

**Association Green Alternative and CEE Bankwatch Network
Joint Comments on Nenskra HPP Construction and Operation Project
EIA Report**

September 30, 2015

1. About the project

The Georgian Partnership Fund, a state-owned investment fund commissioned the consulting company “Gamma Consulting” to carry out an environmental impact assessment (EIA) report on the construction of a 280 MW hydropower plant project on the River Nenskra and Nakra valleys of Mestia Municipality. JSC Nenskra, subsidiary of Partnership Fund, is appointed to implement the project. Implementation agreement with the BOT scheme (Build-Operate-Transfer) has been signed between Government of Georgia, Partnership Fund and Korean K-Water in August 2015.

The project is planned to be implemented in two phases: Firstly, will be constructed 135m height rock fill dam for formation of Nenskra reservoir with storage capacity of 182 million cubic meters and 15.1 km long derivation tunnel that will bring water from the Nenskra reservoir to the power house. It would flood 380-400 ha of land area. On the second phase, it is planned to construct 13m height dam and 12.4 km long tunnel for diversion of water from the Nakra River to the Nenskra River.

The EIA report does not provide total project cost. According to the information provided by International Financial Corporation (IFC), which has provided advisory services to the JSC Nenskra regarding the project, estimated cost is about USD 650-750 million. On another hand the Partnership Fund’s website underlines higher cost for project and amounts it to USD 1 billion. The discrepancies of information raise lots of questions.

JSC Nenskra held public hearings on the project’s environmental impact assessment report on June 1-2, 2015. The public hearings were organized in the community centers of Nakra and Chuberi, as well as in the Mestia. As a follow up, on August 4, 2015, the company applied to the Ministry of Environment and Natural Resources Protection of Georgia, to obtain an ecological expertise conclusion and submitted the EIA report and relevant documents on HPP construction and operation.

The information from Partnership Fund’s website makes clear that the details of the K-Water’s participation in the project were quite uncertain until August 31, 2015. However, it did not hinder South Korean company (K-water) to announce a tender on HPP construction on July 20, 2015 and later to declare Italian company Salini Impregilo as the winner of the tender. The latter one was instructed to carry out construction works. According to the media reports, despite the absence of a construction permit, on September 16, the Partnership Fund together with the K-Water held a groundbreaking ceremony for the construction of Nenskra HPP. Along with the representatives of the company and the Partnership Fund, the event was attended by Georgian Prime Minister Irakli Gharibashvili, Minister of Energy Kakha Kaladze, South Korean and Italian ambassadors and other high level officials.

With announcement of construction, before clearing all necessary permits, represents the faulty practice of hydropower plant constructions in Georgia and can undoubtedly be assessed as a pressure on decision makers.



Striving for environmental and
social justice in Georgia



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Meanwhile, the K-Water also applied to the European Bank for Reconstruction and Development (EBRD) and Asian Development Bank (ADB) to get funds for the project. The comments below, reflects that, and focused on EIA report's compliance with Georgian legislation, EBRD and ADB safeguard policies, and the Equator Principles. The Equator Principles provides the commitment from the banks not to issue loans to the projects, where a borrower does not want or cannot ensure the compliance with recognized environmental and social policies and procedures, including compliance with involuntary resettlement principles.

The comments also include the data obtained during the joint fact finding mission of Association Green Alternative and CEE Bankwatch Network to the project site (15-21.06.2015). During the mission the representatives of the organizations met all stakeholders. In particular, meetings were held with:

- Locals from Chuberi and Nakra communities (24 persons);
- Representatives of the ministry of Economy and Sustainable Development;
- Minister of Energy and ministry of energy representatives;
- Representatives of ministry of Environment and Natural Resources Protection;
- Representatives of Asian Development Bank;
- Representatives of European Bank for Reconstruction and Development;
- Representatives of JSC Nenskra and Partnership Fund.

The meetings with the representatives of the South Korean company K-Water and International Finance Corporation were also planned, but unfortunately they were thwarted.

It should be also noted that on December 18, 2014 the European Parliament ratified the Georgia-EU Association Agreement and adopted the accompanying resolution on Georgia, focusing on the substantial issues of EU-Georgia relations, including energy and environmental protection. The European Parliament “calls on the Commission to assist and monitor closely the Georgian authorities in their investment programme for the construction, rehabilitation and reconstruction of hydropower plants, urging them to comply fully with EU standards and norms with regard, in particular, to the environmental impact assessment of the larger plants;”. European Parliament requirement has not been taken into account during the preparation of the EIA report of the Nenskra HPP by the company and in case of issuing a positive conclusion from the Ministry of Environment, it will definitely have negative impact on its funding opportunities and Georgia-EU relations.

2. Quality of the project EIA report

The quality of the submitted EIA report is extremely poor. The report presented for ecological expertise conclusion as well as organized public hearings do not comply either with Georgian legislation, or with requirements of International Financial Institutions.

The report contains extensive extracts on major issues copied from other HPP EIA reports prepared by “Gamma Consulting” and other consulting companies. Some important issues are either analyzed partially or omitted at all. For example, chapters with similar contents, “5.2.6.1.1. Some methodological and conceptual approaches to estimate flora and plants and define project impact on ecosystems and habitats” and “6.10.2.1. Impact on Flora (construction stage)” are repeated in number of EIA reports, including Black Sea Transmission Line Project; Larsi HPP; Kazbegi HPP; Shuakhevi HPP. Even more, the eco-compensation approach described in these chapters is not used either in subsequent part of EIA, or in biodiversity management plan. As a rule, project developers do not apply a habitat-hectare approach when providing eco-compensations at the stage of implementation of the above mentioned projects. Neither does the Ministry of Environment and Natural Resources Protection demand to meet this obligation.

