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## SECTION A.

**Project Title** 

RESADIYE-III HEPP Date:28/01/2014 Version: 08

## SECTION B. Project description

Resadiye-III is 'Run-off-River' type hydroelectric power plant(HEPP) project located on Kelkit River of Turkey and within the boundaries of Resadiye District of Tokat Province. The purpose of the project is to generate energy from the running waters of Kelkit River. Original project design developed by State Hydraulic Works Authority (DSI) consisted of only one power plant which has later been divided into three individual projects and named as Resadiye-I, Resadiye-II and Resadiye-III respectively.

Resadiye-III HEPP will have a total installed capacity of 22.92 MWm(22.46MWe) with an expected electricity generation of about 158.22 GWh per annum. Corresponding emission reduction is about 88,920 tCO<sub>2</sub> per year. Compared with a natural gas power plant, the Project will replace consumption of imported natural gas and save foreign currency due to avoided natural gas import.







Figure 2. Reşadiye-III HEPP Conveyance Line Route

There exists several dam type plants in the upstream of the plant in the Kelkit Basin which have higher design flow rate, storage capacity and determine the flow characteristics of the plant. Therefore, marginal impact of the project will be smaller compared to these plants. By dividing the project into three parts instead of the single plant with higher capacity, project owner has aimed optimizing the energy potential of the river and reducing risks due to the earthquake in the region. Dividing the project into three parts has caused three smaller plants which have smaller capacities and thus less cumulative impact. Environmental impact assessment of these projects has been assessed considering initial and revised project designs.

When economical and social impacts of the planned power plant project are taken into consideration, it is seen that the realization of the project will have positive impacts on the region. When present utilization status of the project site is taken into consideration, energy generation benefit shall be provided and employment opportunities shall be created for the locals with the proposed project. A contribution shall be provided for the economy of both the country and the region with realization of the project. With the planned activity, 200 people shall be employed during construction stage and 15 persons expected to be employed during operating stage; and majority of the personnel required for Resadiye HEPP Project shall be hired from the people living in the villages around Resadiye District and Koyulhisar District which will create an increase in income of the locals due to trade volume. Since there shall be no facilities of the planned activity which has emission and chemical wastes, there shall be non negative impact on the environment. Only domestic liquid and solid wastes shall occur at the places where the personnel employed accommodate within the scope of the project. Negative impacts that may occur shall be minimized with the precautions to be taken. Detailed analysis of environmental and social impacts are assessed in EIA Report<sup>1</sup>

# SECTION C. Proof of project eligibility

<sup>1</sup> EIA report Section V.2.2 and V.3



# C.1. Scale of the Project

Project Type	Large	Small

## C.2. Host Country

Host country Turkey has ratified Kyoto Protocol in February 5<sup>th</sup> 2009. However, Turkey is not expected to have any emission reduction commitment under Kyoto Protocol.

# C.3. Project Type

Project type	Yes	No
Does your project activity classify as a Renewable Energy project?		
Does your project activity classify as an End-use Energy Efficiency Improvement project?		

Project activity involves construction of a run-off-river hydroelectric power plant for electricity generation. Project category is included in the sectoral scope 1 "Energy Industry – Renewable Sources" according to the UNFCCC definition.

Pre Announcement	Yes	No
Was your project previously announced?		



Carbon credit has been taken into account by project investors in making the project decision to proceed. Carbon income was also taken into account by the financier banks as an integral part of their decision to provide loans to fund the project.

# C.4. Greenhouse gas

Greenhouse Gas	
Carbon dioxide	
Methane	
Nitrous oxide	

# C.5. Project Registration Type

Project Registration Type	
Regular	

Pre-feasibility assessment	Retro-active projects (T.2.5.1)	Preliminary evaluation (T.2.5.2)	Rejected by UNFCCC (T2.5.3)
		х	

# SECTION D. Unique project identification

# D.1. GPS-coordinates of project location

	LONGITUDE	LATITUDE
KARLIYAYLA WEIR	E 37° 26′ 31″	N 40° 21' 27"
POWERHOUSE	E 37° 21′ 55″	N 40° 22' 51"





Resadiye-III HEPP Project is situated in Resadiye district of Tokat province. The Project is located on Kelkit River and close to Cavusbeyli, , Umurca, Altiparmak and Koklu villages.







