

Dariali Energy HPP
Annual Environmental and Social Performance Report

Performance Requirement 1

1. Period covered by this report: 1 April, 2016 to 25 March, 2017

2. Environmental and social management system and management plans:
 - a. Were any changes made to the ESMS, occupational health and safety plan, waste management plan, or other plans with environmental or social requirements? Yes / No
Yes
 - b. If yes, please describe what was changed and summarize the changes:
The following plans were submitted and approved:
 - Waste management plan; Stakeholder Engagement Plan; Reinstatement Plan
 - Health and Safety Management plan- in process, major work is done, will be submitted soon
 - 2016 Blue Rivers report included additional actions for BAP

3. Compliance with government requirements
 - a. Were there any government inspections related to environmental, safety, or social issues? If yes, describe any findings of noncompliance and any enforcement actions taken.
There were no government inspections related to environmental, safety, or social issues.
 - b. Did Dariali Energy violate any permit conditions or other government regulations or requirements? If yes, describe the instances of noncompliance and actions taken by Dariali Energy.

No

Performance Requirement 2

4. Employment

a. Employment data

Category	Total	
	Male	Femal
Number of employees (incl. Tbilisi office)	46	8
Number of professional employees	8	
New hires (incl. Tbilisi office)	35	7
Number living in DE accommodations	24	
Number workers leaving/terminated (see 4.b below)	1 (personal statement)	

b. If workers were fired (that is, terminated for cause), describe the reason(s): n/a

5. Safety (see item 4 for training): Report on quarterly and annual basis

	Total hours worked	Total	Lost-time injuries	Amount of lost time (days) due to injury/incident
A	This period 29.12.16-25.03.17	22,636	0	0
B	Since last lost-time injury	0	0	0
C	Since commissioning (unit 1)	0	0	0

Note: a "Lost-time injury" is an injury sustained *at work* by an employee that leads to the loss of productive work time in the form of worker delays or absenteeism of at least one shift

d. For each lost-time injury this period, please provide the following information:					
<i>Date</i>	<i>Injury or illness</i>	<i>Cause (if accident, describe)</i>	<i>Type treatment provided?</i>	<i>Number of hours/days off work?</i>	<i>Investigation completed? (Yes/No)</i>
29.12.16- 20.03.17	0	0	0	0	

c. Describe changes in activities or practices made as a result of investigations into accidents or injuries:

d. How many formal inspections of safety conditions and PPE usage were conducted by the HSE manager during the period? 29.12.16-20.03.17

Provide dates, summary of major deficiencies identified, actions taken, and current conditions.
12.01.17; 26.01.17; 09.02.17; 23.02.17; 09.03.17; 20.03.17

HSE manager conducted formal inspections once in two weeks.

Deficiencies: 3 workers were without safety helmet;

2 workers were without safety boots;

Reprimand was issued to workers;

Currently PPE usage is ensured by all workers

e. Investments: List any major improvements this period in safety equipment, safety conditions, PPE usage, or other safety-related conditions:

Fire safety system, trash bins installed; Spring uniforms are ordered: rubber boots, 180 safety helmets, 180 vests, 10 safety boots, rainwear uniforms.

6. Worker grievances/complaints

a. Grievances received this period and unresolved grievances from previous period(s)

Environmental and Social Report for [period]

<i>Date received</i>	<i>How received? (box, email, person, etc.)</i>	<i>Complaint summary</i>	<i>Person assigned to handle</i>	<i>Date of resolution</i>	<i>Resolution summary</i>	<i>Resolution accepted by complainant? (Y/N)</i>
29.12.16-25.03.17	0					

- b. For grievances unresolved after 30 days, please provide reasons no resolution has been reached and what efforts have been made to resolve)

7. Training

- a. Provide details on training given during the period, including emergency drills:

<i>Session</i>	<i>Name of trainer</i>	<i>Type of training (induction, safety, traffic, etc.)</i>	<i>Number of workers trained</i>	<i>Materials attached (Y/N)</i>
Training session 1 (session name or subject)	T. Rusishvili	Safety (technical) rules	46	N
Training session 2	T. Rusishvili	Technical operating rules	46	N
...	T. Rusishvili	Fire safety	46	
	T. Rusishvili	First aid	46	
Attach training materials for each session, or cover page only if over 10 pages long				

- b. Total number of workers receiving training related to safety this period? 46

c.

- d. Percentage of new hires (this period) who received general induction training? 46

- e. Percentage of new hires who received job-specific safety training? 100 % _____

8. Worker accommodations

- a. How many inspections of worker accommodations were made by the HSE manager or others during the period? 3

- b. Provide dates of partial and complete inspections, if any:

Complete inspections: 25.01.17; 24.02.17; 24.03.17

Issues fixed:

Repaired the floor;

Room locker (3 times);

Curtain rods fixed (4 times);

Lightning fixed (2 times);

Lightbulb fixed (4 times);

Added heating device (3 times)

c. Did accommodations generally meet the requirements of *Workers' accommodation: processes and standards* (September 2009)?

