

Comments on Kintrisha–2 HPP Project Environmental Impact Assessment Report

12 September, 2012

1. About the project

Implementation of the Kintrishi HPP Project was envisaged by the memorandum of understanding signed between the Georgian Government and Adjara Energy 2007 LLC on February 28, 2008. Besides the Kintrishi HPP, the memorandum also envisaged the construction of seven hydro power plants (Kobuleti I HPP – 13.30 MW; Kobuleti II HPP – 14.30 MW; Kirnati HPP – 14.40 MW; Khelvachauri HPP – 22.40 MW; Chorokhi I–II HPPs – 48.00 MW). According to media reports, Adjara Energy 2007 refused to construct three hydro power plants envisaged by the memorandum, including the Kintrishi HPP, citing its proximity to the Kintrishi Protected Areas and other environmental considerations¹.

Georgian media reported in late January, 2012 that the Georgian Government and the Hydro Development Company signed a memorandum of understanding, according to which the company will construct a 5–megawatt Kintrishi HPP on the Kintrishi River in Adjara. According to the information posted on the website of the Ministry of Energy and Natural Resources of Georgia, the company should have launched the construction on March 25, 2012. According to Georgian media reports², in spring 2012 the company was already carrying out construction works although by then it had not obtained either construction permit or environmental impact permit³.

Thus, presently the project is being implemented by the Hydro Development Company⁴. The consulting company Gergili prepared the Environmental Impact Assessment report commissioned by the project developer.

According to the Environmental Impact Assessment (EIA) report for the proposed project, the project envisages the construction of a derivation type hydro power plant (HPP) with installed capacity of 5.5 MW in the Kintrishi River Gorge, between the villages of Kobalauri and Chakhati in the Kobuleti district of Adjara Region. Kintrisha–2 HPP will be connected to the national grid via 35 kW power transmission line. The total cost of the project is USD 8.5 million.

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¹ Newspaper "Bankebi and Financebi", June 27, 2009; "Tavisupali Sitkva", April 17, 2012; newspaper Batumelebi, May 28 – June 3, 2012.

² "Tavisupali Sitkva", "Batumelebi", the Association of Regional Broadcasters of Georgia, Maestro TV.

³ A letter from the local city council of the Kobuleti Municipality dated May 16, 2012 and a letter the Ministry of Environmental Protection dated April 23, 2012.

⁴ According to the data of the Registry of Entrepreneurs and Non–entrepreneurial Legal Entities, 86% of the company's authorized capital is owned by Estonia–registered company Imetegu (representative, Estonian citizen Horret Verrev); the remaining shares are owned by Georgian citizens (Tamaz Gogoladze – 8%; Elguja Totochia – 4% and Gigla Sikharulidze – 2%).

2. Quality of the EIA report

Generally, the quality of the EIA report is extremely low; it does not meet the requirements set by the Georgian legislation for the content of EIA report.

A great part of 133-page EIA report (12–83 pages; chapters 3 and 4) is dedicated to description of the background situation and technical characteristics of the hydro power plant. In addition, this part is loaded with non-useful and non-informative maps and photos. A great part of technical description would be more appropriate for an engineering-technical project rather than for an EIA report.

The purpose of chapter 5 of the report (organization and implementation of construction works) is absolutely unclear. A part of this chapter is dedicated to general description of the stages of construction of any hydro power plant, while the other part is about the details of construction works and ensuring safety. At the same time, this chapter also includes information, which should have been included in the chapter describing the project, though no such chapter is included in the report and the information about the project is scattered in various chapters.

A total of 12 pages are dedicated to identifying and assessing the project's impacts, as well as determining the mitigation measures. These issues are scattered in chapter 6 (Possible impact of the project); chapter 8 (Waste disposal) and chapter 9 (Review of the measures to mitigate adverse effects of the construction on natural and social environment). The contents of these chapters are beyond any criticism (see below).