### SECTION E. Outcome stakeholder consultation process

### E.1. Assessment of stakeholder comments

Two physical stakeholder meetings have been carried for the proposed project. The preliminary stakeholder meeting has been held on 24/12/2008 in Resadiye Town which is the closest location to the Resadiye III Hydroelectric Power Plant. SFR meeting has been conducted on 14/12/2010 in the same place. Locals have shown more interest to the meeting since it was organized at the beginning of implementation of project and locals were interested about project and their impact on them. Although the announcement for meeting has been made on three locals newspaper at least for two days, second meeting was less attractive for them but still quite good stakeholders have participated the meeting.

SD exercise has been carried out in both meetings. In the first meeting, the exercise has been carried out using questionnaires to provide a more comfortable environment for locals to raise feedbacks. In the second meeting, the exercise has been carried out by showing all indicators to the locals, explaining the scopes and asking for their opinion. In general stakeholders' comments were positive about the Project. Some negative scores given by stakeholders during the first meeting have been summarized in the SFR meeting responded during the SFR meeting by giving examples of measures taken.

The minutes of the meetings have been summarized below

#### Preliminary Meeting

#### İsmail AVŞAR (Representative of TEMA Foundation)

Is there going to be passage ways for the cattle and what sort of security precautions will there be in place ?

#### Fethi TÜRKEL (Project Manager of Resadiye II and III HEPP Projects)

We are taking all security precautions related with the construction and we are also building bridges and fences to maintain secure passages for the cattle.

#### Lütfi ŞAHİN (Köklü Village Headman)

The roads to our villages are adversely affected because of the construction when do you plan to fix the damage?

#### Fethi TÜRKEL (Project Manager)

We are about to complete the construction on the channels, there is also an ongoing new bridge construction. As we complete this step it will be possible to service existing and new roads.

#### Şakir YILDIZ (Local Participant Çavuşbeyli Village)

Our roads are also affected by the project !



#### Sezai İSTİPAÇ (Çavuşbeyli Village Headman)

We want passages for our cattle and for people. There are not enough passages on the water arcs.

#### Fethi TÜRKEL (Project Manager)

We implemented temporary solutions during the construction phase. We will build permanent solutions once the construction is completed. We can identify the locations of required passages together with local representatives.

#### Hilmi YILDIZ (Local Participant Çavuşbeyli Village)

MNG-Turkon contributed a lot with the project. Therefore we would like to thank Mr. Türkel for his contribution. However we are not clear how the expropriation valuation is conducted. Can you clarify?

#### Nihat B. DEDEKLİ (Turkon-MNG Representative)

The valuations are determined by an expert committee appointed by Tokat Mayoralty and expropriation is conducted by EMRA and DSI. We don't have any say on the decisions of these government organizations. Therefore we are bound by legal procedures on this front.

#### Rafet ERDEM (Resadiye Mayor)

We would like you to employ more local people especially from Resadiye. Is there a requirement that force you to employ local people ?

#### Fethi TÜRKEL (Project Manager)

We also prefer to employ local people. It is very beneficial for us since local people know the area and there are no relocation costs involved. However, some functions require specific knowledge, experience and education. We are facing difficulty in finding the people with right skill set.

After the questions are answered, sustainable development matrix forms (in Turkish) have been distributed. Questions in the matrix have been explained and participants have been asked to fill the matrix considering the impact of project activities. 19 participants filled the forms. These forms have been collected and assessed for any negative comments that may require changes in the project design. No negative comments that can affect the project design have been identified.

Finally, Ms. Sevilay Topcu has informed participants about the process, follow-up of the meeting and about the feedback round planned. Contact information of MNG Turkon and GTE were given to each participant for future questions and comments and for those participants who may wish to complete the survey form and send later.

#### SFR Meeting

The meeting has been opened by Kemal Demirkol and purpose of meeting has been explained. Mr Nihat Dedekli from project investor company has explained the progress in projects and given information about the project. Later, Mr Kemal Demirkol has given information about the climate change, emission reduction, summarized the issues discussed in preliminary meeting and informed participants about certification process.



After presentations, participants have been invited for questions and comments. The questions raised during SFR meeting and responses are given below.

#### Altıparmak Village Head

Company has built a road but we cannot use it in rainy weathers. Also, after the new road is built, need for extra fence have emerged to prevent falling of cattle?

