of the requirements of the Water Framework Directive.

According to the Directive, if a state faces a problem in achieving an environmental objective because of transboundary impacts, the Directive offers the possibility to postpone this objective, but not releases a Member State from defining an environmental objective.

Furthermore according to paragraphs 4 and 5 of article 3 of the Water Framework Directive[19], the Member State concerned shall endeavour to establish appropriate cooperation with the relevant non-member State, with the aim of

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[15] See annex 1;

[16] Construction of a total of 10 hydropower plants is planned on the Turkish section of the River Chorokhi https://www.unece.org/fileadmin/DAM/env/water/meetings/Assessment/Tbilisi%20workshop/Presentations/Basin%20presentation%20pdfs/presentation_Tbilisi_Dec2009_Sezer_TR_Chorokhi-Coruh.pdf

[17] Chorokhi-Adjaristskali River Basin Management plan; chapter 5.5. "Exceptions"

[18] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2000L0060:20090625:EN:PDF Article 4 „Environmental objectives";

[19] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2000L0060:20090625:EN:PDF „Where a river basin district extends beyond the territory of the Community, the Member State or Member States concerned shall endeavour to establish appropriate coordination with the relevant non Member States, with the aim of achieving the objectives of this Directive throughout the river basin district. Member States shall ensure the application of the rules of this Directive within their territory."

achieving the objectives of this Directive throughout the river basin district. In case the reasons for not achieving good status cannot be resolved by a Member State since they are outside the competence and jurisdiction of the Member State and where it has taken all reasonable actions to fulfil the legal obligations, according to the article 12 of the Directive, it may report the issue to the Commission for its resolution[20].

5. Problems of public participation

An important shortcoming of the pilot river basin management plan is the fact that interested parties were insufficiently involved in the planning process. The issue becomes especially important since the present document is an EU-funded pilot project, which should be the basis for other river basin management plans in Georgia.

According to the EU Water Framework Directive (paragraph 14)[21], "The success of this Directive relies on close cooperation and coherent action at Community, Member State and local level as well as on information, consultation and involvement of the public, including users" Full-fledged involvement of all stakeholders is possible only if the following three conditions are fulfilled: (1) providing information to interested parties; (2) participation of interested parties in discussions; and (3) ensuring active involvement of interested parties in the process of planning and implementation[22]. Unfortunately, the authors of the Chorokhi-Adjaristskali river basin pilot plan did not devote sufficient efforts to ensure the involvement of all interested parties. A very low quality Georgian translation of the draft plan is a clear example of it, due to which the involvement of interested parties, many of whom do not know the English language, including the local population and representatives of local authorities, was significantly restricted.

In addition, the document does not contain any information about what actions were carried out by the authors of the plan to provide information to local communities; at the same time, there is no information about how many consultation meetings were held or planned at the local level.

The plan mentions that on 24 March 2015 a consultation meeting was held in Batumi, during which the English version of the river basin management plan was discussed. At the same time, it is unknown how information on the planned meeting was delivered and disseminated (besides sending electronic letters to several non-governmental organizations). It is unclear how many local residents or water consumers attended the meeting and what were their position towards the plan.

The process of preparing the plan failed to ensure the involvement of all interested parties, especially locals. Such an approach is in conflict with the fundamental principle of the Water Framework Directive and the active involvement of parties,[23] which can lead to conflicts related to water resources in future.

6. Current Challenges

After signing the Association Agreement, the energy ministry launched a process to sign memorandums with investors for the construction of hydropower plants. 64[24] memorandums of understanding have been signed. Despite commitments in the Association Agreement, not a single EIA report[25] submitted to the Ministry of Environment and Natural Resources Protection for the ecological expertise contains the assessment of HPP impacts in terms of river basin management (defining the ecological status of rivers and planning relevant follow up measures). This however was not seen as an obstacle for the Ministry of Environment and Natural Resources Protection, which easily issued positive conclusions for on those projects, which are planned on rivers with high ecological value[26].

In 2015 the ministry issued a positive conclusion on the Nenskra HPP. At the same time, a consultant hired by the

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[20] GUIDANCE DOCUMENT ON EXEMPTIONS TO THE ENVIRONMENTAL OBJECTIVES; Paragraph 3.2.7 "transboundary context"; http://ec.europa.eu/environment/water/water-framework/objectives/pdf/Guidance_document_20.pdf

[21] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2000L0060:20090625:EN:PDF

[22] https://circabc.europa.eu/sd/a/0fc804ff-5fe6-4874-8e0d-de3e47637a63/Guidance%20No%208%20-%20Public%20participation%20(WG%202.9).pdf%20b

[23] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2000L0060:20090625:EN:PDF Paragraph 14;

[24] http://www.energy.gov.ge/projects/pdf/pages/Ongoing%20Investment%20Projects%201233%20eng.pdf a total of 114 memorandums have been signed.

[25] Koromkheti HPP, Kasleti 2 HPP, Rachkha HPP, Nenskra HPP, Namakhvani HPP, Saguramo HPP;
http://www.energy.gov.ge/projects/pdf/pages/Ongoing%20Investment%20Projects%201233%20eng.pdf

[26] Namakhvani HPP, Nenskra HPP, Kasleti 2 HPP, Rachkha HPP

Ministry of Environment and Natural Resources Protection of Georgia to assess the EIA stressed[27] that the EIA report did not provide a project impact assessment in terms of river basin management and it completely neglected the requirements of the Water Framework Directive. Similarly, a positive ecological expertise was issued for the Namakhvani HPP as well.

