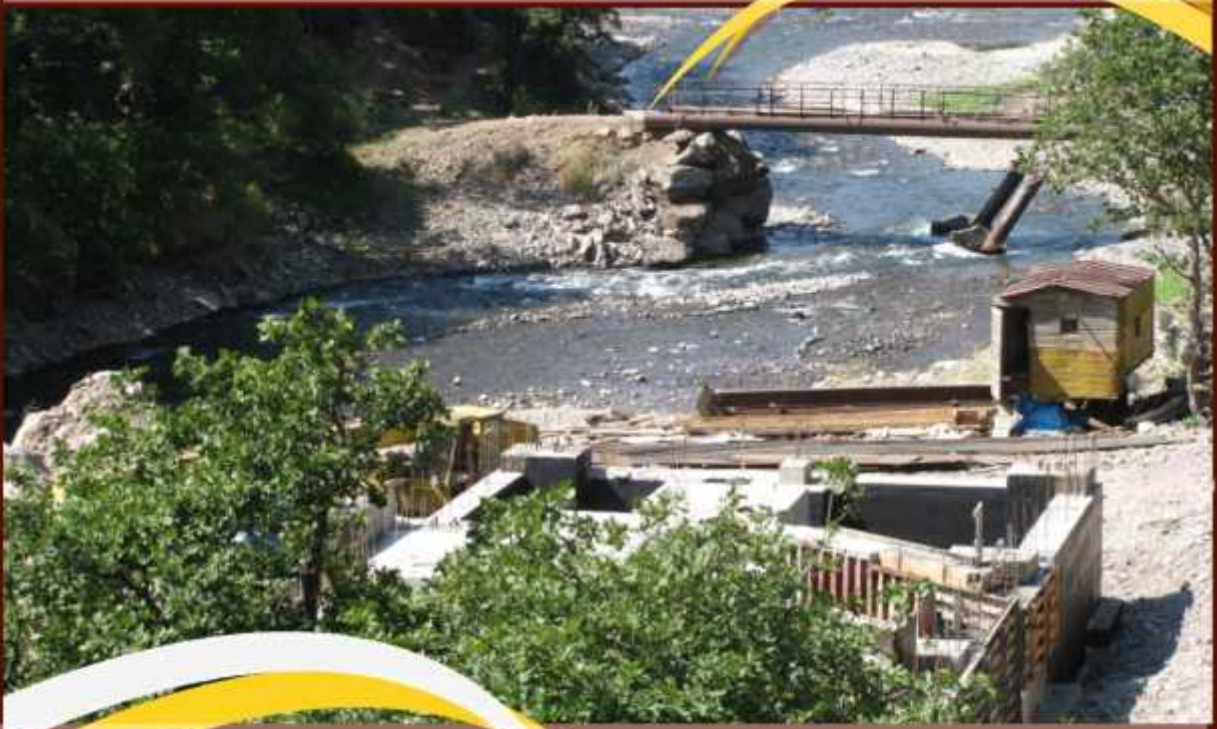




"EcoLur" Informational NGO

SHPPs under Umbrella of International Financial Institutions



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Yerevan 2013



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SHPPs under Umbrella of International Financial Institutions

General information. Energy production is a developed field in Armenia and has diversification nature. The Armenian nuclear power plant has capacity of 408 MW (the estimated capacity of the new power unit is 1000 MW), Hrazdan TPP - 800 MW (5th power unit of Hrazdan TPP - 450 MW), Yerevan TPP - 50 MW (new power unit - 210 MW), Sevan-Hrazdan Cascade - 556 MW, Vorotan HPP - 404 MW, Shnogh -76 MW, Loriberd HPP - 66 MW, Meghri HPP - 130 MW. In the field of renewable energy, the capacity of 140 constructed SHPP is 220 MW and 180 MW from 80 new projects of SHPPs, wind energy – 2.6 MW and another 200 MW planned as a perspective.

The energetic balance of the energy produced in the country looks as follows:

Total - 8,036,200,000 kWh

ANPP – 2,311,000,000 kWh (28%)

TPP – 3.399.100.000 kWh (42%)

Renewable energy – 2,326,199,000 kWh (30%), including SHPP - 570,000,000 kWh (6.5%), Sevan – Hrazdan Cascade - 632,300 kWh, and Vorotan Cascade - 1,118,800,000 kWh. Domestic use of energy makes up 5,923,400,000 kWh or 75%, SHPP specific weight - 497,000,000 kWh, or 8.5%, export – 1,578,000,000 or 20%.

