

# SOCIALCARBON REPORT

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## ATTACHMENTS

## 1. Identifying the Project

### Basic Information

#### Indicators

<b>Project Name</b>	Boyabat Hydroelectric Power Plant
<b>Year-Point of Project</b>	<i>Zero (2014)</i>
<b>Monitoring period (SOCIALCARBON)</b>	<i>29.November 2012 to 31.Temmu 2014 (Both Days Inclusive)</i>
<b>Version + Date of report completion</b>	<i>2.00 -31 August 2014</i>
<b>Corresponding Monitoring Report (Carbon Accounting Standard)</b>	<i>29.November 2012 to 31.Temmu 2014 (Both Days Inclusive)</i>
<b>Location</b>	<i>Sinop, Boyabat</i>

### Identifying the Project Developer

<b>Name</b>	Dr. Aslı Sezer Özçelik Ekobil Environmental Services and Consulting Ltd.
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### Identifying the Project Proponent

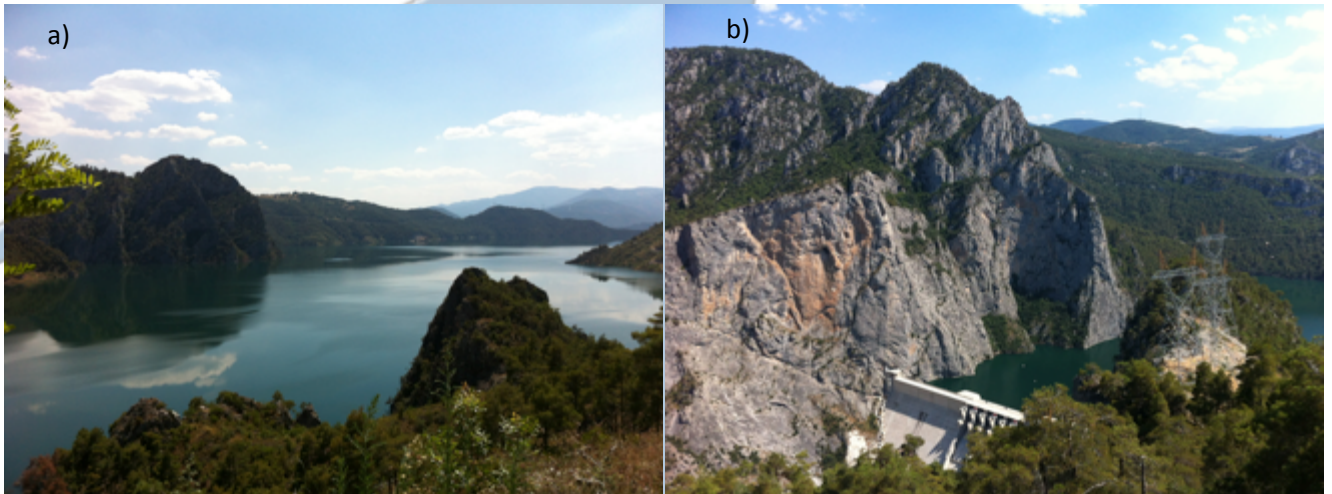
<b>Name</b>	Tuba Başacı Bilhan BOYABAT ELEKTRİK ÜRETİM VE TİCARET A.Ş.
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## 2. Project Details

### 2.1. Summary Description of Project

Boyabat Hydro Electric Power Plant (HPP) is a dam type HPP. It has an installed capacity of 513 MWe. This total electric capacity is reached via three vertical shaft Francis turbines with a nominal output of 171 MWe each. The Project Activity is constructed over the longest (1355 km) river of Turkey, the Kızılırmak river. The project is constructed as the third project counting from the source of the Kızılırmak river.

The following are pictures from the project activity (See Figure 1 a and b), first picture (Figure 1 a) is a view of the reservoir lake and the second picture (Figure 1 b) is the view of the concrete gravity dam that barriers the waters of the Kızılırmak



river.

Figure 1: View from the project activity, a) General view of the reservoir lake, b) general view of the concrete gravity dam.

The main technical characteristics of the project activity and the general properties of the facilities are provided below (Source: Feasibility Study Report) (Table 1):

Table 1: General properties of the project facilities

<b>Characteristics of the Reservoir</b>	
Max Water Level	335 m
Min Water Level	305 m
Active Volume	1,410,000,000 m <sup>3</sup>
Dead Volume	2,147,000,000 m <sup>3</sup>
Total Volume	3,557,000,000 m <sup>3</sup>
Area of the Lake	65,400,000 m <sup>2</sup>
Length of the Lake	60 km
<b>Characteristics of the Dam Body</b>	
Dam Location	10 km SW of Durağan town centre over the Kızılırmak river
Dam Type	Concrete Gravity Dam
Height from Base	195 m
Height from River Base	147 m
Crest Elevation	335 m

Volume of the Body	2,300,000 m <sup>3</sup>
Crest Width	10 m
Crest Length	262m
Thalweg Elevation	147 m
<b>Characteristics of the Spillway</b>	
Spillway Type	Concrete Gravity Dam
Number of Units	6
Cover Height	13 m
Cover Width	10 m
Capacity	9,300 m <sup>3</sup> /sec
<b>Characteristics of the power station</b>	
Type	Semi-Underground
Width	22.5 m
Length	103 m
Annual Generation	1,500*10 <sup>6</sup> kWh
Firm Energy Generation	925*10 <sup>6</sup> kWh
Secondary Energy Generation	575*10 <sup>6</sup> kWh
<b>Characteristics of the Turbine and generator</b>	
Type of Turbine	Vertical Shaft Francis
Type of Generator	Vertical Shaft Synchronous Generator
Number	3
Installed Capacity	171 MW X 3
Effective Rated Head	122.5 m
Maximum Rated Discharge	157 m <sup>3</sup> /sec each

How the project activity will be operating, and the boundary of the project activity (indicated in broken red line) is outlined in the following figure (Figure 2).

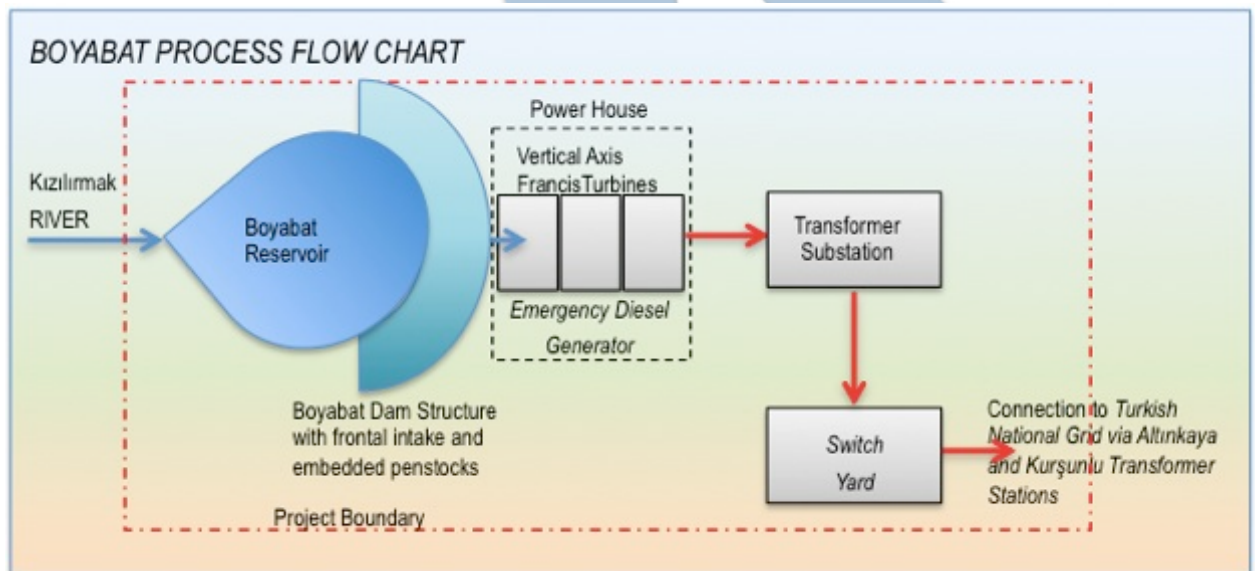


Figure 2: Flow chart showing the basic operational principles of the project activity, and the project boundary.