With minor corrections and some replacement of words, the following chapters of the present EIA document were copied from other EIA reports prepared by “Gamma Consulting” as well:

- 3.1. Alternative Sources of Energy;
- 3.1.1. Hydro Resources;

- 3.1.2. Solar Energy;
- 3.1.3. Wind Energy;
- 3.1.4. Geothermal Energy;
- 3.2. No Action Alternative Option.

Therefore, existence of those chapters in text can only be explained by their formal presence in the report, while not offering any real and useful information. One of the key functions of the EIA report is to define and assess issues related to the alternatives, including “No action” alternative. Nenskra EIA fails to fulfill this task. Subsequently a report in its current form contradicts Environmental and Social Policy requirements of International Financial Institutions.

The document does not provide required data, including information related to power supplies, tariffs, HPP operation and work regimes of the plant, as well as information about possible impacts of the project on the state-owned Enguri HPP. According to media reports¹, after 35 years of operation the hydropower plant will be handed over to the state free of charge and without any terms; however, the report, does not contain any information about the issue.

Besides technical aspects of the project, the report failed to assess the project’s indirect impacts on local communities and to define any mitigation measures. The report also does not provide information about either project’s cumulative impacts associated with the project-related infrastructure development (roads, transmission lines, etc.), or other infrastructure projects planned in the region and their cumulative impacts on the region from social, ecological, economic and energy points of view.

The consulting company does not assess in the report the project’s indirect impact on local population’s livelihoods, caused by loss of a large area (about 400 ha) intensively used by population on one hand, and impact on crops as a result of microclimate change on another.

The EIA report doesn’t contain project’s cost-benefit analysis, including benefits for the state in order to understand project’s feasibility. The same issue has been stressed in the conclusion of the Netherlands Commission for Environmental Assessment (NCEA)², as well as in the assessment prepared by Dr. Frank Schrader, a consultant hired by the Ministry of Environment and Natural Resources Protection of Georgia³. In addition, absence of cost benefit analysis contradicts the requirements of Asian Development Bank⁴.

Important issues stressed by the international consultant, relates to the compatibility of the EIA report with the river basin management plan⁵. Georgia yet has not switched to the river basin management plan governed water resource management model. However, based on country’s international commitments, the river basin management principles should be taken into account during the preparation of EIA reports in order to avoid future controversies with the requirements of the EU’s Water Framework Directive. Neglecting of the river basin management principles is a serious shortcoming of the EIA report.

While addressing the poor quality of the Nenskra’s EIA report, it is essential to recall the number of problematic EIA reports prepared by “Gamma Consulting”. It includes EIA report on Bakhvi III HPP, where power house was taken by a landslide during the construction due to incorrectly selected area and poor geological research. Despite the fact that the construction was completed, Bakhvi HPP still has not been launched; Another example is Shuakhevi HPP, which caused damage to residential houses in nearby villages because of incomprehensive research; In case of Dariali HPP, construction tunnel was damaged by glacial mudflow, due to the poorly designed and executed EIA process, as well as choosing incorrect location. The fault has been acknowledged by the

¹ Irakli Kovzanadze: “One of the most important issues about implementation of this USD 1 billion project is that after 35 years of operation the HPP will be handed over to Georgia free of charge and without any terms.” http://www.fund.ge/eng/view_news/346

² http://moe.gov.ge/files/PDF%20%20Eng/News/Angarishi_ENG.pdf Paragraph 2.4 “Broader costs and benefits for Georgia”;

³ Paragraph 5.3; “Comparative Assessment of Hydropower in Georgian River Basins”;

⁴ <http://www.adb.org/sites/default/files/institutional-document/33788/files/cost-benefit-analysis-development.pdf>

⁵ Review of Nenskra HEP ESIA Study To Ministry of Environment and Natural Resources of Georgia; Chapter 3.4 “Legislation”; “The EU WFD is not only listed at the very end of a table with main European legal and regulatory documents but moreover is not considered from the river basin point of view.” May 13, 2015;

Ministry of Environment and Natural Resources Protection, when an additional permit was issued for continuation of Dariali HPP project. Unfortunately, non-fulfillment of EIA conditions in the process of construction (“Gamma Consulting” was also in charge of auditing the fulfillment of conditions) led towards death of around nine people. The issue of mechanical copying of parts of various reports by consultants, including international consultants, has been raised numerous times during various public meetings. The “tolerance” of the Ministry of Environment towards the established practice by “Gamma Consulting” raises well-grounded doubts.

The quality shortcomings confirmed by the fact that the EIA report does not review the state priorities, described in National Forest Concept for Georgia (Decree N1742-I 11.12.2013 of the Parliament of Georgia and National Biodiversity Strategy and Action Plan of Georgia for 2014-2020 (Decree N343, 08.05.2014 of the Government of Georgia). Moreover, it does not consider recommendations from Ecoregion Conservation Plan for the Caucasus⁶ and TEEB Scoping Study for Georgia: Main Findings and Way-forward, 2013. These recommendations (while not approved by normative acts) represent the state instruments for implementation of the sustainable development policy⁷. The TEEB report is included in the 2013-2014 report of the Ministry of Environment and Natural Resources Protection as guideline to Green Economy.

The EIA report neither discusses nor takes into consideration the document “Cost-Benefit Analysis of HPPs planned in Zemo Svaneti” commissioned by the Ministry of Energy and supported by USAID. The report underlines that out of twenty seven hydropower plants planned in Svaneti, Nenskra HPP will have largest impact on biodiversity and habitat areas. Taking into account the external costs of the damage on nature and social environment, in case of implementation of all hydro projects benefits for the country will be less than costs.

3. Project Feasibility Analysis

The report contains chapter 6.13 “Impact on socio-economic environment” as the analysis of the project feasibility. The following subchapters: 6.13.2.2 “Resource availability”; 6.13.2.3 “Land tenure and utilization”; 6.13.2.4 “Employment”; 6.13.2.5. “Demographic changes”; and 6.13.2.6 “Contribution to economy” are noteworthy. The subchapters’ information analyzed and concluded in chapter 3.2 “No Action Alternative Option”. Below each of the above mentioned subchapters are discussed.