The documents regulating the development of renewable energy field are as follows:

RA Law on Energy, RA Law on Energy Saving and Renewable Energy, RA National Program on Energy and Renewable Energy.

SHPPs

SHPPs in Armenia turned into a field of high incomes, where the interests of top officials are focused on. Through SHPPs energy producers are provided guarantees ensuring high prices of electricity purchase and the absence of any competition. Thus, the license for a SHPP issued by the Public Services Regulatory Commission of the Republic of Armenia is valid for a term of 15 years. The rate for SHPP constructed on natural water course is equal to 20 AMD/ kWh (4.9 cents). The producer is free even from the minimum tax for water usage, which used to be paid to the community budget.

It should be noted that all regulatory documents on SHPPs were confirmed without conducting up-to-date assessment of water resources in Armenia, based on the data on river dating back to

50-60 years ago. The decision to carry out the assessment of water resources in Armenia was reached in 2012, i.e. when the construction of SHPPs obtained wide-scale nature.

Armenia is considered to be a country with medium water resources. But the government reached a decision to increase the limit of SHPP capacity by 3 times making it 30 MW from 10 MW. For comparison Norway, a country with large water resources and a developed network of SHPPs, the capacity limit is 10 MW.

Before proceeding to the funding problem of this scheme, let's consider the process of issuing permitting documents. This process starts at the top level – governmental permission on changing the status of a land area for energy needs. The business entity, which intends to construct a SHP, collects a number of documents, such as permit for water use, licenses issued by the PSRC and Energy and Natural Resources Ministry of Armenia, and then the business entity needs to receive the opinion from the Environmental Expertise and a permit from the community for SHPP construction in its territory. That is, after all permits the Nature Protection Ministry is able to turn down or to approve the decision of higher bodies as an individual entity. In case of the negative opinion of the environmental expertise, the business entity can be changed, as a matter of fact, but not the decision itself whether or not to construct on that spot. That is, from the very beginning the government excludes the environmental damage assessment from SHPPs and the procedure of environmental expertise turns into fabrication. Thus, the implementation of small hydropower development scheme takes place with the immediate participation of top officials and those entrepreneurs, who can influence on the government in decision-making. Here international financial institutions, IFI, who finance this sector, can play a significant role.

Case Study 1

So, on 1 March 2012, the executive changed the category of 0.425 ha land areas of Litchq Community and 0.15 ha land areas from forest owned by the government for the purpose of constructing 2 small HPPs. Nature Protection and Agriculture Ministries had objections in regard with this decision. Agriculture Ministry has objection to changing the category of 0.15 ha land areas, which belong to the forest fund, while Nature Protection Minister makes a reference on government decision 1209 dated on 15.10.2009. In accordance with this decision, the third national park, 'Arevik' has been set up in Armenia, where any agricultural activities disturbing the park regime are banned.

Environmental Expertise of SHPP Projects

The public monitoring of the environmental expertise carried out by EcoLur in 2012-2013 show that the Environmental Expertise violated the environmental legislation in the most cases of issuing an opinion to SHPP projects, particularly RA Law on Environmental Impact Assessment, RA Forest Code, RA Land Code, RA Water Code, RA Law on Specially Protected Natural Areas, RA Law on Flora, RA Law on Fauna, UN Framework Convention on Climate Change, UNECE Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters, UN Convention to Combat Desertification, UN Convention on Wetlands of International Importance, especially Waterfowl Habitat, UN Convention On Biological Diversity.

Citizens' rights to health and healthy environment guaranteed by Article 33.2 of RA Constitution and Article 31 of RA Constitution are violated, i.e. "The private property may be alienated for the needs of the society and the state only in exclusive cases of prevailing public interests, in the manner prescribed by the law and with prior equivalent compensation."

The example of most typical violations, about which NGOs, civic initiatives and local residents have been beating alarm signals to RA Nature Protection Ministry, RA Government and RA Public Prosecutor's Office and other interested departments in the form of letters, applications and demands.

Case Study 2

The letter of Trchkan Public Initiative to Minister of Nature Protection: "Two SHPPS are located on Her-Her tributary to the Arpa River. The riverbed and one of the waterfalls have already dried out. While the second waterfall works, though it has little water in it," (<http://www.ecolur.org/en/news/sos/waterfall-dried-out-because-of-small-hpp/4017/>).