Some important and significant dates in the project history can be listed as shown in the following table (Table 2):

Table 2: Major project milestones

Date	Milestone	Reference
01/07/07	Feasibility Study Report	FSR 2007
25/10/07	Water Usage Agreement	Signed Agreement
13/11/07	Electricity Production License granted for the project	License numbered EÜ1374-3/992
24/03/08	The Project is officially exempted from the EIA process	EIA Exemptions Letter
01/05/08	Construction Worksite Opening Permit Accrued	NHS records
01/06/08	Expropriation process started	Summary of the expropriation process
28/11/08 <sup>1</sup>	Construction Contract Signed	Contract
31/08/09	Financial Closure	Signed Loan agreement
22/03/10	Hydro mechanical Equipment Procurement Contract	Contract
12/10/10	EMRA extended the construction period	EMRA Communication
22/11/12	DSI Substantial acceptance provision issued	DSI Protocol
29/11/12	The Unit 1-2 and 3 was commissioned	Substantial operation protocol

During this monitoring period the project activity is observed to export 1,097,277.709 MWh of Electricity to the host country grid, and imported 4,390.075 MWh of electricity. AS a result the project is observed to create 561,744 tonnes of baseline emissions and 98,755 tones of Project emissions, thus a net amount of 462,989 tonnes of GHG emissions are produced by the project activity during this monitoring period

## 2.2. Project Location

The host party is the Republic of Turkey<sup>2</sup>.

The Project is located at the Central Black Sea Geographical Region/ Sinop Province.

The following are the coordinates of the four random points from around project area

	Latitude:	Longitude
Dam Body	41° 20.316' N	35° 0.068' E

<sup>1</sup> The signing of the construction contract is highlighted in this table as this date is considered as the investment decision date.

<sup>2</sup> The host country Turkey is an Annex 1 country under UNFCCC, and a party to Kyoto protocol without a binding emission reduction target. For more detail please visit : <http://www.mfa.gov.tr/united-nations-framework-convention-on-climate-change-unfccc-and-the-kyoto-protocol.en.mfa>

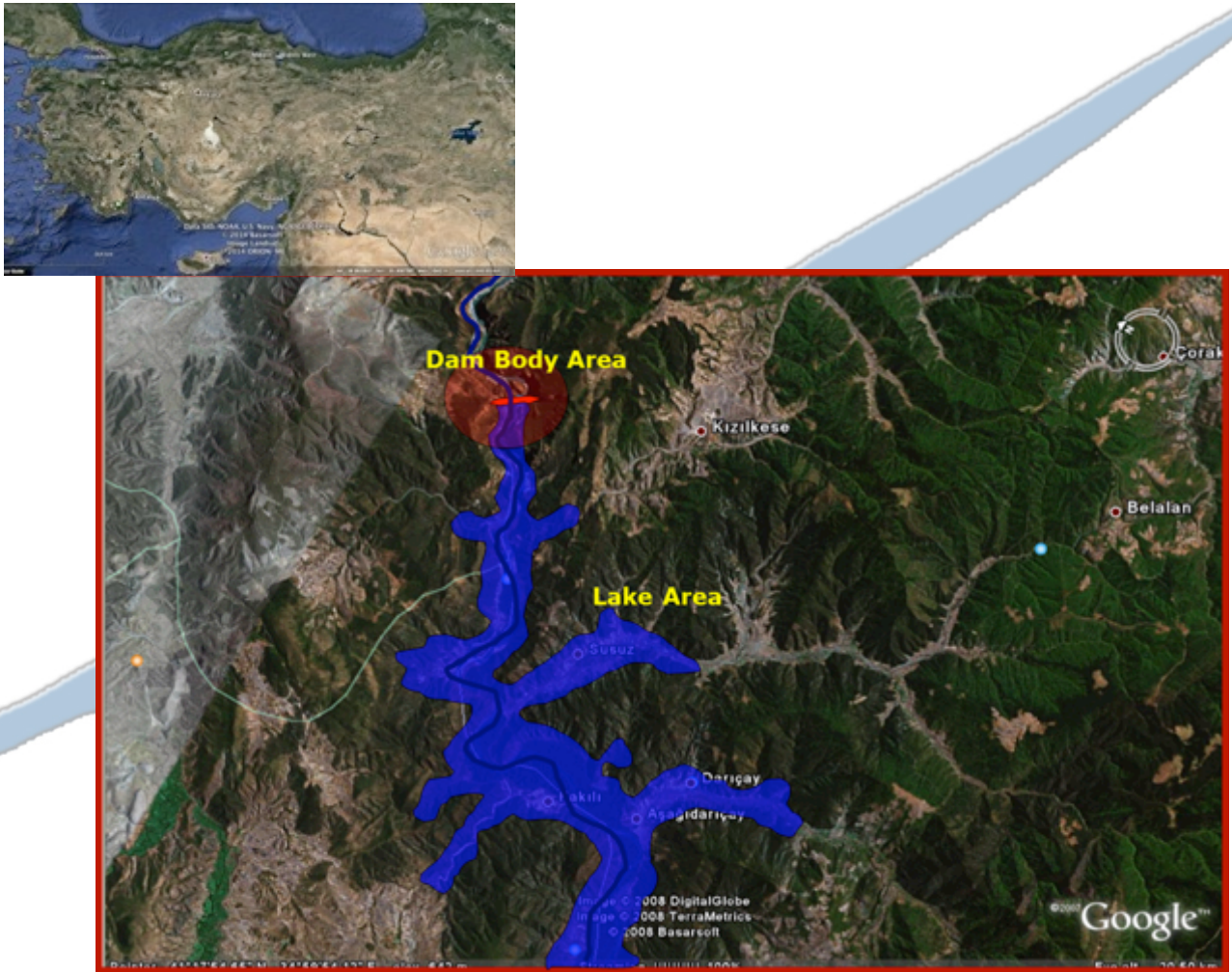


Figure 3: Google Earth image showing the exact project location within Turkey.

### 3. Method of applying SOCIALCARBON Methodology

#### 3.1. Social, economic and environmental impacts of the emission reductions project

Since the project has a history that goes back to 1958 and since it once was a Built Operate and Transfer type project, the Boyabat HPP project is excepted from conducting an EIA (Environmental Impact Assessment) due to BOT grandfathering. Accordingly an EIA Exempt Certificate is granted to the project, by Environment and Forestry Ministry on March 24, 2008.

Even though the project was exempt from undergoing a systematic and full EIA process the project complied with all the relevant environmental regulations and acquired all the necessary permits some of which can be listed as follows (Table 3):

Table 3: List of the permits granted to the project activity by various host country authorities.

Permit	Date Issued	Valid Until	Issued by
Water Usage Right Agreement	25/07/07	31/10/56	DSİ
Generation License	13/11/07	31/10/56	Granted by EMRA
EIA Exemption Certificate	24/03/08	N/A	Granted by the Ministry of Environment and Forestry
Forestry Permit for the Vezirköprü-Çorum-Kargı region	16/09/08	13/11/56	Amasya Regional Directorate of Forestry
Forestry Permit for Boyabat and Durağan regions	16/09/08	13/11/56	Sinop Regional Directorate of Forestry
Purchase, store and utilization permit for explosives	22/12/08	N/A	Sinop Governorship on behalf of Ministry of Internal Affairs
Permit to store explosives	26/01/09	N/A	Sinop Governorship on behalf of Ministry of Internal Affairs
Construction Permits	23/03/09	N/A	Sinop Governorship
Earlier Waste water discharge permit	14/05/09	N/A	Sinop Province Local Representation of the Ministry of Environment and Forestry
Land use permit for purposes other than agriculture	14/05/09	N/A	Sinop Governance Provincial Directorate for Agriculture
Waste water discharge permit	31/01/11	31/01/16	Sinop Province Local Representation of the Ministry of Environment and Forestry
Permit to operate a facility	26/09/12	N/A	SPO of Sinop Governorship
Noise and vibration level evaluation report	02/11/12	N/A	third party report

Some possible environmental impacts during construction and operating phases that can be considered in general are listed as follows:

#### ***Air quality***

During construction phase some dust emissions could happen. But even the project is exempted from the EIA process during the construction and operation phases the project owner and its subcontractors complied with the provisions of "Regulations for Control of Air Pollution Caused by Industrial Facilities", announced in the Official Gazette No. 26236, dated 22/07/2006, during construction.