It is absolutely unclear, what is the purpose of the last, one-page chapter 10 of the report – conclusions and recommendations. It does not summarize the results of assessment; it is also unclear, who is the addressee of the presented advices/recommendations – Hydro Development Company should undertake obligations, instead of giving recommendations.

3. Project description, proximity to protected areas and substantiation of project feasibility

Description of the Kintrisha-2 HPP project is imperfect in the EIA report. Even such important issue, as its location, is described quite generally and is scattered in various parts of the document. The location of the project site is described only in chapter 5 of the report (p. 85) and the description contains only two sentences: *“The construction of the Kintrisha HPP is planned between the villages of Kobalauri and Kakhati in the Kobuleti district of the Adjara Region of Georgia. The construction site is located 15–20 km east of Kobuleti”* (the same is noted in chapter 3.9 – Soils). Thus, it is unclear for the reader what the distance is between the project site and the settlements, or the local infrastructure and especially the Kintrishi protected areas (the Kintrishi State Nature Reserve and the Kintrishi Protected Landscape).

Chapter 3 of the report contains little information (only three paragraphs) about the Kintrishi protected areas (subchapter 3.11. Protected Areas), but even this chapter says nothing about the distance between the project site and the protected areas. The report says that *“the Kintrishi Protected Areas... are located between the village of Tskhemlovani and the Khino Mountain.”* Since the Kintrishi River catchment area starts from the Khino Mountain, it is quite possible that the project territory covers a certain part of the protected areas. Even if the project site does not cover a part of the Kintrishi protected areas, it is important to know the distance in order to fully assess the project impact on the protected areas and in case of impact, to identify relevant mitigation measures.

The fact that the project's initial developer, Adjara Energy 2007, refused to implement the project citing its proximity to the protected areas, arises reasonable doubts that the issues of proximity to the protected areas and the project's impact on the protected areas was deliberately neglected in the EIA report.

As for substantiation of the project feasibility, no such information is provided in the document at all. The following general substantiation is given in the EIA report (only in its chapter 6):

“The Scientific–Research Institute of Economics of Georgia provides the forecasts about the effects of HPP construction on the Republic’s economy. According to their conclusion, HPP construction will have a positive effect on the economic and social development of both the regions and entire Georgia. It will promote rational distribution of industrial forces, increase the level of mechanization and automation of the production; it will especially increase wages of the population, as well as raise their material and cultural level. Not only will the HPP construction provide the increase in incomes, but it will significantly contribute to the development of service sphere.”

These notes, which very much look like the abstract from a Soviet–old textbook, have nothing to do with the Kintrishi HPP project itself.

The report also notes that *“the construction company will meet 60% of requirement for labor force by its own staff, while 40% should be invited.”* It also supposes that *“it is possible to hire local workers from the villages of Khutsubani, Kokhi, Chakhati, Kobalauri and others located in the Kintrishi River Gorge”*. However, it is not fully clear whether the project implementing company undertakes an obligation to employ local population and if yes, how many locals will be employed; also what mechanisms will be provided to all stakeholders to check the information about the number of locals engaged in the project.

Thus, the report does not discuss the project need at all – particularly, what is the project goal and how the country, the region and the local population living in close vicinity to the project site will benefit from its implementation (the project’s social and economic impacts are not assessed at all). This information is essential for the society and decision–makers to better assess how valuable the Kintrishi HPP project is, taking into consideration those negative impacts, which the project implementation may cause.

When discussing the feasibility of the Kintrishi HPP Project, it is essential to give due consideration to the fact that according to the agreement between Georgia and the German development bank KfW, it is planned to allocate several millions of EURO for capacity development of Georgia’s Protected Areas, including the Kintrishi protected areas. Thus, the German side should immediately be notified about the planned Kintrishi HPP project.