**Fethi TÜRKEL (Project Construction Manager):** We have discussed this issue several times with you and we have visited the site with Mayor also. You are right about the road but technically we don't have any choice. You'll remember that we visited the site with Mayor, I have asked you and the Mayor and you have decided on the route and we have built the road with our approval. After flood, the road was renovated and compressed. The road surface will fix as the time passes. We have completed the construction works and our staff and equipment is working on villages for about two months to help their needs. We have also built a bridge and road to Cavuşbeyli village.

If you want, we can send the machines and compress road once again.

We have installed fences in places you have shown and increased the length or height. Mr Tekin will be responsible from plant during operation, he has made some attempts about fences, he can also inform you about the issue.

#### Altıparmak Village Head

Since the surface is wet now, it won't be useful.

**Fethi TÜRKEL (Project Construction Manager):** We will be here for a few more months, if you call us when the road is dry, I can send the compressing vehicles and we can try to fix once more.

**Tekin .... (Plant Operation Manager):** We have installed fences around settlements and in places shown by village heads. We have made an investment schedule to cover all canal route with fences. We plan to complete it in two –three years. If you can show us the place you want to be fenced, we can prioritize it.

#### Çavuşbeyli Village Head

In which places will you plant trees and when will you plant trees.

**Fethi TÜRKEL (Project Construction Manager):** We had made payment to directorate of forestry. We have also purchased about 3,000 plant to be planted. Directorate of Forestry will supervise us where and when we can plant them. We can also provide them staff and equipment if requested.

#### Head of Directorate of Forestry

I can better answer this question. We have received significant amount from the investor for forestation of the plant. A part of this money will be used by government for rehabilitation of other forest area whereas the other part will be used in this area for planting new trees. Locals will also employ during plantation. We'll start planting when the construction works is completed. We expect to start by early January but all the construction works should have been completed before we access the area.





#### Local Participant

Does the government provide guarantee for purchase of electricity for 10 years? Can we purchase electricity from the plant as consumers also?

**Nihat Dedekli (Project Manager):** This project does not use guarantee from government. Usually it is sold to eligible consumers as defined by regulation.

**Tekin .... (Plant Operation Manager):** We used to but electricity from TEDAS previously. If your consumption is more than 100,000 kW/year, than you become eligible consumer and can negotiate with generation companies.

#### **Umurca Village Head**

We are happy with the investment. It has impacted our village but it has also caused many contributions to our village. We kindly request you to consider the fence issue. Also, a part of land expropripated later for risk of erosion has not been paid.

**Tekin .... (Plant Operation Manager):** We have prioritized the locations with village heads approval and installed fences in all locations requested so far. We have initially installed fences when it creates danger to locals or cattle. I have received confirmation to install fences around all open canals. We do not want to harm any people also so we also want to install fence as soon as possible.

**Fethi TÜRKEL (Project Construction Manager):** We made payment to the court 6-7 months ago. They will identify the land owners and transfer money to the owners. Normally, they should have paid until now but if you visit us today afternoon or tomorrow, we can call our friends in headquarter and ask them about the process.

#### Local Participant

Does these projects cause change in climate in the region?

**M.Kemal Demirkol:** These projects are named as run off river type small hepps. Dams with big reservoirs form lake and increase humidity around the lake but as you'll see, these projects do not cause any new lake other than the existing river bed.

After the questions are replied, the blind SD exercise has been carried out. The indicators have been shown to the participants via projection device and each indicator has been explained. Also, especially negative the scores during the first meeting and mitigation measures have been reminded during explanations. No negative comments have been raised during the meeting by the participants. It has been reminded that the documents will be available for 60 days and they can send their feedbacks meantime. Participants have also been informed that measures discussed here will be monitored and checked during verification process conducted periodically. After the SD exercise, meeting has been closed and participants have been asked to fill the evaluation forms and invited to the site visit.

The main issues raised by the participants during the SC meetings were:

- The need for passage ways for cattle,
- Renovation of damaged roads
- Security around conveyance channel to prevent any accident, and
- Consideration of employment of local people.
- Plantation of trees in along the canal route

Stakeholder Comments	Assessment	Response to comment
Reconstruction of damaged village roads. New passage ways for cattle and the security around conveyance channel	Responded promptly	Passages for cattle have been made in several locations as requested by locals. Also, new bridges have been made and new roads have been