Case Study 3

The small HPP "Martziget -2" on Martz River was constructed without any permits, illegally. Documents haven't been submitted for Environmental Expertise, as Nature Protection Ministry informed EcoLur in May 2012. Despite the alarm signal, the Ministry didn't carry out inspections on this illegal HPP. And now people's warnings came true: the ecosystem of the Martz River is destroyed. At the public hearings in Martz Village the villagers protested to the construction of the SHPP "Martsiget-1". According to RA Law "On Environmental Impact Expert Assessment" (Article 6), it's a sufficient ground to turn down the project. At the same time we detected various drawbacks when we examined this project. Volume 1, page 10,

says “that tree felling won’t take place for the construction, as there are no trees and bushes in the territory of 10 ha”, while 17 page, Volume 5, says that “typical vegetation for the territory of SHPP – forest territory”.

The project doesn’t have any part about impact on landscapes, or biodiversity or ecosystem. In-detailed description and mapping of 5-kilometer-long pipes are also missing.

An environmental flow of 0.1 cubic meters per second is supposed to be left, but there is no assessment what will happen to the fish, river ecosystem and what the parameters for the compensation of long-term damage are.

There is no assessment how the SHPP will affect on the welfare of the villagers, who, as a matter of fact, will be deprived of any water and their surroundings, rest zone. (<http://www.ecolur.org/en/news/water/martz-river-dried-out-due-to-small-hpp/4113/>).

The problem is that these violations bear systematic nature and not dotted one, and the problems flow from one project to the other.

Main Problems: Environmental Flow

The destruction of river ecosystems takes place mainly due to the fact that SHPPs operate without any limitations, using the maximum water course of the river. “Environmental flow” concept is regulated with governmental decision 927 dated on 30.06.2011, which says, “The sanitary flow is determined with the minimum water course within selected 10 days of the driest year.” (https://www.e-gov.am/u_files/file/decrees/kar/2011/06/11_0927.pdf).

This means, if the river experienced a drought, and a zero water course was fixed in a randomly selected year within any ten days, the sanitary flow can be estimated 0 cubic meters per second.

But even these conditions are not met.

Case Study 4

The Nature Protection Ministry has detected that SHPPs don’t ensure environmental flow. As Nature Protection Ministry Information and Public Relations Department informs, during several days the working group detected that the environmental flow of the water intake station of “Kurtan” SHPP owned by “Tirakal” LLC was incomparably lower the set standards. While the examinations of the water intake station of “Griar” SHPP in Gegharkounik Region showed that the environmental flow of the station constructed on the Getik River is almost zero, which is a gross violation of environmental legislation and

standards. The same examination was carried out in “Erik” SHPP, Gegharkounik Region. Minutes have been drawn up for all cases and administrative fines will be imposed respectively (<http://ecolur.org/en/news/water/nature-protection-ministry-detected-shpps-not-ensuring-environmental-flow/5211/>).

Main Problems: Cumulative Effects of SHPPs

The load of SHPPs on one river or river basin increases and the main reason is the cheapness of the construction. The pipes of a SHPP are laid, as a rule, the construction works cost high under the conditions of difficult possibility, in mountain gorges. SHPPs almost immediately follow each other, which significantly makes the cost of the work cheaper. As a result, the load on the river increases by many times.

Case Study 5

“The Yeghegis River forming the ecosystem of Yeghegis gorge has changed its physical and chemical compositions in recent three years. Under the data of Environmental Impact Monitoring Center of Nature Protection Ministry, water temperature in the river has risen by 1°C from 2009 to 2011. Its transparency decreased by 3 cm, oxygen content by 2 mg/l, which already had its impact on fish reserves. River trout, endemic species, has already disappeared in the lower section of rivers. This is due to the pressure exercised by SHPPs, for which 11 licenses have been issued. “60 km of rivers are occupied with HPPs. The river enters into one HPP. Then comes out and again goes into another HPP. What will be left...,” said Shatin villagers. They are concerned with the fact that a new construction of “Yegheg” SHPP was launched despite the decision of the village meeting. “The village head and several people decided and that’s it...What should we do, leave?” (<http://www.ecolur.org/en/news/water/yeghegis-river-changes-its-composition-for-three-years/4701/>).

Main Problems: Loss of Biodiversity and Specially Protected Areas

RA Law “On Specially Protected Areas” bans the construction of SHPPs in protected areas, but SHPPs are constructed both in the national parks, and the buffer zones of the reserves, not to mention wildlife preserves, where protection regime is less strict. This violation results in the violation of RA Laws “On Flora”, RA Law “On Fauna” and the UN Convention on Biological Diversity.