#### ***Noise***

Modelling the noise level of the powerhouse predicted that both day and night time noise levels around the nearest residential areas will be within the standards of the "Day and night noise limits for Rural Areas and Settlement Areas" in accordance with the Article 25 of the Regulations for Evaluation and Management of Environmental Noise announced in the Official Gazette No. 25862 on 01.07.2005. In addition to this the noise and aquatic reports for the Boyabat Power house revealed that the facility complies with the Ministry of Labor standards and regulations and except some zones where all the employees are obliged to wear ear protecting gears.

#### ***Water quality***

The project activity is not expected to have any effect on water quality. No pollution from any source will be emitted into the river from the operation of the plant. Hazardous Material and Waste Obtaining, handling and transportation of the benzene and oil that are used during construction will be done in accordance with the "Control of Hazardous Waste Directives" which were published in the Official Gazette number 25755 on March 14<sup>th</sup> 2005 and the "Control of Oil Wastes Directives" which were published in the Official Gazette number 25353 on January 21<sup>st</sup> 2004. All activities related to fuels and oils will be done in a drained area to

prevent leakage, and the drained excess fuels and oils will be transferred to waste treatment facilities.

Other hazardous waste materials such as used tires, used batteries, cables, paint, barrels, oil contaminated soil, oil preserving filters, etc., will be piled in a designated area on site temporarily in accordance with Control of Hazardous Waste Directive which was published in the Official Gazette dated March 14th, 2005 and numbered 25755 and will ultimately be transported to the nearest hazardous waste recycling or discharge plants. The project activity has an approved waste water handling and treatment plan as also substantiated by the waste water handling permit granted to the Boyabat HPP Project.

#### ***Social Impacts and Resettlement Issues***

Since the reservoir lake of the Boyabat HPP covers very large areas, there are many settlements that were effected from the project. However as the project was started in early 1950s the villagers were aware that they would be obliged to be relocated. As a result some migrated before the project have ever started to be finally built in 2007. Those that have stayed have been informed by EMRA, and both local authorities, local inhabitants, the project owner and government parties have been involved actively with the process of relocating the effected people.

Briefly, the process started by informing the citizens and then some agreed and sold their properties, some disagreed and went to the local court to get more amount of compensation money. There were also cases where an entire village had to be relocated. In that case both the project owning company and the host country government authorities helped the citizens by various mechanisms that prevented the effected people to spend the compensation money and allowed them even to borrow money from the government so that they could obtain a better property or house where they would continue their life without compromising their original living standards and in some cases helped them improve those standards.

### **3.2. Method used for obtaining information**

For the preparation of this report the “Approved Indicators for Hydroelectric Power Plants Version 4.1, June 2011” is being used. The indicators used are same as the original approved version, with the exception of indicator “APP (Permanent Protected Areas) and Legal Reservation” under the Biodiversity resource. This indicator was excluded, because as can be seen from the location map and as can be tracked down from the AAP database of TURKEY, was also indicated in the 3<sup>rd</sup> party prepared project presentation file, there are no Permanently Protected Areas around the project vicinity and therefore this indicator is not applicable. Also the indicator related to technology transfer is excluded as there is no technology transfer aspect of the project. Therefore the indicators used for this project are referred to as “the Hydroelectric Power Plants Version 4.1 Indicators Adapted for the Boyabat HPP Project”.

The data collected to evaluate the above mentioned indicators are collected via semi-structured interviews with stake holders that are listed below in section 3.3, via site visits and via telephone call interviews.

### 3.3. Actors involved

The individuals that have been contacted to collect information have been selected from amongst the stakeholders of the project. The below listed people have been contacted taking into account their relation to either the project itself or their relation to the location of the project. The following table provides a list of the individuals involved in the diagnostics, with their job/title and an explanation of why they were chosen. The below individuals have been contacted and communicated between May 29<sup>th</sup> -June 1<sup>st</sup>, 2014, during a site visit.

Name	Contact Info	Job/Title	Reason Involved
Mahfuz Kaplan	Boyabat Elektrik Üretim ve Ticaret A. Ş. Boyabat Barajı ve HES Tesisleri Durağan - SİNOP Tel: + 90 (368) 427 10 84 Fax: + 90 (368) 427 10 89 E-mail: mkaplan@boyabatelektrik.com.tr	Power Plant Manager	To obtain information on Stake holder relationships, Human Resources, and technical aspects of the project.
Tuba Başacı Bilhan	BOYABAT ELEKTRİK ÜRETİM VE TİCARET A.Ş. Cumhuriyet Caddesi Gürsel Plaza No:123 Kat:3 Kavacık/Beykoz/İstanbul-Turkey +90216 537 81 41 tbasacar@boyabatelektrik.com.tr	Project Finance and Budget Control Manager	To obtain information about Financial Resources, Project history and Environmental resources
Ümit Dönmez	BOYABAT ELEKTRİK ÜRETİM VE TİCARET A.Ş. udonmez@boyabatelektrik.com.tr	Samsun Public Relations office Director	Information regarding expropriation issues and procedures.
Halil İbrahim Yavuz	DSI -District Manager for Hydroelectric Energy. T:+90 362 230 79 00	Civil Engineer	To obtain information about Water Usage issues, permits and acceptance of the project
Osman Karakişi	DSI -Department of Energy T:+90 362 437 17 83	Civil Engineer	To obtain information about Water Usage issues, permits and acceptance of the project
İshak Aksoy	Aşıkbüğü Village	Headman to Aşıkbüğü Village	To obtain information about Environmental permits, legal complaints and general acceptance of the project.
İsmail Çil	Aşağı Zeytin Village	Headman to Aşağı Zeytin Village	To obtain information about stakeholder involvement, expropriation, human resources and social resources.
Fikret Aksoy	Aşıkbüğü Village	Opinion leader	To obtain information about stakeholder involvement, expropriation, human resources and social resources.
Şaban Aksoy	Pelitçik Village	Opinion leader	To obtain information about stakeholder involvement, expropriation, human

			resources and social resources.
Nuran Emir	Ministry of Environment and Urban Planning, Samsun District , Constructions Division	Topographical Engineer	Information regarding expropriation issues and procedures.
Murat Çalışgan	General Directorate of Forestry, Kastamonu Regional Directorate-Durağan District Forest Operation Directorate T:+903684161007 F:+903684161899	Forest Engineer	To obtain information about the general acceptance of the project, forestry related issues and issues related to the management of the marginal areas.
Melike Demirboğa	Boyabat Elektrik Üretim ve Ticaret A. Ş. Boyabat Barajı ve HES Tesisleri Durağan - SİNOP Tel: + 90 (368) 427 10 84 Fax: + 90 (368) 427 10 89	Plant Manager's Assistant	To obtain information about human resources
Fevzi Topçu	Boyabat Elektrik Üretim ve Ticaret A. Ş. Boyabat Barajı ve HES Tesisleri Durağan - SİNOP Tel: + 90 (368) 427 10 84 Fax: + 90 (368) 427 10 89	Chief Mechanical Engineer	To obtain information about human resources and general operation of the power plant
Mehmet Büyükgürel	Boyabat Elektrik Üretim ve Ticaret A. Ş. Boyabat Barajı ve HES Tesisleri Durağan - SİNOP Tel: + 90 (368) 427 10 84 Fax: + 90 (368) 427 10 89	Deputy Plant Manager	To obtain information about human resources general operation of the power plant
Muzaffer Gökçe	Boyabat Elektrik Üretim ve Ticaret A. Ş. Boyabat Barajı ve HES Tesisleri Durağan - SİNOP Tel: + 90 (368) 427 10 84 Fax: + 90 (368) 427 10 89	Office Boy	To obtain information about human resources and the acceptance of the local inhabitants towards the project
Abdurrahman Erkol	Boyabat Elektrik Üretim ve Ticaret A. Ş. Boyabat Barajı ve HES Tesisleri Durağan - SİNOP Tel: + 90 (368) 427 10 84 Fax: + 90 (368) 427 10 89	Administrative Affairs Manager	
Şerafettin Akçaoğlu	Boyabat Elektrik Üretim ve Ticaret A. Ş. Boyabat Barajı ve HES Tesisleri Durağan - SİNOP Tel: + 90 (368) 427 10 84 Fax: + 90 (368) 427 10 89	Head Security Officer	To obtain information about human resources

#### 4. Results

The results are presented by using the names of each indicator as they are demonstrated in the original “hydro indicators version 4.1”. The name, description of each indicator is given, the comments on present situation, the score of the indicator determined based on the present situation and the future target for the considered indication is also provided. The targets are tried to be kept to the most realistic level, in order not to increase expectation for the future. The achievability of some of these targets depends on the availability of the human and financial resources, whereas some of the targets are relatively easier to achieve since these are to improve the present situation by implementing a recording and reporting system.