4. Analysis of alternatives

Analysis of alternatives is an integral and important part of the EIA study; however, this issue is not discussed in the report at all. As it turns out from the report, at a certain stage of the project design the alternatives of “hydro–system schemes, facilities and installations” were discussed (p. 7); however, even these alternatives are not presented in the report, to say nothing, for example, about achieving the goal (which unfortunately is unspecified) through alternative ways and studying the alternatives of location.

Neglecting the alternative options can be considered the important shortcoming of the EIA report. It is essential to pay more attention to this issue, to conduct a comprehensive research and to present the findings in the EIA report.

5. Hydrological studies and environmental flow

Such an important issue as environmental flow is only mentioned in chapter 4 of the EIA report (p. 61). According to the report, *“in hydro energy calculations, 10% of average annual flow is the target level of environmental flow”*. No explanation, substantiation or research is provided about why the proposed option (directing 90 percent of water flow in the derivation channel and tunnel and leaving only 10 percent of average annual flow in the river) was selected and how the project implementation will influence the natural and social environment. The proposed project design raises numerous questions and at the same time serves as the firm ground for protesting against the project implementation in its current form due to the following reasons:

1. It is unknown why the proposed environmental flow is 10 percent and not, for instance, 5 percent, 15 percent, 30 percent or more.
2. It is not substantiated that 10 percent of average annual flow will be enough generally for the river ecosystem and particularly, for the fauna dependent on the Kintrishi River, including for fish. It is unclear whether any research has been conducted concerning this issue.
3. The water users dependent on the Kintrishi River have not been identified either, as well as if and what type of influence the water diversion will have on them.

It is also worth noting that hydrological researches are based only on the 1941–1990 data from the hydrological station located at the Kokhi village that does not allow making reliable conclusions. Furthermore, the data for 1965–1986 are used to establish the amount of solid sediments of the Kintrishi River. Actually, there are no observation data for past 22–26 years that makes the calculations provided in the report less reliable. It is also questionable whether it is justified to use the data from the hydrological station located at the Kokhi village for calculations: the report itself notes that this station is six kilometers away from the HPP head unit (p. 23). The station is located downstream the project area, while a number of tributaries join the river upstream, the hydrological observation data of which do not exist so far.

6. Identification of project impacts, assessment and proposing mitigation measures

The section of the EIA report dedicated to identifying possible project impacts, their assessment and mitigation measures is one of the weakest parts. The introductory part of chapter 6 of the report (p. 94) notes that this part of EIA report is mostly based on “the existing reports and literature” and the detailed study will be conducted after “the project is finalized.” Such statements cannot justify this very important shortcoming of the report.

Furthermore, if the project is “incomplete”, it is unclear how the impacts and mitigation measures presented in the report were identified; it is also unclear why and under which project the construction works were carried out on the project site.

The report submitted for public consultation meeting should fully reflect the project’s possible impacts and relevant mitigation measures, as under the current legislation of Georgia, only the version submitted for public discussion is available to the public; only this version gives the ground for public support or opposition to the project.

Only several examples are brought up below to describe the shortcomings in this part of EIA report:

1. The report does not identify the impacts on the Kintrishi protected areas; it does not assess the significance of impact and respectively, no mitigation measures are determined;
2. Although the planned HPP is a derivation type hydro power plant and it envisages directing of the greatest water flow – 90 percent – to the derivation channel (1220m) and then to the tunnel (1120m), the chapter dedicated to the project’s potential impacts (chapter 6) only speaks about the impacts of construction and operation of the HPP reservoir. It causes a surprise because if we trust the project description⁵, the hydro power plant will only have a six-meter height and 26-meter length spillway dam.

⁵ It should be noted that we come across conflicting information in various parts of the report. For example: the first chapter of the report (Technical-economic parameters of HPP) notes that the height of the dam will be 6 meters, and its length on the tower – 26 meters. While chapter 3 of the report (3.10.11 Highly sensitive areas) reads that the height of the dam will be 4 meters, and its length on the tower – 600 meters. The same chapter notes, unlike the first chapter, that the hydro power plant will have a “partially open” channel, not closed.