Case Study 6

Arpi Lake is getting empty because of SHPPs, as Gyumri Aarhus Center Coordinator Gevorg Petrosyan told EcoLur during the conversation. “In summer months we saw how the lake almost completely got empty, because SHPPs were constructed on the Akhuryan River,” Gevorg Petrosyan said. Under him, the water let out of Lake Sevan for the purpose of irrigation is mainly directed to the operation of SHPPs. It should be mentioned that Lake Arpi is included in “Arpi Litch” National Park, which was founded in 2009. The establishment of “Arpi Litch” National Park was funded by German KfW bank, but the same bank supports the construction of SHPPs. The SHPP located in the territory of Amasi was constructed with the funds of German KfW Bank. “The the funds provided, on one side, allots money to conserve ecosystem, on the other side, funds a program, which promotes ecosystem destruction,” Gevorg Petrosyan mentioned (<http://ecolur.org/en/news/water/lake-arpi-getting-empty-because-of-shpps/5238/>).

Main Problems: Forest Felling

SHPPs are often constructed in forest areas or areas adjacent to forests. Armenia is a country with few forests. Forest-covered areas make up 11.2%, under the official data, and 6-7%, under independent assessment. On this background, the laying of pipes and roads for a range of 4-6 km with minimum width of the road - 6 meters, is accompanied with forest felling in the ranges compared with the plans of forestry enterprises.

Case study 7

Jermuk-based activist Macedon Aleksanyan’s letter: “... SHPP pipes occupy the territory of the forestry of Vayots Dzor. The project mentions the number of the trees to be felled down under the project makes up from 200 to 500. The NGOs don’t agree with this assessment, all the parameters show the number of the trees should have been much more taking into consideration the slope of the forest territory. ...Process of issuing permitting documents for “Jermuk-1” SHPP project and the implementation process of the project is implemented with gross violations. Moreover, ArmForest was excluded from this process and the felled trees are considered as illegal,”- <http://ecolur.org/en/news/water/who-will-pay-fines-for-forest-cut-down-under-jermuk1-shhp-project/4870/>

Main Problems: Landslides

The construction of SHPPs is conducted taking into consideration landslide process and looseness of soil. Landslide processes get active after intensive construction works, explosions, pipe and road laying.

Case Study 8

On June 3, a rock weighing 30 tons fell on the excavator in the territory of “Khachaghbyur-2” SHPP. Excavator driver Artyom Khalatyan, aged 27, died. Under Ruben Yadoyan, Head of “Engineer - Geologist” Company, PhD in Geological Sciences, “Khachaghbyur-2” SHPP is being constructed in active landslide zone. According Ruben Yadoyan, “We have studied Aghstev Valley and it has all the prerequisites needed for landslide formation: inclines of slopes, fissure zones, precipitation etc, which all causes landslides. <http://ecolur.org/en/news/water/vkhachaghbyur2v-SHPP-being-constructed-in-landslide-zone/4933/>.

Social Problems

Neither SHPP projects nor their further operation practically take into consideration the impact of SHPPs on the welfare of the communities. This issue obtained social response which leads to the social tension in the communities, pressurizing democratic formations in the society, using the leverages of authority power and corruption. People get deprived of their meadows, pastures, irrigation and rest zones, i.e. means of living, such as cattle breeding, growing vegetables, bee keeping, gardening and obtaining ecologically clean products, the development of local rural tourism etc. The local residents don't benefit from SHPPs in any way. They don't take part in the distribution of the income received from producing energy and don't get any cheap energy, as under RA Law “On Energy” all the produced energy is sold to “Electrical Networks of Armenia” (Russian “Inter RAO UES” Company) under monopoly right. As a matter of fact, village heads reach a decision instead of community residents, who often come to an agreement with HPP owners.

Case Study 9

No public hearings were held on “Amberd” SHP construction project in Byurakan. This information was provided to EcoLur by Information and Public Relations Department of Nature Protection Ministry. All the villagers oppose to this SHPP, as the land areas are endangered, which are irrigated from the river water. The villagers headed for the construction site to oust the heavy machinery,” the statement says. Despite the statement on not having any public hearings, the construction works have already launched. It would be

noted that three SHPPS have been constructed on the Amberd River – Amberd 1, 2 and 3. The licenses have been issued to “Amberd HPP” LLC. <http://ecolur.org/en/news/water/no-public-hearings-for-shp-construction-in-byurakan/4803/>

Case Study 10

In Martz village 180 signatures have been collected against the construction of Martziget – 1 SHPP. The villagers brought the paper with the signatures to EcoLur. The matter is that Martz Village Head Robert Galstyan and “Martz Energy” LLC signed minutes, which doesn’t reflect the opinion of villagers opposing to the SHPP. The villagers informed EcoLur that they tried to put the seal of Martz administration under their signatures, but Village Head Robert Galstyan refused to seal it (<http://www.ecolur.org/en/news/water/martz-village-head-signed-protocol-notwithstanding-villagers-opinions/4745/>).