The Ministry explained that since the legislation does not oblige it to reflect on river basin management principles in the report, the Ministry lacked an opportunity to discuss this issue in the process of ecological expertise[28].

Similar decisions made by the Ministry significantly complicate the move towards a river basin management model, because in parallel, the process of planning/constructing hydropower plants is actively underway, during which the river basin management principles are neglected. Considering the Ministry of Energy's 2024 deadline for movement to river basin management plans, by when at least 50 new hydropower plants are planned to be put in operation[29], it is clear that under such conditions, a transition to the river basin management model is impossible, and the fulfillment of obligations undertaken by the Association Agreement is in serious danger.

7. **Conclusion and Recommendations**

In its present form, the pilot Chorokhi-Adjaristskali River Basin Management Plan fails to address the challenges of the country – maximum use of hydropower potential – and therefore it cannot become a model for other river basin management plans. The preparation of the plan in its present form is a half-baked attempt to fulfill obligations of the Association Agreement and poses a threat to the process of comprehensive movement of the country to the river basin management principles.

In our opinion, it is essential that the pilot plan on Chorokhi-Adjaristskali River Basin Management:

- Meets the requirements of the EU Water Framework Directive;
- Ensures comprehensive involvement of all interested parties, including local communities and water consumers, in the process of preparing the plan, as envisaged by the Water Framework Directive;
- Represents a model, which will promote the introduction of a good practice for developing the river basin management plans in Georgia.

Unfortunately, the Chorokhi-Adjaristskali River Basin Management Plan cannot be considered a model because some exceptions made with respect to the most important issues. Hence, it is essential:

- To prepare the mentioned document again without exceptions and mostly focus on the HPPs planned just in this basin, their impact and development of effective mechanisms for mitigation/avoidance of this impact, including the revision of the project design;
- To start identifying all interested parties, including local communities and to ensure their active involvement in the planning process as envisaged by the Water Framework Directive.

In addition, to ensure comprehensive and effective transition to the river basin management model, it is crucial for the Ministry of Environment and Natural Resources Protection:

- To suspend the process of issuing positive ecological expertise conclusions for those projects where no assessment has been made in terms of river basin management;
- To revise positive ecological expertise conclusions issued for all those projects that do not meet the requirements of comprehensive river basin management plans, taking into consideration the condition on preservation of high ecological status of rivers.

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[27] Review of Nenskra HEP ESIA Study; Prof. Dr. Frank Schrader International Consultant on Hydropower ESIA;

[28] Response No 294 of the Ministry of Environment and Natural Resources Protection; January 18, 2016;

[29] http://www.energy.gov.ge/projects/pdf/pages/Ongoing%20Investment%20Projects%201233%20eng.pdf

Annex 1.

Planned and ongoing HPP Projects on the River Adjaristskali

A project of the three-step cascade is planned to be implemented on the River Adjaristskali, which includes three HPPs: the 185 MW Shuakhevi HPP, the 165 MW Koromkheti HPP and the 85 MW Khertvisi HPP. Presently, construction works are underway only on the Shuakhevi HPP; but after completion of the project, construction of the Koromkheti and Khertvisi HPPs will also begin.

The Shuakhevi project involves the construction of a 22-meter Skhalta dam (with a 19.4 hectare reservoir) and a 39-meter Didachara dam (with a 16.9 hectare reservoir) on the rivers Skhalta and Adjaristskali, as well as the construction of three diversion tunnels (at lengths of 5.8, 9.1 and 17.8 kilometers) to divert water flows from the upper parts of the Adjaristskali, Skhalta and Chirukhistskali rivers towards the reservoirs and then the powerhouse. Leaving only 10% of an average annual flow of the river is envisaged as an ecological flow that is "a practice recognized in Georgia"

Similar schemes are planned for the construction of Koromkheti and Khertvisi HPPs in downstream of the river Adjaristskali that will finally create a uniform cascade. In case of implementation of these projects in their present form, the river Adjaristskali and its important tributaries will appear in the derivation tunnels and the biological, as well as physical-chemical and morphological parameters of the river will sharply aggravate. Moreover, the mentioned changes will have a negative impact not only on water consumers, who are dependent on the river, but also on the process of formation of the Black Sea coastal line.

HPPs planned on the river Chorokhi

Like the river Adjaristskali, construction of the HPP cascade is also planned on the last 21-kilometer section of the river Chorokhi. The cascade involves Kirnati HPP, Khelvachauri 1 and Khelvachauri 2 HPPs. Currently the construction works are underway only on the Kirnati and Khelvachauri 1 HPPs.

The project envisages the construction of two dams (60.30m and 42.5m) and a 1.3 km derivation tunnel, in case of implementation of which over 200 hectares of area will be flooded, including agricultural plots of the villages of Kirnati, Maradidi and Erge in the Khelvachauri municipality, as well as household plots, various buildings and the areas owned by the municipality.

Like the projects planned on the river Adjaristskali, significant aggravation of ecological parameters of the river Chorokhi will be inevitable.

HPPs Planned on the River Machakhela

Although no construction of hydropower plants is underway on the river Machakhela, according to the existing plan, construction of a cascade involving two derivative (run-of-river) hydro power plants is planned with a total capacity of 42 MW[30]. Since the preliminary technical specifications of the planned HPPs are calculated in line with "the practice recognized in Georgia", which envisages leaving of only 10% of an average annual flow of the river, obviously, even in case of implementation of the mentioned HPP projects, sharp aggravation of ecological parameters of the river will be inevitable.

[30] http://www.energy.gov.ge/projects/pdf/pages/Machakhela%201%20Hidroelektrosadguri%20875%20geo.pdf

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