##### 4.1. Social Resource

<i>Name of Indicator</i>	<i>Population Displacement</i>
<i>Description of Indicator</i>	Evaluates if the project requires people, activities or services to be displaced due to the implementation of the project, as well as the measures adopted during the planning and implementation stages, in order to minimize negative impacts or maximize positive impacts.
<i>Comments on present situation</i>	The project has undergone an extensive expropriation process that was conducted simultaneously with the project planning and construction. The project owner subcontracted an expertise company to determine the unit price of each type of lot, and declared this in a major meeting at the construction work site, in 2009. A small portion of the property owners agreed and applied to the company to sell their land, and the rest opened court cases. As of today, majority of the issues are solved related to the land use transition of these lots. A summary of this is provided as Annex 1 While the land use and compensation processes are carried out, there have been villages that needed to be relocated partially and entirely. The host country regulations requires the new areas to be inhabited to be as close as possible to the old one to decrease any social problems that may rise. The villagers together with the special provincial authorities and the project owner, are observed to be involved proactively to determine the new areas to be inhabited. This is also mentioned by the villagers we have talked. In the new settlement areas, since the area was built with modern standards the living standards of the citizens have improved compared to the old housings.
<i>Score of the Index</i>	5-Participatory Relocation Program, including negotiations with different actors (owners, public agencies, and civil society organizations).
<i>Future Targets</i>	No target assigned
<i>Name of Indicator</i>	<i>Communication With Stake Holders</i>
<i>Description of Indicator</i>	Evaluates the process for contacting stakeholders in the planning, implementation and operation stages.
<i>Comments on present situation</i>	There is a permanent and continuous dialogue between the Boyabat Hydroelectric Power Plant Management and the stakeholders, such as the local representations of the host country government’s offices, and the local inhabitants such as the villages that surround the reservoir lake. The government

officer's correspond with the project management both via the official letters and via the informal spontaneous calls in case of minor issues or emergency issues. The local inhabitants admitted that they were able to get in touch with the project management via either their communications office located at Samsun or via the mobile phone numbers that were provided to them.

<b>Score of the Index</b>	3. During the planning and operation stages, the entrepreneur has communication with the stakeholders.
<b>Future Targets</b>	The communication with stakeholders are very well structured but the scenarios described in levels 4, 5 and 6 does not represent the situation in the host country, therefore we target to implement further adapting this indicator to fit the host country scenarios.

<b>Name of Indicator</b>	<b>Acceptance</b>
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<b>Description of Indicator</b>	Evaluates the level of support or acceptance from the neighbouring population in regard to the project construction or management of the reservoir.
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<b>Comments on present situation</b>	The project was made known to the local inhabitants several decades ago (see the detailed snapshots of the project origins and history in the validated PDD), thus in a way the inhabitants were psychologically prepared that there would be an expropriation process and some villages would be sunken. As of present the project is accepted with its positive and negative impact but due to the size of the project, one cannot deny that it is impossible to satisfy every single individual affected from the project activity. Therefore one can say that due to the good practice and very positive relationships established by the project owner the local stakeholders are in general ok with the project but some opposition or discontent still exists. In addition to the testimonials from the village heads and opinion leaders, the Boyabat HPP have people recruited from the immediate vicinity especially from the Durağan Town, they mentioned that the people in their town were thinking that the project had a positive contribution to their region.
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<b>Score of the Index</b>	4- Support from local stakeholders, but some opposition still exists.
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<b>Future Targets</b>	No target assigned
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<b>Name of Indicator</b>	<b>Social Demands</b>
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<b>Description of Indicator</b>	Social Demands may be understood as institutional or civil society interests: demands made by institutions, agencies, NGOs, municipalities or other institutions which aim to improve the human development and/or the environment near the project. This item evaluates which social demands the entrepreneur addresses.
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<b>Comments on present situation</b>	During the site visit and in our conversations with the project owner we have seen that the project owner we have understood that the project management did help the local inhabitants during the transition stage where they were to loose their properties and move into their new settlements. In some cases the project have even helped the some families by contributing to the rent of their transitional homes. They helped the
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infrastructure of the new settlements and they have also contributed on by providing donations to the local city governorships, or to village budgets. As a result one can conclude that the project owner did help the local community by actions that is beyond their regulatory obligations. Some examples are renovation of an antique house, construction of the roads and infrastructure of the Kızılırmak Neighborhood, and construction of an animal shelter for Saraydüzü Municipality to manage the stray dogs and cats, and construction of a leisure building for Saraydüzü town, where three of the impacted villages citizens have resettled in the newly established Kızılırmak neighborhood that have better living standards compared to their old settlements. But is also revealed that despite these actions the village headmen still had some other demands, and the entrepreneur has no standardized approach to address these demands. (See Picture below)

<b>Score of the Indices</b>	4- The entrepreneur takes actions that surpass compulsory activities.
<b>Future Targets</b>	Draft a standard operating procedure to address and formulate how to address social demands.



<b>Name of Indicator</b>	<b>Social Programs</b>
<b>Description of Indicator</b>	Evaluates the quality and results of additional social programs, such as: <ul style="list-style-type: none"> <li>- Social and Environmental Communications Program</li> <li>- Community development / income generation</li> <li>- Ethnic integration (Not Applicable in this case)</li> <li>- Other social areas (women's involvement in family income generation)</li> </ul>
<b>Comments on present</b>	There are no social programs implemented at the local vicinity of

<i>situation</i>	the project activity.
<i>Score of the Indices</i>	1- No actions were taken.
<i>Future Targets</i>	Identify Social programs that can benefit majority of the local stakeholders.
<i>Name of Indicator</i>	<b>Social Benefits</b>
<i>Description of Indicator</i>	<p>Evaluates the additional benefits to local stakeholders, when these benefits are measurable or evident. These benefits may include:</p> <ul style="list-style-type: none"> <li>• Improvements in health system (new installations, enhanced water and electricity systems, support for health programs, and others)</li> <li>• Additional economic activities (industry, commerce, and others)</li> <li>• Improvements in the infrastructure (roads, energy provision, leisure spaces, and others)</li> </ul>
<i>Comments on present situation</i>	<p>The project owners have helped the building up of the infrastructure of many re-established villages, they have also helped them built new mosques, and areas that the communities benefited. In addition to that especially during the construction period the project provided jobs to many of the local inhabitants, that some of these people improved their skills and abilities. During this monitoring period, the project contributed to the local economy due to the flats rent by the staff of Boyabat Power plant whom a majority is residing in the Durağan town. Since the project staff is residing in the Durağan town, the buildings that were built for their settlement is planned to be left to the host country government to be used for other public purposes. One of the options is the use of these buildings as a semi-open prison, by the Ministry of Justice. In that case the co-benefit of such type of utilization will be a significant movement in the local economy due to visitors to the prison.</p>
<i>Score of the Index</i>	4-Project delivers benefits in more than one of the major areas to a limited number of local stakeholders.
<i>Future Targets</i>	Identify and implement more social benefit areas that can deliver benefits to a large number of people.