IF not, please provide details (inspection date, deficiencies identified, actions taken, current status):

Performance Requirement 3

9. Waste

a. Provide quantities of wastes generated and managed – use Georgian rules for waste types and management:

<i>Type of waste</i>	<i>Generated this period (kg)</i>	<i>Sent off-site (see 9.b)</i>	<i>Disposed on-site</i>	<i>Still stored on-site</i>
Nonhazardous solid waste	150	150	0	0
Used oil	0	0	0	0
Other hazardous waste	0	0	0	0

b. For wastes sent off-site, provide dates, haulers, disposal/treatment sites:

Waste is sent once a week, municipality waste vehicle, municipality landfill

c. How many inspections of fuel storage and waste management were made by the HSE manager during the period? Provide dates and findings of significant deficiencies/problems, actions taken, and current conditions.

Daily visual check. No significant deficiencies/problems, plastic bags were not in the trash bins (3 times), cigarette ends were not in the trash bins (5 times)

10. Spills

<i>Date</i>	<i>Material spilled</i>	<i>Amount (provide units)</i>	<i>Hazardous? (Y/N)</i>	<i>Was river contaminated?</i>	<i>Describe cleanup</i>	<i>Authorities notified?</i>
29.12.16-25.03.17	0	0	0	0	0	0

Performance Requirement 4

11. Were there any incidents involving trespassing on the site by a member of the public or other unauthorized person? If so, provide details (date, description of the trespass, location, resolution)
- Hunters entered the site territory, DE warned that they were on the project site and pointed the safe zone where they could safely walk.

12. Traffic accidents:

a. Were there any traffic accidents involving project vehicles or equipment during the period? If yes, provide details (dates, nature of accident/incident, injuries and/or damage, any actions taken)

No

b. Were there any traffic incidents involving non -project vehicles and/or pedestrians? If so, provide details (dates, nature of accident/incident, description of worker/non-worker injury and/or damage, any actions taken)

No

Performance Requirement 6

13. Environmental flows (Eflows)



Environmental flow
chart.xlsx

Please see detailed information in Environmental flow chart

	<i>Number of full days (if any)</i>	<i>Total number of hours (including on full days)</i>	<i>Percentage of total operating hours</i>
Zero turbines operating	1	53	2,4 %
One or more turbines operating		Turbine 1- 1058; Turbine 2- 400; Turbine 3- 697 Total- 2155 hours	97,6 %
Eflows (see note 1):			n/a
Less than 2.29m ³ /sec	0	0	0
Between 2.29m ³ /sec and 2.79m ³ /sec	92	2208	100 %

Notes:

Information above is for the period from 29.12.16 to 25.03.17

- Eflows are considered flows that are not diverted to the sand basin or pipeline and that pass through the fish pass or gates.
 - Flows between 2.29 and 2.79m³sec are within 10% of the required EFlow
-

14. Fish pass operation [Please see detailed information in Environmental flow chart](#)

Environmental flow
chart.xlsx

<i>Flows through fish pass (see note)</i>	<i>Number of full days (if any)</i>	<i>Total number of hours (including on full days)</i>	<i>Percentage of operating hours</i>
Between 0.6m ³ /sec and 0.8m ³ /sec	92	2208	100 %
No flow through fish pass	0	0	0
>0 but less than 0.6m ³ /sec	0	0	0
Over 0.8m ³ /sec	0	0	0
Note: Flows between 0.6 and 0.8m ³ sec are within about 15% of the required flow through the fish pass			

Note: Information above is for the period from 29.12.16 to 25.03.17

15. Include a graph showing average hourly and average daily flows through the intake, fish pass, and gates.

[Please see detailed information in Environmental flow chart](#)



Environmental flow
chart.xlsx

16. Fish monitoring

a. Was fish migration through the weir monitored this period? Yes / No.

Yes

b. Were invertebrates monitoring during this period? Yes/No

Yes

c. If yes, who conducted the monitoring?

d. If yes, what dates and hours?

11 - 16 August 2016 and 14 – 23 October 2016. There was 24-hour drift of invertebrates measured.



Aquatic
Biodiversity-Annual

e. Attach monitoring report

f. What were the total number of adult and juvenile trout that passed through the fish pass during the spring and fall migration seasons?

In spring it was not measured because the HPP was not operational so the fish could migrate by natural riverbed.

In autumn the surveys of the fish pass efficiency were conducted, but the total number of trout passing was not calculated as far as the station was still in commissioning state.