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		opened for enabling easier access to villages. Fences and walls have been made around the stilling basin and canal route near the settlements. We are planning to install fences along the canal in two or three years so that all the route will be covered. We have submitted this investment to the management and they have accepted this. Each year we'll cover some part starting from top priority regions.
Job Opportunities.	Responded promptly	Local people will had priority in recruitment since they are more familiar with the region and there is no need for relocation. However some roles require specific talent and education and it might be difficult to find people with the required skill set. During construction, about half of the staff was from locals. During operation, there exists also many local staff including plant manager.
Plantation around the canal route.	Responded promptly	We have made payments to the Directorate of Forest for each trees cut during construction. We have discussed them a few weeks ago and they have told us that they have ordered the plants they will start planting trees as soon as the construction staff/equipments leave the area. In addition to the payment we have made, we have also purchased about 3,000 plants to be planted around the canal and powerhouse. We'll plant them under the supervision of directorate of forestry.

## E.2. Stakeholder Feedback Round

The project has been developed following retroactive project cycle of GS. SFR has been organized as a physical meeting. All stakeholders participating preliminary meeting and those identified as stakeholders have been invited. Details of the meeting are given above. After the meeting, the participants have been invited for a site visit however; no participants have participated except the GS local expert.



The invitations have been sent via registered mails ,emails and hand delivery. Participants of first meeting has been contacted via village heads, or phones and documents have been delivered(List is available in Annex 3). The invitation has been published on three local newspapers for two days in each newspaper between 02 December -07<sup>th</sup> December.

Summary of the project documents in Turkish, including outcomes of the local stakeholder consultation meeting has been made available to stakeholders either by mail or through local governors, village heads. Also, original copies of the documents has been made available to all stakeholders through GTE web page (<u>http://www.gte.uk.com</u>) for at least 60 days starting from 14<sup>th</sup> of December.



# SECTION F. Outcome Sustainability assessment

# F.1. 'Do no harm' Assessment



Project activities have been analyzed against questions in table 2.6 and in annex H of GS toolkit. Project is not complicit in corruption and fully respects human rights. Also, there exist no identified species under protection in the project area that will be affected negatively by the project.

Project is a run-off-river type project and does not involve use or generation of any hazardous waste. All of the project activity is implemented considering related environmental and safety precautions. Based on the analysis, only relevant areas related to project activity are determined as labour standards and environmental protection which are assessed as given in table below.

Resadiye HEPP Project has been initially designed as a single project with an installed capacity of about 48MW but later considering the geological structure of the region, has been divided into three parts. There exists two dam type plants at the upstream named Kılıçkaya and Çamlıgöze having installed capacities of 120MW and 32MW respectively each having 162 m<sup>3</sup>/s design flow rate. Hence, these plants significantly affect the operating regime of the proposed project as the proposed projects have no reservoir. Compared to the plants at the upstream, proposed projects have lower installed capacities and flow rates.

Most significant environmental impact of project will be on the plantation around the conveyance canal and impact on river habitat due to reduced flow rate. In order to compensate the trees affected during construction, company has made payment to forestation fund of the Directorate of Forestry(Receipts submitted to DOE) and in addition has purchased seedlings to plant along the project site. Plantation studies is expected to start in early 2011 as soon as the construction works are completed. For the impact on river habitat along the diverted section, project is not expected to have significant negative impact on the river habitat as the minimum flow is continuously released from the weir. Considering that the plants at the upstream significantly higher flow design rates (2\*81m<sup>3</sup>/s) than the proposed plant (60m<sup>3</sup>/s), when two turbines are operated at full capacity at the Kılıçkaya or Çamlıgöze Hepps, the Resadiye HEPP plant will be able to divert maximum 37% whereas this ratio will be 74% even if only one turbine is operated at the upstream plants and both turbines are operated in the proposed plant. In order to enable fish migration, fish passage has been integrated to the design of weir even though the plants at the upstream are dam type and there exist no fish passage. During site visits and interviews with staff in the plant, they have confirmed the migration of fish species to the upstream of the river bed.

There is no protected or sensitive area within the project boundaries. Closest sensitive area is more than 15km away from the project site as can be seen from the GIS map of Mistry of Forestry and Water affairs below.





Compared to the initial scenario with single HEPP, new design will enable a safer plant design and reduce risk of erosion and earthquake. Dividing project into three parts will also decrease the length of diverted section and provide spaces for natural flow compared to earlier project design.

The EIA study has assessed all species in the project site and river bed considering initial project design (October 2006). After dividing the project into three parts, the EIA has been updated in October 2008 considering new project design.