Thus, the impact on natural and social environment caused by diversion of the water flow is completely neglected in the EIA report, to say nothing about mitigation measures.

3. Chapter 5 of the report (p. 90) notes that it will be necessary to carry out explosions under a narrow-hole method to construct a derivation channel and process a head tank. The impact of this measure on the natural environment and the population living in adjacent settlements has not been studied at all. Furthermore, no significance of such impact has been defined and no mitigation measures have been proposed.

4. A separate chapter (chapter 8) is dedicated to the issues of waste management. However, this 1.5-page chapter dedicates only several paragraphs to the project itself – the remaining part provides a review about the theoretical issues of waste management. For example, according to the report, “*hazardous and common waste should be segregated and placed in different containers.*” The information provided in the document does not enable to clarify, how this waste will be treated finally and where it will be disposed. Furthermore, it does not indicate, who will be responsible for final waste disposal.

If the project implementing company places waste on landfills, it should be taken into consideration that the majority of landfills existing in Georgia fail to meet even minimal environmental standards. Thus, it is essential to study the impact of construction waste on waste disposal sites and to define the final waste disposal site clearly in the document.

5. The table, which describes “Measures to mitigate negative impacts of HPP operation” (p. 108) mentions among mitigation measures “compensations to private landowners” – whereas the entire report does not describe whether the project will have any impact and if yes, what kind of impact it will have on local population, their lands and tenure rights.

The same table names among negative impacts “poaching by the workers engaged in the construction” and “prohibition of poaching” is cited as a corresponding mitigation measure. The authors of the EIA report should know that poaching is prohibited by Georgian legislation and any such actions will be followed by relevant sanctions; thus, “prohibition of poaching” cannot be discussed as a mitigation measure. It is very strange to plan such mitigation measure since according to the report, “the workers engaged in the construction” represent a source of a threat.

6. Subchapter 3.10 of the report Flora and Fauna – is one of the weakest ones; it actually does not contain any valuable information, which, in case of the project implementation, would make it possible to reveal the threats posing to biodiversity and determine the mitigation measures. The description of this territory rich in biodiversity scarcely covers about two pages.

It is noted on page 52 of the report that botanical description is based on literary sources, field researches as well as “own experience and knowledge.” Since the report does not mention whose knowledge and experience is meant, it is impossible to assess how valuable it is. The report does not indicate any literary source; respectively, it is impossible to define how correctly these sources were selected and used.

As far as the field researches are concerned, the report notes that “*five species included in the Red List of Georgia were identified as a result of thorough field researches*”. It should be noted in this respect that all the five mentioned species are tree-plants of a great size; thus, using a phrase “*thorough field research*” in respect of these tree-plants is, softly speaking, quite awkward. The fact that no field research was conducted or it was extremely superficial, is confirmed by the notes provided in the report: “*During the pre-construction botanical researches the list of the Red List plant species will apparently increase.*” This phrase is repeated twice that again indicates at a superficial nature of the research; at the same time, nothing is said about whether the expansion of this list will be reflected in the project-related decision-making, its implementation and/or mitigation measures.

Subchapter 3.10.1 on fauna is even weaker and more superficial; it again demonstrates low quality of the report. Fauna species are basically listed in the Georgian languages, without their Latin names (Latin names are indicated only in few cases). In addition, even theoretically it is impossible that some species listed in the report (such as Caucasian grouse or Caspian snowcock) are found on the project site.

Moreover, the report does not differentiate on which species the proposed project will have no impact and which species will face a treat in case of the project implementation. For example, the report similarly “discusses” Caucasian squirrel, which spends the most part of its life in the trees, as well as Caucasian grouse and Caspian snowcock, which live in sub-alpine zones (and generally are birds), and Eurasian otter (*Lutra lutra*), which is a water animal, while the existence of this population completely depends on water quality, safety of habitats and food base, which also are water animals.