The procedure of holding public hearings and taking public opinion into account is not established. The land owners, on whose land areas the HPPs are constructed, are not protected by the law. The status of the land areas they own can be changed with a governmental decision, which has the following statement “eminent public domain” without their consent.

Case Study 11

Nine SHPPs should be constructed on the Meghri River. Taking into consideration the interim distance, the river basin of the Meghri in a distance of 38 km is exposed to the impact of SHPPs. In this way, the landscape of Arevik Park, the territory of which is partially included in the basin of the Meghri River, will be destroyed. “There won’t be any water left in the river and our lands will become deserted...We will also experience problems with bees. Our fruit trees are pollinated by bees, but bees don’t fly where tension is high. We will stay without bees and our gardens will dry out,” said Meghri activists. (<http://www.ecolur.org/en/news/water/shps-on-meghri-river-may-lead-to-destruction-of-bees-and-orchards/4360/>).



Yeghegis River in Pipes



**"Jermuk-1" SHPP Blocking
Arpa River Course**



**Activists Opposing to
"Khachaghbyur - 2" SHPP Construc-**



**Martz Villagers Throwing SHPP
Pipe into River**



Martziget River



Meghri River



Argitchi River



Breakdown at "Argitchi" SHPP



"Yegheg" SHPP Pipes



**Shatin Villagers Complaining
against "Yegheg" SHPP**



"Daranak" SHPP Construction



Daranak River

ROLE OF IFI IN SHPP DEVELOPMENT IN ARMENIA

Small hydropower has a number of privileges for the IFIs operating in this field (the European Bank for Reconstruction and Development, European Investment Bank, KfW German Development Bank, International Finance Corporation - IFC). First of all, it's worldwide ecological umbrella in the form of the Kyoto Protocol and Clean Development Mechanisms (CDM). Developing countries like Armenia sell quotes for CO₂ emission in international market at the expense of so-called 'clean' energy produced at SHPPs, for which Emissions Reduction Purchase Agreement - ERPA is concluded.

The European Bank for Reconstruction and Development has funded the construction of 24 SHPPs. The EBRD has replied to EcoLur providing details about funding and terms and conditions.

EcoLur: What are amounts of all EBRD loans, direct or mediated, the funds of which were used to construct SHPPs in Armenia mentioning each loan and its validity term?

EBRD has signed and disbursed under 2 products:

1. Armenian Renewable Energy Programme (AREP). EBRD provided a US \$7 million loan facility signed in May 2006; maturity 4 years. The EBRD financing was supplemented by a US \$5 million facility from the R2E2 Fund and US \$3 million financing from Cascade Bank. AREP was administered by Cascade Bank which was acquired by Ameriabank in 2010.
2. A direct loan to Bazenc from EBRD under the Direct Lending Facility (EUR 1.1 million loan signed in July 2005; maturity 5 years).

Both projects have been completed. AREP is being repaid while Bazenc has been fully repaid.

EcoLur: Which SHPPs are constructed with the funds of EBRD loan in the frames of Armenian Renewable Energy Programme (AREP)?

1. Artavan-1 SHPP, Vayots Dzor Region
2. Aygezard SHPP, Ararat Region
3. Spitak HPP-1 SHPP, Lori Region
4. Ler-Ex 1, 3, 4, 5, 6 SHPPs, Syunik Region
5. Yeghegnadzor SHPP, Vayots Dzor Region

6. Dzoragyugh 1 and Dzoragyugh 2 SHPPs, Gegharkunik Region
7. Her-Her 1 SHPP, Vayots Dzor Region
8. Jradzor SHPP, Shirak Region
9. Aygedzor SHPP and Aygedror-2, Tavush Region
10. Vahagni SHPP, Lori Region
11. Goght 1 and Goght 2 SHPPs, Kotayk Region
12. Khachaghbyur SHPP, Tavush Region
13. Bovadzor SHPP, Lori Region
14. Khachaghbyur-1 SHPP, Tavush Region
15. Surb Aghbyur, Vayots Dzor Region
16. Ayri SHPP, Syunik Region

Loan to Bazenc

1. Bazenc SHPP, Vayots Dzor Region

EcoLur: Which companies, operating SHPPs, take part in the purchase agreement of certified emissions through Multilateral Carbon Credit Fund - MCCF and what is the extent of funds?