3.1 Subchapter “6.13.2.2 Resource Availability”

According to the project sponsors, “a great part of project area is state-owned” and “a great part of project area is intensively used by local population for pastures, timber extraction, collection of wild fruits and other purposes. In case of project implementation, local population will lose possibility to use these territories that will have a small, but negative impact on their economic situation.”

Its well-known that land represent very scarce resource both in the Chuberi as well as in villages of Zemo Svaneti. Therefore, accessibility to resource is the most acute problem for the population, especially addressing the issue of hundreds of hectares usage that will be lost. The consulting company declares that the land is state-owned, thus local population will experience insignificant losses. However, the project area represents a traditional property of the Chuberi population and neglecting this circumstance may become the reason for severe confrontation between the investor and the population.

Though Georgian legislation does not recognize a concept of traditional property, this concept is ultimately recognized by safeguard policies of International Financial Institutions (IFIs).

⁶ <http://wwf.panda.org/?205437/ecoregion-conservation-plan-for-the-caucasus-revised> - Ecoregion Conservation Plan is a result of a collaborative effort involving World Wide Fund for Nature (WWF) and experts; the document is used by the governments of Caucasian countries as a guideline for developing their protected area system.

⁷ www.teebweb.org UNEP and WWF, 2013. TEEB Scoping Study for Georgia. United Nations Environment Programme (UNEP), Geneva, Switzerland).

Consequently, acknowledgement of the state right on the project areas and neglecting the rights of local communities represents rough violation of IFIs policy requirements. The issue was necessary to be studied by any interested company and included in the resettlement action plan; but no such plan has been prepared at all.

It is also unclear what particular criteria were used by the consulting company when it assessed the loss of resource availability as a small impact, because the document does not outline a number of important data, such as exact number of locals utilizing the mentioned area, the source of their income, a share of natural resource utilization in their income and the harm caused by the loss of these resources.

The restricted resource accessibility is one of the most acute problems of the project as it may become the reason of confrontation between the local population and project.

Incompliance between the claims made in the report and local population's views was clearly demonstrated during discussion on the EIA report, organized by Ministry of Environment, in Tbilisi.

The territory used as fertile land, was described by the investor as useless, while claimed that it would be inevitably damaged during the construction. Locals stated that they used these places for pastures. Use of those lands, for construction would bring negative social impact to population of villages.

From the social responsibility point of view, only two families, directly affected by the project, were offered compensations in Chuberi. No responsibilities have been taken towards families, whose agricultural lands will be either reduced or damaged, or who will face problems in connection with pastures and irrigation water.

The report does not assess the number of potentially resettled people. According to the project, resettlement will not be required in the process of HPP construction. However, some negative effects of HPP construction, such as problems with agricultural land, health aggravation increased humidity, and intensive geological processes will force the local population to resettle in long term. As a result, in the best case scenario, in such cases the state rather than a private company is usually burdened with all resettlement costs.

3.2 Subchapter "6.13.2.3 Land Tenure and Utilization"

It is noted at the beginning of this subchapter: "If we take into consideration an important distance between the project areas and settlements, they are not used intensively for public purposes." This assertion comes into conflict with the information provided in the previous subchapter, as well as with the following text of the given subchapter, according to which, the project area is intensively used by local population and "project implementation will limit their activities to a certain extent."

The report, however, does not explain what is meant under the phrase "limit the population's activities to a certain extent"; since the project-occupied areas will be lost forever as a result of the project implementation and alternative territories simply do not exist at all. Unfortunately, the report does not contain any plan to avoid adverse effects or any mitigation plan.

The wording made at the end of the very first article of the same subchapter is also unclear: "Relevant procedures will be carried out with the National Forestry Agency of the Ministry of Environment and Natural Resources Protection of Georgia during the period of public discussion of the EIA report on removing project areas from the forest fund." It is unclear what will be the grounds for removing project areas from the forest fund during the period of public discussions, while no positive ecological expertise conclusion has been issued for the project.

As we learnt at the meeting with the representatives of the Ministry of Environment and Natural Resources Protection in June, a significant part of forests has already been removed and transferred to the Ministry of Economy. Based on the abovementioned, not only a positive ecological expertise conclusion should not be issued, but investigation should be launched immediately on why and when forests were removed and transferred to the Ministry of Economy.

According to the last paragraph of the subchapter, during the meetings held in the EIA process, “no property-related discontent was expressed. As of March 2014, no property-related complaints or disputes were registered.” Considering that a working document of EIA report was prepared in 2015, while its discussion was held on June 1-2, 2015, it is unclear to whom local population should have submitted property-related complaints or who should have registered them until March 2014. In addition, complaint mechanism is not presented in the report submitted for obtaining a permit that represents rough violation of the requirements of international financial institutions. Hence, it is unclear what the consulting company tries to substantiate with this wording.

3.3 Subchapter “6.13.2.4 Employment”

According to the report, 500-600 persons will be employed during different stages of construction and 50-60 persons will get permanent jobs on the stage of operation that will have positive effects on the employment and social condition of local population. Unfortunately, the project does not mention any obligations of the investor in terms of providing employment to local population. As experience from other projects demonstrated the local population basically get low-paid jobs, while getting these jobs are connected with a lot of difficulties (for example, in case of the Paravani HPP project, ordinary workers were required to know English and to have the university diplomas). These possibilities are further strengthened by the following wordings made in the same chapter:

- Noteworthy that there is certain risks of negative impacts in connection with employment, in particular: employment expectations and discontent of local population;
- Recruitment policy will be developed and published at a local, municipal and regional levels; and
- Recruitment will be carried out through relevant testing.