In our opinion, first and foremost, attention should have been paid to the species vitally dependent on water habitats, such as fish and amphibian, as well as otter (*Lutra lutra*) from mammals. As far as amphibians are concerned, it is essential to focus attention on the Red List species, such as Caucasian salamander, since leaving only 10 percent of water in the river may cause drying up of nearby springs, which represent the habitats of these species. Finally, it will cause destruction of amphibian populations. To determine the impacts, it is vital to thoroughly study the diversion section (at least at one kilometer distance from the both river banks) in order to reveal the habitats of vulnerable species, to plan apparent mitigation measures, or else in case of irreversible degradation, to make a negative conclusion. Besides a zoological research, it is also essential to conduct a hydrological research to ascertain how the river diversion will influence the Kintrishi River tributaries. Such research is necessary to define the state of fish and other water species as well as to identify the threats posing them.

Generally, the hydro power plants that involve diversion of water flow have a strong negative impact on the Eurasian otter (*Lutra lutra*) populations, which are protected not only by national legislation, but also by the international conventions (for example, the Bern Convention), and are also included in the Red List of the International Union for Conservation of Nature (IUCN). This species suffers several types of impacts:

- Reduction of food base (water invertebrates, fish) that is inevitably caused by such types of construction;
- Restriction of movement in the habitat area (construction of roads, etc., traffic movement in the process of construction and operation);
- Increased mortality rate after getting into a diversion channel and HPP facilities (it is possible to evade this danger);
- Destruction or degradation of vital habitats of animals (for example, reproduction and rest sites).

It is possible to reduce the mentioned threats/risks, if a comprehensive EIA study identifies the vital habitats of these species, ascertains the related threats and defines the relevant preventive measures. For instance, according to the practice widespread in Europe, it is established to enclose the entire territory of water intake with nets (for example, 300 meters on the both sides of the river), in order to avoid the appearance of animals in the diversion channel that would have caused their destruction (drowning).

The report also reads: *“It is known from literary sources that formerly the Black Sea salmon was entering the Kintrishi River for spawning; however, we do not come across this species now.”* Such statement is absolutely unclear and doubtful, as all available literary sources⁶ confirm that the Kintrishi River is the main spawning area for this species. Since other habitats of the Black Sea salmon are seriously degraded, in the opinion of some scientists, the Kintrishi River is the last spawning are for this fish in the Black Sea basin. Thus, it is unclear, which particular data make the authors of the EIA report declare that the Black Sea salmon has died out in the Kintrishi River and respectively, it does not need any care.

⁶ See the annotated list of Georgian fish: N. Sh. Ninua, B. O. Japoshvili, 2008, Checklist of fishes of Georgia, Proceedings of the Institute of Zoology XXIII Tbilisi, pp. 163–176.

The report also reads that trout is the main species needing protection. However, the mitigation measures provided on page 110 do not give any ground for mitigating the risks related to fish. It is absolutely unclear what the following statement mean: "*the river habitats downstream the upper dam should be protected*". How one can talk about protection of habitats, when according to the project, only 10 percent of water flow will remain in this part of the river? The report notes that water quality should be preserved "downstream"; however, it does not specify what should be done in this respect.

To summarize, the part of the EIA report dedicated to flora and fauna is generally descriptive and does not enable a reader to obtain any information and make conclusions.

Finally, it should be stressed that the EIA report is full of useless texts apparently copied from other EIA reports and/or textbooks (apparently to cover the shortcomings of the EIA report) that prevents a reader from obtaining useful, project-related information.

The quality of the presented EIA report is extremely low and it does not provide any information about the types, scales and significance of the project's environmental impacts. Thus, Green Alternative considers it absolutely inadmissible to submit the report in its current form to the competent authority for obtaining an environmental impact permit.