The rate of the critical indicators: 17 %  
 The rate of satisfactory indicators: 67 %  
 The rate of sustainable indicators: 17 %  
 The total of the 6 social indicators is: 21  
 The average score for the social resource is: 3.50 (Satisfactory)

**4.2. Human Resource**

<b>Name of Indicator</b>	<b>Human Resource Availability Capacity Building Initiatives</b>
<b>Description of Indicator</b>	Level of experience and capacity of people involved in the operation and maintenance of the project.
<b>Comments on present situation</b>	During the site visits, we have observed the Boyabat HPP operation team members were selected from amongst the very best in the host country. The plant manager admitted that it was not possible to find staff with specifications they required from the immediate vicinity of the project area. But there were people with security guardian certifications amongst the local inhabitants. So they encouraged their subcontractor responsible for the security affairs, to hire personnel from the immediate vicinity of the project sites. The project is providing jobs to a total of 57 people including the 18 subcontracted ISS -Security company staff that are selected from the local inhabitants.
<b>Score of the Index</b>	5- Operations and Maintenance: Employees of the project have experience and have participated in training or courses for intervals of one year or less.
<b>Future Targets</b>	No Target assigned

<b>Name of Indicator</b>	<b>Health &amp; Safety</b>
<b>Description of Indicator</b>	Evaluates if a comprehensive employee safety program is in place and its effectiveness can be demonstrated by the absence of life-threatening accidents
<b>Comments on present situation</b>	It is observed that the project has a proper health and safety system, where employees are provided regular health and safety trainings. In addition to this to ensure zero accidents and a safe work environment for the employees the project has a Third party OHSAS certification, attached as Annex-2 to this report.
<b>Score of the Index</b>	6- Existence of an Occupational Health and Safety Management System certified by a third party.
<b>Future Targets</b>	No Target Assigned

<b>Name of Indicator</b>	<b>Benefits</b>
<b>Description of Indicator</b>	<p><b>Evaluates existence of additional benefits to workers regarding the following:</b></p> <ul style="list-style-type: none"> <li>- Education (support for studies)</li> <li>- Health (medical and hospital assistance)</li> <li>- Retirement assistance</li> <li>- Other (leisure, sports, and meal vouchers, among others).</li> </ul> <p><i>In cases where the services for implementation, operation and maintenance are outsourced, the indicator evaluates the outsourced employees also.</i></p>
<b>Comments on present situation</b>	In our site visit we have interviewed all the employees of involved in the project activity and it is observed that they are all receiving benefits in 2 of the areas namely, free lunch or dinner (depending on the shift time), and free shuttle ride to work In addition to this all the employees except the

subcontracted security personnel, have private health insurance, and rental support on top of the free lunch/dinner and shuttle ride. The higher rank of engineers have car and mobile phone allowances. All employees mentioned that they were happy and they were feeling as part of a very nice project.

<b>Score of the Indice</b>	5-Benefits are offered to all employees involved in the project in to three of the areas.
<b>Future Targets</b>	Target: A regular survey to test employee satisfaction will be arranged.

<b>Name of Indicator</b>	<b>Involvement of Employees in the Project</b>
<b>Description of Indicator</b>	Evaluates internal communication process of the entrepreneur in relation to project emissions reductions.
<b>Comments on present situation</b>	During site visit we have observed that only the management was aware of the Climate Change related issues and the carbon Project. But other workers were not informed.
<b>Score of the Indice</b>	2- Only management and employees directly involved in the carbon project are aware.
<b>Future Targets</b>	Target: An in house training will be organized to inform all the employees about the carbon project.

The rate of the critical indicators: 25 %  
 The rate of satisfactory indicators: 0 %  
 The rate of sustainable indicators: 75 %  
 The total of the 4 Human Resources Related indicators is: 16  
 The average score for the Human Resource is: 4.50 (Sustainable)

#### 4.3. Financial Resource

<b>Name of Indicator</b>	<b>Economic Performance</b>
<b>Description of Indicator</b>	Evaluates if the economic performance of the project met the expectations of the shareholders and directors regarding, for example, goals for energy generation, stated periods for executing jobs, and operational and maintenance costs. It evaluates if the goals were met or if they did not meet the expectations for the given period.
<b>Comments on present situation</b>	The Boyabat HPP Operations and maintenance team is doing their best to optimize the project revenues. In our interview about the project's performance, the project Finance and budget manager admitted that they were achieving their goals. The project is producing under its full potential. (Please note annual expected production was 1,370,000 MWh but it realized as 870,500 MWh, but the project operations management tried their best to catch the best price in the market for the electricity they produced and they sold to an average price of approximately 0.11 USD/kWh, keeping the project within the expected project revenue range enough to pay the debts, this satisfied the shareholders).
<b>Score of the Indice</b>	3-Moderate Performance. Goals and expectations established

with shareholders have  
**Future Targets** Target: Improving the projects performance by 5%.

<b>Name of Indicator</b>	<b>Market</b>
<b>Description of Indicator</b>	Evaluates eligibility of credits to CDM Market or to other voluntary markets as well as their attractiveness to potential buyers.
<b>Comments on present situation</b>	The carbon asset of the project is developed considering the CDM rules and the project is validated to the Verified Carbon Standard and can only be sold to the offset buyers from the voluntary markets.
<b>Score of the Indice</b>	3. Project activities are eligible for the voluntary market.
<b>Future Targets</b>	No Target Assigned.

<b>Name of Indicator</b>	<b>Sale of Credits</b>
<b>Description of Indicator</b>	Evaluates uncertainties regarding the value of commercialized credits generated by the project
<b>Comments on present situation</b>	Since the carbon market is very unpredictable it is very difficult to make a guess weather the credits could be sold or not.
<b>Score of the Indice</b>	1-Uncertainties about the commercialization of the carbon credits for the period.
<b>Future Targets</b>	Target: Improve marketing efforts and find a suitable buyer for the tonnes to be issued.

The rate of the critical indicators: 33 %  
 The rate of satisfactory indicators: 67 %  
 The rate of sustainable indicators: 0 %  
 The total of the 3 financial indicators is: 7  
 The average score for the Human Resource is: 2.33 (Critical)

**4.4. Natural Resource**

<b>Name of Indicator</b>	<b>Sustainability Principles</b>
<b>Description of Indicator</b>	Evaluates the existence of specific policies and programs geared toward project sustainability and the applicability of the principles, values and objectives regarding sustainability.
<b>Comments on present situation</b>	The Boyabat Energy share holders have Sustainability commitments and reporting. As a result the Boyabat Energy is also involved in their annual surveys that measure sustainability related parameters. As a result one can admit that, the sustainability concept and principles are appreciated and practiced as environmental protection, improved working environments, in-house trainings and improving the quality of life in the vicinity of the project area. However, the concept is not very well understood among the project employee, and this is observed in the answers provided to the sustainability survey. Yet the establishment of the ISO 14001 Environmental quality system, and other quality standards is pushing the operations towards sustainable management ways and practices. Yet, this needs to be improved by specific trainings that address sustainability issues, and sustainability reporting and monitoring needs to be incorporated to the operations.
<b>Score of the Indice</b>	3- Incorporation of sustainability in the values, strategy and principles of the project owner.
<b>Future Targets</b>	Target: Organize a training session to explain sustainability concepts to the Boyabat HPP Personnel and assign parameters that will be monitored and improved by targets that will be reported in the next monitoring period.
<b>Name of Indicator</b>	<b>Environmental Management</b>
<b>Description of Indicator</b>	Evaluates environmental management procedures adopted by the project, including organization, coordination of actions, and documentation of impacts identification, monitoring, and periodic emissions reporting, as well as existence of regular certification.
<b>Comments on present situation</b>	The project is implementing an environmental management system that is certified by a third party. The certification is presented as Annex 2.
<b>Score of the Indice</b>	6-Certified environmental management system.
<b>Future Targets</b>	Target: No target Assigned
<b>Name of Indicator</b>	<b>Environmental Legislation</b>
<b>Description of Indicator</b>	Evaluates accordance of the project with environmental laws and norms, including agreements with public authorities, such as environmental licenses, requested authorizations for installation, etc.
<b>Comments on present situation</b>	The project complies with the Turkish environmental regulations and rules. All the environmental permits and licenses are valid and up to date. Some of these permits are provided to the validating DOE, a list of the environmental permits are given on Annex 3.
<b>Score of the Indice</b>	5. Environmental licenses routinely issued; determined obligations are fulfilled.
<b>Future Targets</b>	No target assigned
<b>Name of Indicator</b>	<b>Legal Procedures</b>
<b>Description of Indicator</b>	Evaluates if the project was involved with any lawsuit or

	administrative sanctions executed by public organs, person or people, aiming the environment and human health protection or repair.
<b>Comments on present situation</b>	Although there are court cases going on related to the expropriation issues there are no court cases related to public health issues or environment. Considering that in case of such a law suit DSI and Forestry would be a party to this or would be informed, In our site visits we have asked the DSI officers, and the Forestry management officers, if there was such a legal case, and they have confirmed that there were no such case or any legally filed complain about the project.
<b>Score of the Indice</b>	6- The project did not suffer from public civil or judicial action or receive any warnings due to potential risk or effective damage to human health or the environment.
<b>Future Targets</b>	No target assigned