Considering that the Prime Minister announced the opening of the project construction, it is absolutely unclear when the recruitment policy will be developed or what kind of testing the company plans to hold.

Although the same chapter contains a note that “JSC Nenskra plans to retrain local youth in order to offer them employment during the construction stage”, it is unclear, when, where and whom the company plans to retrain, especially as construction works have actually been declared opened by the Georgian government. Thus, employment opportunities for local population are nothing but a false promise and overestimation of project benefits.

In addition, even if locals constitute the absolute majority of the employed (that has never occurred in Georgian reality before), this benefit cannot counterbalance possible losses.

The report reads that “according to the results of the public opinion survey conducted in the EIA process, a certain part of local population has some experience of working in the sphere of construction.” Regretfully, the report does not mention either when and where the survey was conducted or what was the purpose and the methodology. In addition, the local population is unaware of the survey.

3.4 Subchapter “6.13.2.5 Demographic Changes”

The present subchapter actually is a continuation of the previous one and covers demographic changes caused by employment. According to the report, “the project does not envisage construction of permanent settlements for workers, because basically local population will be employed in the process of HPP construction and operation (about 80% of entire personnel).” Unfortunately, stemming from the practice of other HPP construction, it can be said that mostly foreign citizens will be employed in the process of construction and therefore, it is unclear, what are the grounds for these assumptions.

Furthermore, according to the report, “it is expected to return labor force seeking jobs outside back to the region that will have a positive impact on the demographic situation.” It is, however, unclear what the motives for such suppositions are as they simply aim at overestimation of project benefits.

3.5 Subchapter “6.13.2.6 Contribution to Economy”

According to the report, “local construction materials will be used in the process of HPP construction that will stimulate the production of construction materials.”

Such claims contradict subchapter 4.7.10 of the report “Local Construction Materials”. According to which only inert materials (only gravel and stones) and timber extracted on the ground will be used by the project. Timber materials will be purchased from licensed enterprises operating in the Mestia Municipality, and inert materials will be extracted from the pits searched on the project area.

It is unclear, how the production of construction materials will be stimulated, if materials for construction works will be extracted from newly searched pits. In addition, since 95% of the project area is covered with forests and this territory should be completely cleared to pave the way for the construction of a reservoir, the company will not have to buy timber from local licensed enterprises, because existing timber resources will be used. Therefore, the claims about intensification of production sector are exaggerated and have nothing to do with the reality.

The report overestimates positive effects caused by employment of local population.

According to the subchapter, investments necessary for the project implementation and tax revenues are an important benefit. However, the report does not provide either exact amount of investments, or its distribution by years; neither does the report outline the amount of investments, which will actually stay in Georgia or flow out as a result of importing equipment and other services for project needs.

As far as tax revenues are concerned, the report does not provide detailed analysis and provides only one parameter in a form of a property tax. According to the report, “property tax (1% of balance cost of HPP communications) and land tax (approximately 380 hectares) will be transferred to local budget that will be not less than 10-12 million per year.” However, no grounds for such assumption are provided so far.

Not only the report not analyzes, but it not even mentions project impacts on the country’s macroeconomic parameters (GDP, electricity export, etc.). It does not outline the total project cost, the amount of electricity designed for Georgia and its tariffs.

Special attention should be paid to various information sources about the total cost of the project. According to the Partnership Fund⁸, the total cost of the project is USD 1 billion, while according to the information provided by IFC, the project cost is fluctuating within USD 650-750 million. Considering that relevant information is unavailable in the EIA report either, there are serious doubts related to corruption and money-laundering.

The EIA report does not cover the issues of project impacts on economic factors. The information provided in the document represents only assumptions of the project sponsors, while the provided information often contradicts itself in different charters.

The report does not contain the project’s cost-benefit analysis without which it is impossible to justify the project’s feasibility that in turn contradicts the requirements of Asian Development Bank⁹.

Consequently, the presented information that was submitted for ecological expertise is insufficient and not ensures feasibility of the project from ecological and social-economic point of view. Thus it represents a violation of the requirements of “environmental impact assessment” decree and it is crucial to issue a negative ecological expertise conclusion.

According to the information disseminated by the project promoters, 100% of generated electricity will remain in Georgia. It should be noted that according to the same information, one megawatt of installed capacity exceeds USD 4000 that is about four-fold more compared to the cost of production of all HPPs either planned or being

⁸ http://www.fund.ge/geo/view_news/337

⁹ <http://www.adb.org/sites/default/files/institutional-document/33788/files/cost-benefit-analysis-development.pdf>

under construction in Georgia. Hence, full purchase by ESCO of electricity generated by Nenskra HPP will lead to sharp increase in consumer tariffs for Georgian population.

It's absolutely clear that the project is definitely unprofitable for Georgia and reflects only financial interests of its developer.

4. No-Action Alternative

The No-Action Alternative is discussed in chapter 3.2 of the report. It claimed that “the present assessment of environmental impact on the planned activity, along with anticipated negative impacts, revealed important positive aspects that would not be realized in case of non-implementation of the project.” Out of positive results it lists those social and economic “benefits”, which were discussed in chapter 6.13. Based on the above mentioned a conclusion has been made: “In case of non-implementation of the project and at the expense of avoiding possible environmental impacts, the development of regional infrastructure and social and economic condition will be hampered to a certain extent. HPP construction and operation, taking into consideration rational project decisions and relevant mitigation measures, will bring more significant social and economic benefits than the project's no-action alternative.”

No-Action alternative does not contain concrete figures that would have proven negative economic aspects of non-implementation of the project. Moreover, it does not mention how many forests and so on, including virgin ecosystems will survive in case of non-implementation of the project; economic value of these survived ecosystems is not calculated either. Thus, no-action alternative is unconvincing; it is assessed unilaterally and partially by the authors of EIA report.