The MCCF has a carbon credit transaction with “Ani” OJSC in respect of the Jradzor project. Jradzor is CDM registered (please see: <http://cdm.unfccc.int/Projects/DB/KPMG1209636068.0/>)

The EBRD through its technical assistance programme also assisted Hydro Corporation (the mother company of Ani) in the registration of the Argichi Small Hydro project (please see <https://cdm.unfccc.int/Projects/DB/KPMG196433078.89/>)

4. Whether other development banks, for example KfW, can make use of MCCF services or they have intermediates?

EBRD and ELB have established the Multilateral Carbon Credit Fund. In Armenia the MCCF has only bought carbon credits from projects that have indirectly been financed by EBRD. MCCF has no carbon transactions with other development banks.

EcoLur: Whether EBRD examined the operations of SHPPs constructed with EBRD loans and whether the banks possess information about the findings of these examinations, whether the activities on loan were assessed?

As part of the EBRD due diligence process, the Environment and Sustainability Department reviewed the environmental management plan (EMP) designed for the Armenian Renewable

Energy Programme and added to it a specific set of eligibility criteria for screening candidate projects. These criteria benefited from the Bank's previous experience with mini-hydro facilities. Sub-projects were required to comply, at a minimum, with national standards and international best practices for environment, health and safety. Environmental due diligence was undertaken by consultants for each subproject financed and the Bank's Environmental Department reviewed the resulting reports to assess subproject compliance with the agreed eligibility criteria and with applicable environmental, health and safety and employment regulations.

As for Bazenc, after an initial environmental due diligence process at project approval, the Bank tasked consultants with undertaking a follow-up monitoring visit in July 2006 which confirmed on-going compliance of the project with national environmental and social protection requirements. No corrective actions were required of the project.

The list of SHPPs constructed with EBRD funds doesn't include Argitchi SHPP, though this SHPP doesn't have direct connection with the EBRD, as the EBRD Multilateral Carbon Credit Fund (MCCF) signed an agreement for the sale and purchase of CERS in the frames of CDM of Argitchi SHPP <http://www.nature-ic.am/en/Argichi>. The description of Argitchi SHPP project was submitted to the Multilateral Carbon Credit Fund in 2006.

According to the information provided by the project participant Emission Reduction Purchase Agreement (ERPA) for the sale and purchase of CERs generated by the proposed CDM project activity will be signed with EBRD Multilateral Carbon Credit Fund (MCCF). <http://www.nature-ic.am/en/Argichi>.

It should be noted that CDM supposes strict requirements to the project. However, as it's evident Argitchi project has been studied both by EBRD and MCCF experts. Otherwise, it's difficult to explain the fact that nobody paid attention to the gross violations made by "Hydrocorporation" LLC while registering Argitchi SHPP and Nature Protection Ministry of RA, who ignored these violations and neglected numerous alarm signals from the local population and public on the illegal construction of Argitchi SHPP.

“Project Status: The project is validated by KPMG Sustainability B.V. and submitted to the CDM Executive Board for registration. It was registered by the CDM Executive Board on February 24, 2008. The project owner has already signed a loan agreement with EBRD. Currently the project owner is expecting the final part of the investment to initiate construction works. Project Timing: Construction works will be launched in 2009. Project Data Public Consultations: Public hearings on the project held on April 25, 2006. Project Design Document: Submitted to the DNA for approval on October 24, 2006. Approved by the Armenian CDM DNA on November 23, 2006. Validation KPMG Sustainability B.V. in January 24, 2008. Registration: Submitted to the CDM Executive Board for registration on November 30, 2007. Registered by the CDM EB on February 24, 2008. Other Relevant Documents: Environmental impact assessment completed on July 7, 2006 (<http://www.nature-ic.am/en/Argichi>).

As it's obvious, the documentation dates back to 2006-2008. The problem is that the SHPP hasn't been constructed up to 2012, while under the current legislation, all the permitting documents, including the EIA (2006) are expired. The only document with no expiry date is the document on CDM registration and consequently the mechanism of purchase of quotas remains in force.

The construction of Argitchi SHPP was launched in 2012. The project has to undergo a new procedure of receiving all permitting documents, including holding public hearings and receiving an opinion of the environmental expertise. In reply to EcoLur's enquiry, Nature Protection Ministry noted that Argitchi SHPP hadn't been submitted for the expertise. The Ministry hasn't carried out inspections and stopped illegal construction. The Ministry ignored the fact that the Argitchi River is a spawning site for endemic fish species, while the government annually spends significant funds from the budget to recover their population. Lake Sevan is under the protection of Nature Protection Ministry, while the Argitchi River is a part of its ecosystem, and is a specially protected area, “Sevan” National Park, protected by RA Law “On Lake Sevan”, which bans any processing activity in the drainage basin affecting the lake ecosystem and biodiversity.