<b>Name of Indicator</b>	<b>Environmental Impacts</b>
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<b>Description of Indicator</b>	Evaluates magnitude of environmental impacts of the project, existence of environmental impact statements/studies, and maintenance of environmental evaluation procedures.
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<b>Comments on present situation</b>	The project has not undergone an Environmental Impact Assessment process, since it was initially designed by the host country government. Yet, there is a very ancient environmental impact assessment report prepared in year 1998. This 3 <sup>rd</sup> party report was prepared to the World Bank Standards. The report also outlines some generally common environmental impacts related to every hydroelectric power plant activity. In addition to this, since the financing institutions that have provided the loan are bound by the Ecuador principles the project activity regularly monitors environmental parameters such as the lifeline water, and other environmental issues via their environmental management system certified by a third party. During this monitoring stage, we have asked DSI if there were any issues related to the compliance of the project to the environmental rules and regulations. DSI reported that the project was in compliance with regulations and they visited the project site with a group of government officials and the project was observed to be ok. In addition to this the forestry department emphasized that the project mitigated the excavation damp site and forested that part by planting 50,000 young trees. (See picture on the right)
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<b>Score of the Indice</b>	4- Studies show high environmental impact, yet compensation and mitigation measures for such impacts are satisfactory (i.e. Efficient execution of environmental programs).
<b>Future Targets</b>	No Targets assigned

<b>Name of Indicator</b>	<b>Environmental Risk Management</b>
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<b>Description of Indicator</b>	Evaluates the definition, implementation and maintenance of
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	procedures relevant to potential emergencies and accidents related to the project, as well as those relevant to the preparation of answers for such situations, in case of emergency.
<b>Comments on present situation</b>	The project has a general and third party risk insurance and there is an established Environmental Risk Management plan, and the project staff is trained on how to implement this plan in case of an emergency.
<b>Score of the Indice</b>	5- Periodic evaluations of environmental risks are conducted. Environmental emergencies are documented and monitored.
<b>Future Targets</b>	No Target Assigned

<b>Name of Indicator</b>	<b>Reservoir and marginal areas management</b>
<b>Description of Indicator</b>	Measures the effectiveness of the Reservoir and marginal areas management, considering: a) existence of invasions in the marginal and adjacent areas and mitigation measures adopted b) existence of plan or program for use of the reservoir and surrounding areas, considering its coverage and efficacy for assurance of the planned uses.
<b>Comments on present situation</b>	The project is located in a rouged topography and therefore there are no excessive marginal areas, that can be invaded. However at the down stream parts of the project some local inhabitants try to grow rice at the places that are partially flooded. This part is outside the jurisdiction of Project management, and DSI is responsible to protect the illegal use of these areas.
<b>Score of the Indice</b>	3. There are no invasions or inadequate uses of project owner' areas around the reservoir.
<b>Future Targets</b>	Target: Develop a plan for the management of the reservoir and marginal areas.

<b>Name of Indicator</b>	<b>Erosion, landslides, silting and floods</b>
<b>Description of Indicator</b>	Evaluate the current stage of erosion and silting of the reservoir and if the operations are a major cause of the problem and the existence of programs to manage these risks, such as monitoring, and erosive processes control (ex: protection and reforestation programs for reservoir protection zone).
<b>Comments on present situation</b>	The project is located at a rugged topography, and there are rocks that may fall to the project structure, but they are secured to the main rock by steel wiring. It is also observed that the operations didn't cause much erosions or sedimentation due to the geographically favourable conditions. We have also noted that in the executive summary of the old EIA prepared in 1998, it is indicated that "At the dam site there are no formations that have a potential for landslides or slope collapses. Thus, it is not expected that construction activities would create any important slope stability problems and landslides".
<b>Score of the Indice</b>	4- Operations cause minimal or none on-going sedimentation or erosion problems in Reservoir or downstream areas.
<b>Future Targets</b>	Explore and develop programs to avoid mass flows in cooperation with the local inhabitants, forestry department and DSI.

<b>Name of Indicator</b>	<b>Water Resources</b>
<b>Description of Indicator</b>	Evaluate the current stage of water quality of the reservoir or downstream water and if the operations are a major cause of the problem and the existence of programs to manage these risks, such as monitoring data and measures of control implemented (ex: sewage treatment station eventually implemented in local

	communities due to construction of the hydroelectric plant, actions taken for sanitary vigilance, etc.).
<b>Comments on present situation</b>	The project has no negative impact on the water quality and quantity. The amount of lifeline water agreed to be released to the river is regularly monitored and continuously released by the project activity.
<b>Score of the Indice</b>	4. Operations either enhance or cause minimal deterioration to Reservoir or downstream water quality.
<b>Future Targets</b>	No Target Assigned.

The rate of the critical indicators: 0 %  
 The rate of satisfactory indicators: 44 %  
 The rate of sustainable indicators: 56 %  
 The total of the 9 natural resource indicators is: 41  
 The average score for the natural resource is: 4.55 (Sustainable)

#### 4.5. Biodiversity/Technology Resource

<b>Name of Indicator</b>	<b>Recovery of Degraded Areas</b>
<b>Description of Indicator</b>	Evaluates existence of reforestation projects in marginal areas of the reservoir, procedures for planting, maintenance, control measures and surveillance. It also evaluates extent of actions: limited legal obligations, areas of the company, riparian forest in the incremental basin, and so on.
<b>Comments on present situation</b>	During the construction phase, there were some areas that were disturbed during the construction of the Dam or other tunnels related to the project activity. These areas are being reclaimed. In addition to this within the project boundaries it is observed that the project owner have made improvements and landscaping activities but these are limited to project boundaries, that are already quite extensive.
<b>Score of the Indice</b>	4-Voluntary recovery of degraded areas but only in areas of project ownership.
<b>Future Targets</b>	Target: No Target Assigned

<b>Name of Indicator</b>	<b>Biodiversity Conservation</b>
<b>Description of Indicator</b>	Evaluates actions of biological monitoring developed in surrounding environmental areas and influence of the power plant; assesses specific programs developed for flora and fauna on the banks of the reservoir or in surrounding areas for conservation and research.
<b>Comments on present situation</b>	The project owner is safeguarding the project boundaries and watching for illegal hunters and fishers. This way they are supporting the local wildlife.
<b>Score of the Indice</b>	3-Limited to legal obligation.
<b>Future Targets</b>	Target: Coordinate with the forestry department and DSI to find ways of supporting local wildlife.

<b>Name of Indicator</b>	<b>Ichthyofauna</b>
<b>Description of Indicator</b>	Evaluates existence of procedures for monitoring the Ichthyofauna, partnerships for research, and management actions (restocking, culture in ponds, net)
<b>Comments on present situation</b>	The 1998 EIA study has detailed information about the aquatic

**situation**

life in the project area. As a baseline the study indicates that: “Eight species of freshwater fish were found in the study area, the most abundant of which was the barb (196 specimens), followed by siraz (16 specimens) and wels (9). Barb were found at all sampling stations throughout the project area and accounted for about 83% of the total number of fish captured. Most fish (approximately 30% of the total catch) were captured at the sampling Station 5, about 26 km upstream of the Boyabat Dam site All of these fish species are common in Turkey and can be observed in most catchment areas, rivers and lakes throughout the country. Suitable habitat exists over a wide geographical area in Turkey.” However, there no further studies related to fish populations in the area were performed, and the aquatic life is not monitored.