17. Implementation of Adaptive Management Plan recommendations. Note that some measures may be for only the March 2017 report, with further requirements to be specified in Blue Rivers December 2016 report.

a. Measure 1: from October to March and after high sediment events, check sediments at end of sand basin chambers twice per day, clean out when sediment reaches within 40cm of threshold

The monitoring of the sediments were conducted in accordance to the O&M plan. Sediment level didn't reach the risk limit, therefore there was no necessity to clean out the sediment on the Headwork and Sediment basin.

b. Measure 2: Install and operate water level meters in fish pass and all gates (describe how flow rates are measured/estimated through all gates, including trash racks/basin basin.

Water discharge measurement device on the fishpass, Headwork and Sediment basin will be calibrated in April-May.

c. Measure 3: Sediment flushing at night. Describe time of sediment flushing events listed in item 21.b.
There was no Sediment flushing.

d. Measure 4: Operation of fish trap framework and search for suitable resistive counter. Describe when framework was used and the results of fish trapping.
Please see Blue Rivers report

e. Measure 5: Modifications of channel downstream of fish pass and weir, to a depth of up to 20cm, in advance of upstream migration (describe actions taken and time—see item 18)

Will be done after the flood season.

f. Measure 6: See items 13 and 14
Please see the Environmental flow chart

g. Measure 7: fish pass operation: see item 14.
Please see the Environmental flow chart

h. Measure 8.1.1A&B: fish monitoring -- see item 16.a
Please see Blue Rivers report

i. Measure 8.1.2A&B: invertebrate monitoring -- see item 16.b
Please see Blue Rivers report

j. Measure 8.2.1A&B: water level/depth/discharge monitoring during low-water season. Report results of monitoring
Please see the Environmental flow chart

k. Measure 8.2.2: channel monitoring during low-water season. Report results of monitoring
After the flooding season, the channel will be excavated monitoring will be performed accordingly.

l. Measure 8.2.3: fine and coarse sediment dynamics downstream of headworks. Report results of monitoring

There are no accumulated sediments, monitoring will be done in accordance to the O&M plan.

m. Measure 8.2.4: fish pass calibration. Report results.

Will be done in April-May

n. Measure 9: training of local staff. Report results and future plans.

Please see the information regarding the local staff training in Blue Rivers report. Currently DE is looking for the specialist to attend the training with Blue Rivers in April.

18. Was the channel immediately downstream of the weir modified during the period to maintain a channel suitable for upstream and downstream fish passage? Describe dates and actions taken, and configuration of the channel when complete.

The channel was not modified.

19. Implementation of Reinstatement Plan recommendations

Please see detailed information in the updated Reinstatement



Dariali HPP
Reinstatement Plan

plan

- a. Are there any areas where slopes were stabilized during this period, or need to be stabilized? If yes, provide information on location, approximate square meters, actions taken to stabilize to date, and actions yet to be taken (and when scheduled).
- b. Describe actions taken to implement the reinstatement plan: locations and actions taken to stabilize slopes, replace topsoil, establish revegetation, etc.
- c. Please estimate the percent vegetation ground cover on corridor, including uphill and downhill slopes:

20. Implementation of Terrestrial Biodiversity Action Plan recommendations:

- a. Describe any training or other actions taken to reduce/discourage hunting and poaching of birds and animals.
HSE Manager will spend 2 minutes on next Safety Training to reduce/discourage hunting and poaching of birds and animals
- b. Describe placement of platforms and boxes for bird nesting, and whether birds were observed using any of them.
There were no placement of platforms and no birds observations yet. DE has ordered 5 platforms and 5 boxes for bird nesting for the observations.

21. Sand trap flushing

- a. Was sand flushed out of sand basin this period?
No
- b. If yes, please describe dates and approximate amounts of sand
No
- c. Did sand block the main channel? If yes, what actions were taken to clear?
No

Performance Requirement 10

22. Stakeholder grievances/complaints

- a. Grievances received this period and unresolved grievances from previous period(s)
There were no grievances received.

<i>Date received</i>	<i>How received? (box, email, person, etc.)</i>	<i>Complaint summary</i>	<i>Person assigned to handle</i>	<i>Date of resolution</i>	<i>Resolution summary</i>	<i>Resolution accepted by complainant? (Y/N)</i>

b. For grievances unresolved after 30 days, please provide reasons no resolution has been reached and what efforts have been made to resolve)

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3. Describe significant outreach to local and other stakeholders this period (date, stakeholder(s), purpose of meeting/outreach)

There were no significant outreach to local and other stakeholders this period.

24. Was the project covered by the press during this period?

The project was not covered by the press during this period

c. If yes, please provide this information:

<i>Date</i>	<i>Media (TV/radio station, newspaper, etc.)</i>	<i>Summary of coverage</i>

25. Did Dariali Energy issue any press releases? If so, provide copies (and translations).

Press release regarding the mudflow:

<http://darialienergy.ge/en/mudflow-in-devdoraki-gorge/69>

Press release regarding the demonstration of the best environmental practice:

<http://darialienergy.ge/en/dariali-hpp-demonstrating-best-environmental-practice/70>