The violations not stopped by any party resulted in heavy consequences: two breakdowns occurred when testing Argitchi SHPP.

Case Study 12

EcoLur has received an alarm signal from Gegharkounik Region. Barley crops have been destroyed because of the broken pipes of Argitchi SHPP in Verin Getashen Village. It's already the second case of such breakdown within two month, and the SHPP is developed by

“Hydrocorporation” LLC. The breakdown of pipes first occurred on 18 July and the water washed away the crop of potato.

“...This SHPP is like the sword of Damocles hanging over our heads. Those villagers, who haven’t left Armenia yet and wanted to work in their country, have already packed their suitcases to leave it...Somebody decided and changed the riverbed and laid low-quality pipes and flooded the fields...While these crops were the only income for poor peasants, which have been flooded by the water...But nobody has reacted so far, either the government, or the company, or the local administration, though this SHPP is like a bomb for us...” Verin Getashen villagers wrote (<http://ecolur.org/en/news/water/signal-alarm-from-gegharkounik-region-again-argitvhi-shpp-pipes-broke/5273/>)

Now Argitchi HPP is submitted for the funding to German KfW Development Bank.

KfW German Development finances the construction of SHPs in Armenia in the frames of “Promotion to Renewable Energy” program. This is a purely financial agreement and its sources are laid down in “On Financial Cooperation” bilateral agreement concluded in 2004. The sum of the first loan agreement made up 6 million Euros, that of the second agreement - 18 million Euros (2010). The amount of the third agreement concluded in 2012 made up 40 million Euros. The mediator in the allotment of funds is German-Armenian Fund, and its map (<http://gaf-re-shpp.am>) shows SHPPs constructed with the financial means of the Fund, as well as SHPPs pending for funding, which also includes SHPPs already in the process construction or accomplished on the Yeghegis River and its tributaries in Yeghegis Gorge. Yeghegis reserve is a habitat and migration corridor for IUCN red-listed animals, such as bezoar goat, Armenian moufflon and even Caucasian leopard. Its landscapes are also unique. With the support of WWF an observation site for red-listed animals have been constructed for the purpose of developing ecotourism.

Case study 13

“Yegheg” SH received the positive opinion of the environmental expertise in 2010. Nevertheless, this SHPP wasn’t constructed. Its construction was launched in 2012 on the Yeghegis river, in the territory of Shatin Village, Vayots Dzor Region. The villagers collected 300 signatures against the SHPP and sent it to the administration of Vayots Dzor Region. Nature Protection Ministry promised to turn down the project. The construction is stopped for a while.

“We opposed to it, blocked the road, but they set the whole village against each other. If we oppose to each other, it turns out the villagers oppose to each other...They exploited the people as Judah and partitioned the village...

- The only solution turns out to leave the village and to leave everything... The villagers have applied to the Ombudsman, its representation in Yeghegnadzor. ‘The main thing was not having any public hearings. We had only one public hearing and during these hearings the village voted against. Nevertheless, it didn’t result in turning down the project. Shatin Village Head replied he couldn’t find any funds to hold another public hearing and to reveal the village opinion... There were physical clashes in the village, sometimes the police try to warn, but the situation hasn’t calmed down so far...’ said Lusine Martirosyan, representative of Human Rights Defender’s Office in Yeghegnadzor. <http://ecolur.org/en/news/water/shatin-even-half-an-hour-didnt-pass-when-road-was-blocked-blood-may-be-shed/4830/>.

KfW is considering the option to fund Daranak SHPP, the construction of which has already been launched in the buffer zone of Sevan National Park.

Case Study 14

The SHPP project on Daranak River, a part of the drainage basin of Lake Sevan, may destroy the ecosystem of the Daranak River. The regime of Lake Sevan (Nationality Park “Lake Sevan”) drainage system is regulated with Law RA “On Lake Sevan”, RA Law “On Special Protected Nature Areas”. The experts of the environmental expertise of Nature Protection Ministry make a reference not to the laws itself, but to a bylaw – governmental decision 927 dated on 30 June 2011, which says the sanitary flow is determined with the minimum drain within last 10 days. In this case, the sanitary flow of the water will make up only 0.013 liters per second and 0.007 liters per second, i.e. the Daranak River will be left without any water in the range of 1/3 of its length. (<http://www.ecolur.org/en/news/water/governmental-decision-higher-for-environmental-expertise-than-environmental-laws/4596/>).