<b>Score of the Indice</b>	<i>1-There is no monitoring.</i>
<b>Future Targets</b>	<i>Target: Set up a monitoring plan to observe aquatic life and design a program to improve it.</i>

- The rate of the critical indicators: 33 %
- The rate of satisfactory indicators: 67 %
- The rate of sustainable indicators: 0 %
- The total of the 3 Biodiversity indicators is: 8
- The average score for the biodiversity resource is: 2.67 (Critical)

**4.6. Carbon Resource**

<b>Name of Indicator</b>	<b>Additionality</b>
<b>Description of Indicator</b>	Consists of reduction of greenhouse gas emissions or increase in removal of CO2 beyond what would occur in absence of project activity. This item evaluates tools used for assessing additionality and compliance with national and international standards.
<b>Comments on present situation</b>	The project is validated to the VCS version 3.3 standard and implementing CDM Approved tools to demonstrate additionality. The project is under VCS version 3.3 Verification.
<b>Score of the Indice</b>	6. It is considered additional according to criteria stated in a monitoring methodology approved by the CDM Executive Board.
<b>Future Targets</b>	No Target Assigned

<b>Name of Indicator</b>	<b>Emissions Reductions Calculations &amp; Monitoring</b>
<b>Description of Indicator</b>	Evaluates methodologies used to calculate emissions and monitor compliance with national and international standards.
<b>Comments on present situation</b>	The projects emission reductions are calculated and monitored based on CDM approved Methodology “ACM0002 version14: Grid-connected electricity generation from renewable sources”
<b>Score of the Indice</b>	6. The project has a methodology to calculate emissions reductions and a monitoring plan based on a methodology approved by the CDM Executive Board.
<b>Future Targets</b>	No Target Assigned

<b>Name of Indicator</b>	<b>Validation &amp; Verification</b>
<b>Description of Indicator</b>	Evaluates existence of total or partial validation/verification of project by a third party, if third party is accredited by UNFCCC, and compliance procedures for validation/verification with national and international standards.
<b>Comments on present situation</b>	The project is validated by a UNFCCC accredited DOE, and the same UNFCCC accredited DOE is also assigned for the verification of the project..
<b>Score of the Indice</b>	6.Validation and Verification are conducted by a Designated Operational Entity according to UNFCCC specifications.
<b>Future Targets</b>	No Target assigned

<b>Name of Indicator</b>	<b>Project Performance</b>
<b>Description of Indicator</b>	Evaluates performance of project, verified by comparison with estimates of emissions reductions under the PDD.
<b>Comments on present situation</b>	Due to general lack of precipitation the project’s production performance was as low as 60% of the estimated amounts in the validated PDD.
<b>Score of the Indice</b>	4-Reasonable: 51% to 75% of carbon credits predicted for the period were effectively generated.
<b>Future Targets</b>	Target: Improve project performance as far as possible.

The rate of the critical indicators: 0 %  
 The rate of satisfactory indicators: 25 %  
 The rate of sustainable indicators: 75 %  
 The total of the 4 carbon resource indicators is: 22  
 The average score for the carbon resource is: 5.50 (Sustainable)

**5. Historic analyses**

This part of the template is left Blank as this is the “point zero” report and there are no previously validated or verified SCR.

*Table presenting historic performance of the Resources:*

Resource	Point Zero	Point One	Point Two	Point Three
<b>Social</b>				
Historic Analysis of Social Resources: <i>Comparative analysis of the diagnostics carried out over the years, describing the evolution of the scores obtained for the indicators and/or resources, pointing out improvements/deterioration socio-environmental performance (does not apply to Point Zero report). The comparative Analysis shall be presented for each one of the Resources, below.</i>				
<b>Human</b>				
Historic Analysis of Human Resources:				
<b>Financial</b>				
Historic Analysis of Financial Resources:				
<b>Natural</b>				
Historic Analysis of Natural Resources:				
<b>Biodiversity</b>				
Historic Analysis of Biodiversity Resources:				
<b>Carbon</b>				
Historic Analysis of Natural Resources:				
<b>General Performance</b>				

### **General performance at the year of evaluation**

Based on the above explanation the sustainability performance of the Boyabat Hydroelectric Power Plant Project can be summarized as follows (Table 4):

**Table 4: Sustainability Performance of Boyabat Hydroelectric Power Plant project - Point Zero (29 November 2012 to 31 July 2014).**

Resource	Critical	Satisfactory	Sustainable	Average Score	General Performance
Social	17%	67%	17%	3.50	Satisfactory
Human	25%	0%	75%	4.50	Sustainable
Financial	33%	67%	0%	2.33	Critical
Natural	0%	44%	54%	4.55	Satisfactory
Biodiversity	33%	67%	0%	2.67	Critical
Carbon	0%	25%	75%	5.50	Sustainable
<b>Overall Assessment</b>	<b>18.00%</b>	<b>45.00%</b>	<b>36.83%</b>	<b>3.84</b>	<b>100.0%</b>

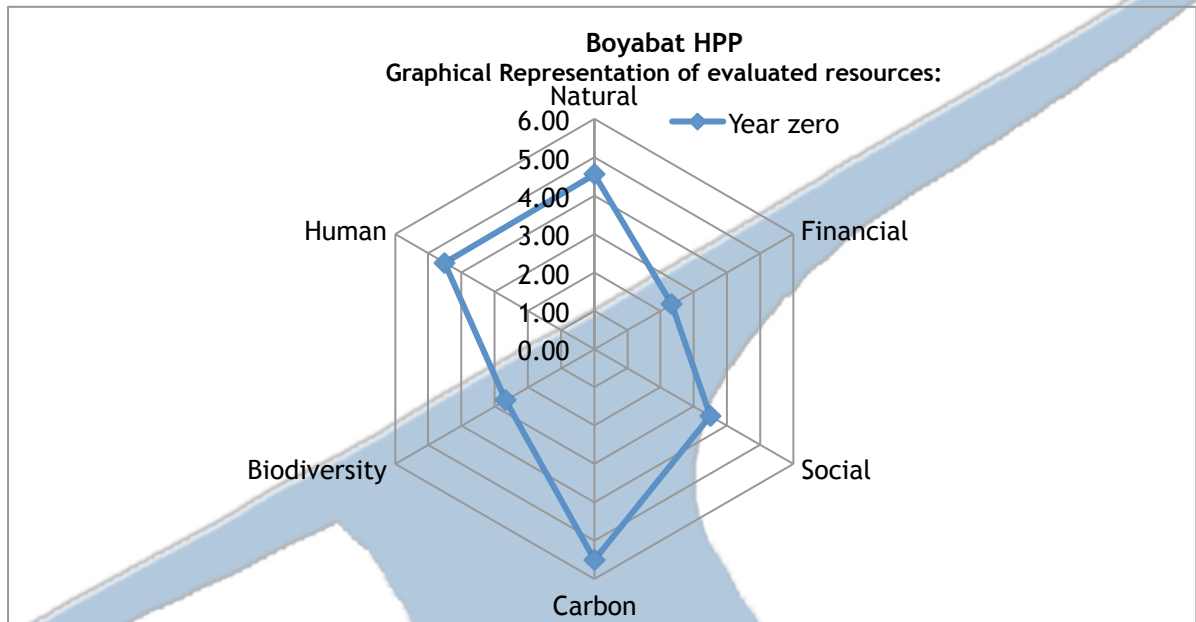
Based on the above table (Table 1) that summarizes the general state of the Boyabat HPP, the project is performing satisfactorily based on the overall assessment (A score of 3.84 >2.70 and <4.40 satisfactory score range). The project observed to underscore in two resources mainly financial Resources and biodiversity resources. Both these resources are observed to score at the “Critical” range. The financial Resource scored critical due to the 40% less production values compared to the amounts estimated in the PDD, and the Biodiversity score scored critical due to lack of a monitoring arrangement related to aquatic life. In addition to that there are some indicators that scored critical, mostly due to lack of a systematic and organized approach to those parameters.

The carbon resource of the project is one the strongest aspect of the project, as it was developed using UNFCCC approved methodologies and tools and since it was validated by UNFCCC accredited DOE. Another strongest resource is the Natural Resources that scored 4.55 (sustainable), because of the environmentally sensitive approach of the project owner, and since they were involved in third party certification for environmental management system, and environmental risk management system.

The lowest average performance score of the project is related to the financial and the biodiversity resources. For these resources the project is observed to score within the band of critical range with a score of 2.33 and 2.67 respectively. As explained above these resources have room and opportunity to exhibit improvement for the next evaluation periods.

The Social, and Natural resources are observed to get scores within the satisfactory range. In the next monitoring stage it is believed that the project will also improve in these resources. Such as the social resource that is expected to improve as a result of social programs that will be identified and put in place in the coming years.

*Graphic of the performance (hexagon), showing the average score obtained for each resource.*



## 6. Prospects

### 6.1. Status of the prospects from the last verified SCR

This part of the template is left Blank as this is the “point zero” report and there are no previously validated or verified SCR.

- Achieved prospects

Resource - Specify the resource	
Indicator	Identify the indicator
Prospect	Describe the prospect from the last verified SCR
Details	Provide details regarding the action implemented.

Resource - Specify the resource	
Indicator	Identify the indicator
Prospect	Describe the prospect from the last verified SCR
Details	Provide details regarding the action implemented.

- Not achieved prospects

Resource - Specify the resource	
Indicator	Identify the indicator
Prospect	Describe the prospect from the last verified SCR
Details	Provide details why the prospect was not implemented.
Follow up	Re plan the steps to implement the action proposed.