It should be noted that during the 2008 Russian military aggression, Georgia suffered a USD 1 billion loss as a result of burning 250 ha of quite degraded forests in Borjomi Valley (conclusion of the ad hoc commission). At least twice more area of high conservation value forests will be destroyed as a result of the Nenskra HPP project implementation. So, the damage caused to ecosystem services will apparently exceed the project's investment value.

However, as the analysis made in the previous chapter shows, the EIA report does not contain a detailed and fact-based economic benefits of the project. In addition, assessment of project-related risks, which pose a direct threat to the lives of local population (see comments “Risks of development of dangerous geodynamic processes”) is omitted in the project. Moreover, the report says nothing about the lost opportunities of regional development for local population (ecotourism) and project impacts on livelihoods of local population (impacts caused by microclimate change on crops, health) and economic benefits gained from ecosystem conservation.

So, it is clear from the above mentioned that the best alternative to the project is its non-implementation.

5. Analysis of Alternatives

According to the authors, renewable energy sources, such as solar and wind energy, do not represent realistic alternatives in Georgia and therefore its consideration is deemed unnecessary. That represent an important shortcoming of the presented EIA report as it does not provide the motives for such claim.

It should be noted that number of sunny days in Georgia is fluctuating within 200-250 days per year. Prime cost of solar panels and related equipment has been reduced significantly over the past years and this tendency is still underway as a result of technological progress achieved. However, in that terms there are no changes in the EIA reports of HPP projects prepared by Gamma Consulting during last decade, that represents the reason to issue a negative ecological expertise conclusion.

Important shortcoming includes the fact, that report does not consider possibility of development of individual solar micro-stations capable to connect to the grid, that is widely accepted practice in Germany and other European countries. The same can be said about wind energy, which has not been assessed in the EIA report at all.

The EIA report highlights Georgia's hydropower potential, though does not discuss the issue of small hydropower development, or, for example, combined use of small HPPs and other renewable energies, energy efficiency or rehabilitation of existing HPPs. Usually, these issues should be discussed and resolved as a result of cost-benefit analysis for the country.

The recommendation on carrying of the cost-benefit analysis for the country was issued by the Netherlands Commission for Environmental Assessment (NCEA) in the report prepared on Khudoni HPP project¹⁰. Similar remarks were made in the assessment made by the consultant hired by the Ministry of Environment and Natural Resources Protection¹¹.

Consequently, as the conclusion, the present EIA report does not consider technically and financially suitable alternatives to the project's preferred option and therefore the feasibility of the presented preferred option is not determined. It comes into contradictions with environmental and social policies of the European Bank for Reconstruction and Development, as well as with Georgian legislation.

The EIA report considers selection of the five potential locations for the dam, as well as the several options of dam's height. The potential heights are: 130, 150, 200 or 250 meters. The options for the height of planned dam do not correspond to natural conditions, because the Nenskra project is planned above Khudoni and placement of such high dam in the River Nenskra Valley will intensify different seismic processes.

6. Dangerous Geodynamic Processes and its risk assessment

Chapter 6.7 of the report reviews the risks related to dangerous geodynamic processes. According to the report, "dangerous geological processes cover a number of gravitation processes of the Earth's surface, such as ravine erosion, landslide, rock fall, mudflow, etc. which may be caused or intensified as a result of the project implementation." However, the project focuses on existing geologically dangerous sites. It does not assess those risks that are to emergence of new sites, as a result of removing plants and/or changing the microclimate due to the construction of a reservoir. The report does not discuss the issue in the context of global climate change that may accelerate the mentioned processes and/or give way to the emergence of new sites.

6.1 Construction Phase

According to chapter 6.7.2.1 of the report (Construction Phase), "during the preconstruction or design phase, a contractor should carry out additional studies and based on its results define the measures for safety operation of the dam" (6.7.2.1 Construction Phase, p.25). Therefore, it is clear that the report does not carried on detailed studies on the project area, that would give possibility to assess the safety operation of the dam.

The report does not contain detailed studies on the dam alignment location for the Nakra HPP headwork. Like in the previous case, some additional studies planned during preconstruction phase. Furthermore, the report says that "if the project-defined engineering solutions are not enough for risk minimization, the dam will be moved upstream to a selected location in about 2.5 kilometers away." Only this argument is enough not to issue a positive ecological expertise conclusion to the project pursuant to legislation.

There is no risk assessment in relation to the new roads construction. The only recommendation made requires, that engineering geological studies for new road corridors will be conducted during the preconstruction phase.

6.2 Operation Phase

The basis of the conclusion of the chapter 6.7.2.2 (Operation Phase) "Taken into consideration small sizes of landslide-prone areas, no significant reduction of a reservoir will take place as a result of landslide and erosion processes," is too controversial and unclear.

¹⁰ http://moe.gov.ge/files/PDF%20%20Eng/News/Angarishi_ENG.pdf

¹¹ Review of Nenskra HEP ESIA Study To Ministry of Environment and Natural Resources of Georgia; Paragraph 5.3; "Comparative Assessment of Hydropower in Georgian River Basins"; May 13, 2015;

The report does not specify revealed landslide-prone areas in the project area, including the studies and risk assessment in case of their expansion as a result of HPP construction and operation; The report also does not contain assessment of current dimensions of existing landslide areas, their current sizes and the risks of emergence of new landslide-prone areas.

However, the same chapter later states that there is the landslide site on the left side of the dam axis, while its additional studies planned only in front of construction. The fact that the EIA report does not contain assessment of these risks contradicts both Georgian legislation and IFIs requirements.¹²

The report does not provide detailed risk assessment for impacts of avalanches and rock falls on the reservoir. For unknown reason, the report focuses only on the risks of pouring the wave originated as a result of avalanche over the dam, and not paying attention on its impact on the size of the reservoir. The report says nothing about risks of emergence new prone-sites as a result of the dam operation. It reveals only two high-risk sites and claims that additional studies will be undertaken by Subcontractor Company before the construction.