In 2012 Austrian “Energy Changes Projecten wicklung GmbH” Company attempted to get guarantees from Nature Protection Ministry for passing “Sedvi-1” and “Sedvi-2“ SHPPs in one package in the frames of CDM through MCCF. The attempt failed. But the precedent itself caused deep concerns that business initiates to put forward its interests in package format, several SHPPs at once. While development banks support such an initiative, which openly contradicts to the principles of social and environmental responsibility.

The public announced about the need to stop the process of SHPP construction, unless the assessment of environmental and social consequences of already-constructed SHPPs are carried out. The policy of renewable energy also needs to be reviewed based on the criteria of sustainable use of water resources and based on the needs of the country and the civil society.

The criteria of sustainability for renewable energy proposed to EBRD by CEE Bankwatch Network comprise a part of the bank’s social and environmental responsibility policy.

I Strategic planning of hydropower development

1. A national energy strategy should be in place and be subject to a Strategic Environmental Impact Assessment (SEA) procedure in line with the EU Strategic Impact Assessment Directive (SEA Directive), where a needs assessment, demand management and assessment of various alternatives for satisfying energy needs is given thorough importance. Rehabilitation and increased efficiency of existing HPPs has to be given priority before new project development;
2. River basin management plans should be in place and be subject to strategic environmental assessment (SEA);
3. Small hydropower may be developed on not more than 30-50 percent of rivers in a catchment area. Determination of the exact boundary must be subject to prior assessment during the preparation of river basin management plans and their strategic environmental assessment;
4. Based on strategic environmental assessment of the river basin management plans, “no go zones” should be created where implementation of any hydro project will be prohibited. ‘No go zones’ should include river stretches located in IUCN categories I-IV and corresponding protected areas within national categorization systems, as well as river stretches located in areas with high conservation value/importance territories (eg. Upstream areas of rivers, riparian floodplains, intact (virgin) forests, mountainous wetlands, habitats of rare and endangered species and subspecies);

5. Classification of rivers and river stretches with respect to their potential appropriateness as locations for HPPs has to be conducted based not only on technical energy potential, but also based on ecological and landscape value. Water body status has to be determined (from high status to heavily modified) in order to define sufficient environmental flows downstream from the water intake. Maintaining of an environmental flow in the river (rather than minimal sanitary flow) is necessary to ensure that river in ecosystems, climate change adaptation potential and the livelihoods of people depending on them are sustained

II Project level criteria

1. Project development should be based on timely and informed public participation procedures in which affected communities and other stakeholders including civil society groups are proactively consulted (not only informed), where their views properly taken into account and consent of the affected communities is obtained for the project development. Compensation measures for affected communities have to be mutually agreed and be legally enforceable.

2. In the case of derivative HPPs, based on the status of the river determined as the result of classification (see p.5 above), either a complex or simplified holistic methodology must be used to determine environmental flow;

3. Affected community livelihood needs (water, plants, animals, recreation etc.) are assessed and sufficiently provided for during project construction and operation; Impacts on water ecosystems (including on lakes, estuaries and other water bodies or their elements downstream) and climate are assessed and prevented/mitigated during the project construction and operation.

4. The project must not involve construction of any dam that affects the water flow regime and wildlife circulation, therefore any project must:

- Not involve any dam that blocks the river flow entirely;
- Not derogate the current status of the river;
- Not derogate the ecological services /functions of the river including wildlife reproduction, climate change adaptation potential, erosion protection and sedimentation;
- Not involve artificial mitigation like fish ladders and/or fish friendly turbines as these have been proven to be ineffective measures;
- Not involve any physical and large scale economic resettlement that will have a significant negative impact on livelihoods of the affected communities

- Should be integrated into the existing landscape in a way that it does not cause significant visible changes or disrupt wildlife movement;
- Have a significant positive climate change impact or impact on a river's capacity to serve climate adaptation.

We also think that the responsibility of each party taking part in the process of SHPP development should be determined, including that of the government, business, developers, local administrations and financial institutions. The policy of energy safety should be reviewed based on the needs of the country and the civil society, and only afterwards to adopt a new concept of developing energy sector. In our opinion, the development banks may factually help in this regard providing an opportunity to work out and introduce the best standards and practices on the management of natural resources, protection of human rights to the land, where they live, to the water they use and to the wildlife which is a universal property.