### 6.2. Prospects

The following are the main perspectives identified during the diagnostic, including possible recommendations and goals to be reached. Only indicators where future prospects are defined are listed below.

Social Resource	
Indicator: Communication with stakeholders	The communication with stakeholders are very well structured but the scenarios described in levels 4, 5 and 6 does not represent the situation in the host country, therefore we target to implement further adapting this indicator to fit the host country scenarios.
Responsible	Carbon Finance Consultant (Dr. Aslı Özçelik)
Timescale	Prior to completion of Point one report.

Indicator: Social Demands	Draft a standard operating procedure to address and formulate how to address social demands. While drafting consider the situations you have experienced during earlier stages of the project.
Responsible	Mahfuz Kaplan or a Person assigned by Plant manager
Timescale	Within the first quarter of the next monitoring period.

Indicator: Social programs	Identify Social programs that can benefit majority of the local stakeholders. The Samsun communications office will communicate with the stake holders and determine potential programs and Istanbul HQ will discuss the available budget and choose the program that will be most cost effective and bring the most positive impact.
Responsible	Ümit Dönmez and MS Tuba Başacılar Bilhan
Timescale	Within one year

Indicator: Social Benefits	Identify and implement social benefit areas that can deliver benefits to a large number of people. Discuss budget opportunities and human resources issues with the central management and draft an implementation program.
Responsible	Mr. Mahfuz Kaplan -Plant Manager and Head Quarters at Istanbul
Timescale	During the entire year.

Human Resource	
Indicator: Benefits	A regular survey to test employee satisfaction will be arranged. Or alternatively to test employee satisfaction, plant manager can arrange, random one to one interviews with the employee.
Responsible:	Mr. Mahfuz Kaplan or a person assigned by him
Timescale:	During the entire year.

Indicator: Involvement of Employees in the Project	Target: An in house training will be organized to inform all the employees about the carbon project. Also a third party can be invited to provide the informative lecture about the concepts of climate change, carbon markets and carbon standards.
Responsible:	Mr. Mahfuz Kaplan-Plant Manager
Timescale:	Should be accomplished at least one months before the preparation of the next monitoring report.

Financial Resource	
Indicator: Economic Performance	Improve production by 5% compared to last year. Please note that achievement related to this target is not solely dependent on the project management.
Responsible:	Mr. Mahfuz Kaplan-Plant Manager
Timescale:	End of next monitoring period.
Indicator: Sale of Credits	Improve marketing efforts and find a suitable buyer for the tonnes to be issued. Prepare marketing documents to help selling of the credits.
Responsible:	<i>Istanbul HQ</i>
Timescale:	<i>Should be accomplished some time before the preparation of the next monitoring report</i>

Natural Resource	
Indicator:	Organize a training session to explain sustainability concepts

Sustainability Principles	to the Boyabat HPP Personnel and assign parameters that will be monitored and improved by targets that will be reported in the next monitoring period.
Responsible:	Mr. Mahfuz Kaplan-Plant Manager
Timescale:	During the first half of the next monitoring period.

Indicator: Reservoir and marginal areas management	Develop a plan for the management of the reservoir and marginal areas. Communicate and coordinate with DSI and Local Forest Authorities in the planning and implementation stages.
Responsible:	Mr. Ümit Dönmez-Samsun Liaison office Manager
Timescale:	Should be accomplished some time before the preparation of the next monitoring report

Indicator: Erosion, landslides, silting and floods	Arrange Programs to avoid mass flows, or improve existing ones and develop new ones in cooperation with the local inhabitants, forestry department and DSI.
Responsible:	Mr. - Mahfuz Kaplan-Plant Manager
Timescale:	<i>Should be accomplished some time before the preparation of the next monitoring report</i>

<b>Biodiversity Resource</b>	
Indicator: Biodiversity Conservation	Organize a wildlife support program in Coordination with the forestry department and DSI to find ways of supporting local wildlife.
Responsible:	Mr. - Mahfuz Kaplan-Plant Manager
Timescale:	<i>Should be accomplished some time before the preparation of the next monitoring report</i>

Indicator: <b>Ichthyofauna</b>	Set up a monitoring plan to observe aquatic life and design a program to improve it. It is highly recommended to cooperate with local university researchers.
Responsible:	Mr. - Mahfuz Kaplan-Plant Manager
Timescale:	Should be accomplished some time before the preparation of the next monitoring report

<b>Carbon Resource</b>	
Indicator: <b>Project Performance</b>	Improve project performance by implementing regular maintenance and repair, as far as possible.
Responsible:	Mr. - Mahfuz Kaplan-Plant Manager
Timescale:	Should be accomplished some time before the preparation of the next monitoring report

## ANNEX-1 – THE SUMMARY OF THE EXPROPRIATION

BOYABAT HPP EXPROPRIATION STATUS																						31 MAY 2014		
					PRIVATE PROPERTIES 1 <sup>st</sup> Stage (2008-2011)						PRIVATE PROPERTIES 2 <sup>nd</sup> Stage (2012-2015)					TREASURY			VILLAGE LEGAL ENTITY					
PROVINCE	TOWN	TOTAL NUMBER OF LOTS	TOTAL PRIVATE PROPERTY	VOLUNTARY	ARTICLE 10 ( 2620 )			ARTICLE 27 ( 11 324 )			ARTICLE 10 (11 324)					TOTAL	COMPLETE D	LEFT	TOTAL	COMPLETE D	LEFT			
					LAW SUITS	COMPLETE D	DEVA M EDEN	LAW SUITS	COMPLETE D	DEVA M EDEN	TOTAL	LAW SUITS	COMPLETE D	DEVA M EDEN	TO BE SEWED									
SAMSUN	VEZİRKÖPRÜ	1.822	1.748	157	279	279	0	1.312	1.312		1.312	1.311	1.215	96	1	61	56	5	14	14	0			
SİNOP	SARAYDÜZÜ	5.568	5.017	71	2.341	2.317	24	2.605	2.605		2.605	2.566	2.397	169	39	487	1	486	62	31	31			
ÇORUM	KARGI	4.731	4.605	2				4.603	4.603		4.603	4.295	4.152	143	308	99	38	61	28	20	8			
ÇORUM	OSMANCIK	3.075	2.954	150				2.804	2.804		2.804	2.458	2.088	370	346	101	37	64	20	18	2			
<b>TOTAL</b>		<b>15.196</b>	<b>14.324</b>	<b>380</b>	<b>2.620</b>	<b>2.596</b>	<b>24</b>	<b>11.324</b>	<b>11.324</b>	<b>0</b>	<b>11.324</b>	<b>10.630</b>	<b>9.852</b>	<b>778</b>	<b>694</b>	<b>748</b>	<b>132</b>	<b>616</b>	<b>124</b>	<b>83</b>	<b>41</b>			

## ANNEX-2 The OHSAS, ENVIRONMENTAL MANAGEMENT AND QUALITY CERTIFICATION of the BOYABAT HPP PROJECT

# CERTIFICATE



for the management system according  
to ISO 9001:2008 and ISO 14001:2004  
BS OHSAS 18001:2007 and ISO 50001:2011

The proof of the conforming application with the regulation was  
furnished and in accordance with certification procedure it is certified for  
the company

## boyabat

HQ: Cumhuriyet Cad. Gürsel Plaza No:123 Kat:3 Beykoz  
İstanbul / Turkey  
Plant : Boyabat Barajı ve HES Tesisleri Durağan  
Sinop - Turkey

Scope:

Hydroelectric power plant (HEPP) operation and  
electricity sales services

Certificate Registration No.:	TIC 15 100 148859 TIC 15 104 141204 TIC 15 116 14551 TIC 15 275 14060	Valid until: 2017-04-25 Valid from: 2014-04-26
Audit Report No.:	3330 2NWF A0	

This certification was conducted in accordance with the TIC auditing and certification procedures and  
is subject to regular surveillance audits.

TÜV Thüringen e.V.  
Certification body for  
systems and personnel



Jena, 2014-04-26



Original certificates  
are branded with a hologram.

The current validity can be demanded at our homepage [www.tuv-thueringen.de](http://www.tuv-thueringen.de)

Zertifizierungsstelle des TÜV Thüringen e.V. • Ernst-Ruste-Ring 5 • D-07745 Jena • ☎ +49 3641 309740 • ✉ [zertifizierung@tuv-thueringen.de](mailto:zertifizierung@tuv-thueringen.de)