This shortcoming is highlighted in conclusion prepared by Dr. Frank Schrader, a consultant hired by the Ministry of Environment and Natural Resources Protection of Georgia. The conclusion stresses that it is unclear why mudflows in the Nenskra Valley were not investigated properly in the EIA report¹³.

The area allocated for construction of a dam face a great danger of intensification of rocky landslides. During a public discussion in Tbilisi, field experts emphasized that it is impossible to build a rock-fill dam with a concrete core.

6.3 The project impact on the Village Naki

The Nakra hydropower plant risk impact on the village Naki (Nakra) should be considered seriously. According to the report, during the HPP operation phase the safety of village Naki is endangered due to the mudflow Lekvederi River, that flows to Nakra river. The river valley is extremely erosive and intense precipitation causes mudflows with a great amount of debris. Presently, debris brought to the Nakra Valley is washed away with the water from the Nakra River and accordingly, the risk of spreading mudflow to the direction of the village is reduced. Since Nakra HPP becomes operational, only sanitary flow will be released downstream and the river will lose its ability to transport debris. It will increase the risks of mudflows towards the village direction. For unknown reasons, the EIA report considers that risks of this scenario development is low.

Meanwhile, the local people in Naki village, have concern regarding the other even larger mudflow river Leknashera, on the north of the village, which is completely neglected in the EIA report. This represents a serious shortcoming of the document. Itself the fact, casts doubt on the reliability of geodynamic processes and risks assessment. Locals stated that both rivers are active and almost every year they bring a great amount of debris. For the last time, in 2010, the Leknashera River completely covered the cemetery and agricultural plots in the village, while in 2001 the Lekvederi River washed away a plot of land owned by a local resident as well as a tractor.

Therefore, as conclusion could be stated, that EIA authors have not conducted detailed geological studies that contradicts Georgian legislation, as well as the requirements of IFIs.

¹² Environmental and Social Policy of the European Bank for Reconstruction and Development; <http://www.ebrd.com/downloads/research/policies/esp-final.pdf>

¹³ 3.6.5 „Impacts on Surface Geology and Morphology and Mitigation Measures“; page 17;

7. The biodiversity related issues

The project implementation, due to its scale, design and project area, will cause irreversible degradation of biodiversity. The project includes all those adverse effects that are typical for reservoir and derivative (run-of-the-river) types of hydropower plants: destruction of water habitats by a high dam; fragmentation of land habitats by a reservoir; flooding; destruction of forests and other land ecosystems; degradation of river habitats as a result of leaving only sanitary flow in the riverbed, and etc. The project area is located on the planned protected areas in Zemo Svaneti. The document “Zemo Svaneti Protected Areas Management Plan (2008)” developed by the World Bank’s Protected Areas Development Project, designs the Nenskra and Nakra Valleys in the strictly protected areas of the Svaneti National Park. The EIA sponsors claims, that the areas of HPP communications locations are outside of the planned protected areas in Svaneti, is not true. This is principal issue and the ministry is obliged to organize discussion on the consultation council of the Agency of Protected Areas.

The EIA report studies on biological environment are incomplete. The description of climatic conditions of project area stress, that it has been covered by snow from November 7, 2012 till April 7, 2013. Meanwhile, the same report claims that field works were launched in August 1, 2012 and completed by February 13, 2013; all investigations were finalized by March 8, 2013. It’s incredible to conduct a comprehensive field studies under conditions of four months of deep snow cover and frost. Therefore the reliability of conducted studies triggers serious doubts. As a result, it’s not surprising that during the field studies, experts could not discover protected species of reptiles, important species of invertebrates and a significant part of flora species.

It is extremely curious when the authors of the report claim, that since local population fails to recollect the facts of attacks by wolves (*Canis lupus*) and lynxes on their domestic animals, these species do not live in the project-affected area. The absence of the facts, that wild animals attack domestic animals, indicates that natural ecosystems are characterized by high productivity. Destruction of high conservation valued ecosystems on several hundred of hectares will aggravate human-wildlife conflict mostly due to reduction of wildlife habitats and food plots, as well as emergence of new waste deposits.

The inadequacy of the EIA is confirmed by the fact that the authors equalize the reservoir surface with land areas covered with water. The area of slopes in the river valley significantly exceeds the area of a hypothetical reservoir surface. It is obvious that the area of forests and other ecosystems has not been specified in the process of preparing the EIA report.

The project sponsors considered, that the mountain river’s natural ecosystem destruction, its replacement by an artificial reservoir and introduction of invasive species, as a positive phenomenon: “the creation of reservoir will lead towards creation of biocenosis typical for lakes that will improve the environment for invertebrates and fish.” Such conclusion is a legacy of Soviet-era thinking and is beyond any comments.

The report does not provide any real compensation and conservation plan that contradicts the rule of preparing an EIA report and the best international practice. The present document contain some pasted texts from other EIA reports on compensation measures: “net profit” and “habitat-hectare” assessment methods; habitat restoration; planting; collection of seeds; their transfer to conservation centers, etc. based on previous practice, it does not specify to which conservation centers the plants will be transferred and which particular species will be subject to transfer; Therefore, the issue is discussed formally in the EIA report. It’s unclear, whether the project developer undertakes the commitment to apply these methods and in respect to which species and habitats. As a rule, the ministry has never monitored the fulfillment of conditions undertaken in frames of EIA reports; neither has it made the developer accountable for non-compliance to the conditions (for example Larsi HPP; Kazbegi HPP, etc.).

The report claims that as the mitigation the HPP personnel will strictly control the illegal cutting and poaching. It’s impossible that HPP personnel will work at HPP and simultaneously will control poaching, especially as they do not have such legal power.

EIA report clarifies that the project will have a significant impact on biodiversity – forest ecosystems, endemic, rare and endangered species and their habitats (especially ichthyofauna and forests). However, the report contains important shortcomings and it is a verbatim copy of Shuakhevi HPP EIA report. For example, the EIA report notes

that (volume 2, p. 56) “if construction of the planned project corridor is connected with forest cutting, the activity does not represent the integral part of the environmental impact assessment document, but is a subject of future relations between the client and the Ministry of Energy and Natural Resources and the Ministry of Environment Protection during which all relevant procedures defined by legislation should be taken into consideration. After approval of the environmental impact assessment document, it is necessary to define the list of planned activities, including the amount of wood subject to cutting, as well as to carry out detailed inventory of forests included in the state forest fund.” Due to hasty copying from the old EIA report, old names of the ministries are indicated. An assertion that the issue of possible impacts of forest cutting does not represent a part of environmental impact assessment is wrong and contradicts Georgian legislation.

The same page contains a quotation from Article 24 of the Law of Georgia on the Red List and the Red Book of Georgia, regarding the removal of the Red List species from the environment. However, it's interesting which of the listed cases of removal of the Red List species from the environment are relevant to this case? Financial interest of a private company – HPP construction does not fall under the category of “special state importance.”

It is noted on page 57 that “the rules and procedures for changing the category of the state forest fund lands are implemented according to the rule approved by Order No 5 dated February 15, 2010 of the Minister of Environment and Natural Resources Protection of Georgia “On the rule of granting a special purpose category to the state forest fund lands”. This Order has been abolished and its provisions have been reflected in the Rules for Using Forests approved by Decree No 242 dated August 20, 2010 of the Government of Georgia; in particular, chapter V¹ was added to it: “State Forest Fund for Special Use.”

The project sponsors assertions are incorrect from legal point: according to the above-mentioned provision if the construction of hydro plants, pipelines, roads, communication, power transmission lines, etc. need a forest cut, as a form of forest utilization, it is possible. However, it does not mean that HPP construction represents itself the form of forest utilization. Neither does it mean that a person can guide himself by the quoted article to change a forest category.

Page 58 describes the cases of carrying out special cuttings, on the slopes between 30 and 35 degrees, as well as 35 degrees and more inclination. However, it is unclear why the interests of a private company – and in this particular case HPP construction – represent “special state importance.”

The EIA report reviews the rule of forest fund removal, but the reason is unclear, because the report does not identify the areas, which will be removed for project needs. Moreover, according to the Ministry of Environment Protection, a significant part of forests located within the project area has already been removed and transferred to the Ministry of Economy. Hence, not only a positive ecological expertise should not be issued, but it is crucial to investigate the grounds for the removal of forests and their transfer to the Ministry of Economy.

The project will cause irreversible degradation of biodiversity, protected, rare and endangered species, and high conservation value forests. The laws on the Red List and the Red Book, as well as law on the environmental protection, the Convention on Biological Diversity and the Bern Convention will be definitely violated. In particular, the project implementation will lead to violation of para 2 of article 46 “Protection of Wild Plants and Animals, the Law of Georgia on Environmental Protection. It states, that “any action, which is likely to cause damage to wild animals and wild plants, their habitats, reproduction areas and migration routes, is prohibited”; para 2, article 10 “Key requirements for the protection of endangered species”, the Law of Georgia on the Red List and the Red Book, states, that “any action, which is likely to lead to the reduction of a number of endangered species, aggravation of their habitats and livelihoods, is prohibited;” , as well as according to the article 11 “Protection of wild endangered animals” – “Any action, which is likely to lead to the reduction of a number of endangered wild animals, violation of their habitats, reproduction areas, survival stations, migration routes, roads leading to water and water sources, is prohibited.”

Therefore, according to the ecological expertise conduction rules, taking into account all above mentioned the ministry has no means to issue a positive ecological expertise conclusion.

8. Social Impact

One of the important shortcomings of the EIA report is irrelevant assessment of the project's social impacts; instead, the document actually focuses on so called positive factors (improvement of infrastructure and employment)¹⁴. As for the project's negative impacts on the population as a result of microclimate change and loss of certain areas necessary for HPP infrastructure, they are not assessed and respectively no mitigation measures are defined.

According to subchapter 6.15.3.2 (Possible Cumulative Effects of Reservoirs on Different Climate Scales), "its [reservoir's] effects on the climate will be substantial in spring, when the ice starts melting and breaking , and in late autumn, before ice phenomena begin. Sharp difference between water and air temperatures and strong wind will intensify evaporation. Evaporated moisture will cover buildings and fruit trees in a form of hoar frost and damage them. The damage caused by early frosts is graver as it will damage buds and sprouts, and ultimately result in premature aging, fruitlessness and dying of plants. For the people, that experience from rheumatism and/or need treatment respiratory or cardiovascular diseases the health condition will further aggravate."

However, despite the given conclusion, the report does not assess the impact on the local population both in case of loss of the crops and health conditions, but also the fact that local's livelihoods will be worsened significantly that will lead towards gradual depopulation of the villages.

The issue has been described as a serious shortcoming by the independent international expert¹⁵ hired by the ministry. Incomprehensive assessment of social impact and neglecting relevant mitigation measures contradicts both Georgian legislation and the environmental and social policies of IFIs.

9. Cumulative Impacts

According to President of the Energy Academy, Revaz Arveladze¹⁶, construction of Nenskra HPP may have negative impacts on water accumulation capacities both for the operational state-owned Enguri HPP as well as for planned Khudoni HPP (in case of its construction). The EIA report does not address to this issue; in addition, it also fails to outline working regime of Nenskra HPP and its compliance with and impact on Enguri HPP. The international expert hired by the ministry also focuses on this issue in his conclusion¹⁷.

In addition, the construction of power transmission line needed for the Nenskra HPP project, is also connected with significant cumulative effects; therefore, it should be assessed altogether with already existing transmission line, as well as with planned Khudoni HPP transmission line; As a result, there will be three high-voltage transmission lines in a narrow valley. As the construction of additional roads will be needed for new mentioned transmission lines, the EIA report should have assess the impact of these transmission lines on geodynamic processes that may lead to increased sedimentation in the Jvari reservoir. However, the EIA report not address this issue at all. According to the report, the preparation of EIA for transmission line will start only after availability of transmission line construction project. This approach is a clear example of the project fragmental assessment.

10. Public Awareness and Participation

Chapter 10, EIA report "Public Awareness and Participation in EIA Process" claims that "all stakeholders were identified (potentially affected by the project); the short information on planned project activities and special forms for questions from the public were prepared." The report also includes a stakeholder engagement plan and the dates of scoping meetings.

¹⁴ EIA report, chapter 6.13 "Impact on Social-Economic Environment"

¹⁵ Review of Nenskra HEP ESIA Study To Ministry of Environment and Natural Resources of Georgia; Paragraph 3.6.8 "Impacts on Socio-Economic Issues and Mitigation Measures"; May 13, 2015;

¹⁶ Public hearing meeting in the Ministry of Environment and Natural Resources Protection regarding Nenskra HPP; May 22, 2015;

¹⁷ Review of Nenskra HEP ESIA Study To Ministry of Environment and Natural Resources of Georgia; Paragraph "3.3.1 Overall Evaluation and Gaps"; May 13, 2015;

EIA report claims, that preliminary meetings on the project were held in the villages of the Nakra and Chuberi communities (Naki, Lekalmakhi, Zeda Margi, Larilari, Sgurishi, Tita and Lakhami) on April 24 and 25, 2015. However, a representative of Nakra to the Mestia Municipality said that no scoping meeting was held in the villages during that period.

Although the actions carried out by the project sponsors formally meet the requirements of international financial institutions, considering the fact that 1) not all stakeholders were identified; 2) no scoping meeting was held and the stakeholder engagement plan is extremely short and non-informative, it can be said that the implementation of the actions are far from the requirements of IFIs.

For example, according to the stakeholder engagement plan, participation of representatives of the government and experts were considered to participate in consultations during the planning stage. The participation of other stakeholders (non-governmental organizations and local population) was not envisaged by the plan. Such approach represents a rough violation of environmental and social policies of IFIs¹⁸.

10.1 Scoping Meetings

According to the EIA report, preliminary meetings on the project were held in the villages of the Nakra and Chuberi communities (Naki, Lekalmakhi, Zeda Margi, Larilari, Sgurishi, Tita and Lakhami) on April 24 and 25, 2015. However, a representative of Nakra to the Mestia Municipality said that no scoping meeting was held in the villages during that period.

10.2 Local Population's Access to EIA Report

According to local population, there was only one copy of the EIA report available in the region, kept by the member of the Mestia municipality from the Nakra community. As a result, the representatives of the Chuberi community had no opportunity to familiarize themselves with the document; Only in front of public hearings they receive the conclusion of the report. In case of Nakra community, while the document was not available for them, some of the active members of the community managed to read the document and provide information to the Chuberi population.

In addition, it should be noted that neither the Partnership Fund, nor K Water made electronic versions of EIA reports available on their respective websites; The local population received the reports only from the Green Alternative, that drastically restricts the population's informed participation in consultation process while represents significant violation of IFIs' safeguard policies.

10.3 Public Discussion

According to the project's EIA report, information about public discussion was published in the April 4, 2015 edition of newspaper "Sakartvelos Respublica" (Republic of Georgia). The project sponsors take no action to disseminate information to the local communities; therefore, the Chuberi population learnt about the date of the planned discussion only a day earlier. This fact naturally restricted the population's informed participation in the process.

Based on evidence of the local population, during public hearing (held 1-2.06.2015) the project developer addressed to the positive sides of the project, mainly on creation of jobs. The project-related risks outlined in the EIA report were not highlighted at all.

Locals stressed that the project developer not informed the local population about their rights, as well as about project grievance mechanism that represents violation of Environmental and Social policies of the EBRD and ADB.

¹⁸ European Bank for Reconstruction and Development; Environmental and Social Policy PR 10 (10);

Conclusion

In conclusion, the present document:

1. Does not comply with Georgian legislation and environmental norms and standards acting on the territory of Georgia;
2. Does not validate that implementation of the described activities in precise place and under concrete circumstances will not cause irreversible qualitative changes to the environment and natural resources;
3. Does not envisage mitigation measure for reduction and avoidance of environmental impacts;
4. In case of issuing a positive ecological expertise conclusion, Georgian legislation will be roughly violated, because it will cause reduction of the number of endangered species, aggravation of their habitats and livelihoods;
5. Does not contain the project's cost-benefit analysis; respectively, the issue of the project's impact on either economic or energy factors (tariffs, supply conditions) is not assessed. The information provided in the document lacks relevant analysis and is based only on the assumptions by project sponsors;
6. The project does not comply with the IFIs safeguard policies, as well as policies and standards of EU standards.

Taking into account all above mentioned, the ministry lacks opportunity to issue a positive ecological expertise conclusion.

Optimistically, the current leadership of the ministry, during the decision making process address the issues on the EIA report compliance to the environmental legislation and project's possible impacts on ecosystems rather than to promote the project's economic or energy theoretical gains. Hopefully, the Ministry of Environment and Natural Resources Protection will withstand the pressure, and will prove to members of the government that decisions made in accordance with to full pledged EIA process are more profitable both from environmental as well as economic and social points of view.

The moratorium should be announced in order to ensure objective decision making on complex infrastructure projects until a new Environmental Assessment Code will not enter into the force.