Safeguarding principles	Description of relevance to my	Assessment of my project risks	Mitigation measure
	project	breaching it	
		(low/medium/high)	
	Human Rig	ghts	
1 The Project respects	Project activities	Low	Ensuring that
internationally proclaimed	are not expected		water is available
human rights including dignity,	to cause any		for locals for
cultural property and	human rights		irrigation and
uniqueness of indigenous	abuse. Turkey		other purposes
people. The Project is not	has ratified		
complicity in Human Rights	European		
abuses.	Convention on		



Safeguarding principles	Description of	Assessment of my	Mitigation
	relevance to my	project risks	measure
	project	breaching it	
		(low/medium/high)	
· · · · · ·	Human Right in		
	10/03/1954 <sup>2</sup> .		
	Project is built on		
	a section of		
	stream where		
	there is no or		
	limited water		
	demand for		
	agricultural		
	activities or other		
	purposes as		
	locals uses		
	nearby sources		
	for drinking water		
	and other needs.		
	There exist		
	several irrigation		
	plants at the		
	upstream of the		
	plant which are no		
	affected by the		
	proposed project		
	activity. However,		
	parameter will be		
	monitored to		
	ensure that no		
	negative impact		
	occurs. <sup>3</sup>		
2 The Project does not involve	Project does not	Low	Compensation
and is not complicit in	involve any		payments made to
involuntary resettlement.	resettlement		locals as required
	Expropriated		by regulations.
	lands have been		
	paid at rates		
	determined by		
	regulations. I wo		
	HOUSES HAVE		

<sup>2</sup> <u>http://www.istanbul.gov.tr/?pid=9218</u> (Accessed on 31/08/2009)

<sup>3</sup> FSR Section 4.4.2 and table 4.24



Safeguarding principles	Description of	Assessment of my	Mitigation
	relevance to my	project risks	measure
	project	breaching it	
		(low/medium/high)	
	been		
	expropriated. In		
	addition to legal		
	payments made,		
	construction		
	been donated for		
	construction of a		
	new house and		
	residents from		
	these land owners		
	have been		
	recruited in the		
	plant		
3 The Project does not involve	Project does not	Low	No mitigation
and is not complicity in the	have any impact	2011	measure is
alteration, damage or removal	on cultural		required
of any critical cultural heritage.	heritage as given		required
	in Pre-EIA page		
	56.	dauda	
4 The Brainet respects the	Labour Stan		No mitigation
employees' freedom of	Turkey has ratified	LOW	
association and their right to	ILO 87 and 98		measure is
collective bargaining and is	conventions .All		required for this
not complicit in restrictions of	staff recruited are		indicator
these freedoms and rights	employed		
	according to the		
	national		
5 The Preiest dage not	Net Relevant	Low	No mitigation
involve and is not complicit in	Turkey has ratified	LOW	no mugation
any form of forced or	ILO convention 29		measure is
compulsory labour.	and 105 on forced		required for this
	and _compulsory		Indicator
	labour <sup>5</sup> .		
		Low	No mitigation
6 The Project does not	Not Relevant.		measure is
any form of child labour	of IPEC since		required for this
	1992 and ratified		indicator
	ILO convention		

<sup>&</sup>lt;sup>4</sup> Amendments for Expropriation List (dated 24/07/2008 and 27/05/2010)

<sup>&</sup>lt;sup>5</sup> <u>http://www.ilo.org/public/turkish/region/eurpro/ankara/about/sozlesmeler.htm</u>



Safeguarding principles	Description of	Assessment of my	Mitigation
	relevance to my	project risks	measure
	project	breaching it	
		(low/medium/high)	
	138 and 182.		
7 The Project does not	Not Relevant.	Low	No mitigation
involve and is not complicit in	Turkey has ratified		measure is
any form of discrimination	ILO convention		required for this
based on gender,	100 and 111 and		indicator
	based on gender		
	is illegal in Turkey.		
8 The Project provides	Work Safety&Risk	Low	All labours are
workers with a safe and	of accidents		trained in terms of
healthy work environment and			work safety and
is not complicit in exposing			relevant safety
unhealthy work environments			emergency plan is
			issued and in
			force for risk of
			accident.
	Environmental F	Protection	The sector test of the sector se
9 The Project takes a	-RISK of accident	LOW	I o minimize the
regard to environmental	around the		risk of accident
challenges and is not	conveyance line		and enable safe
complicity in practices			access to other
contrary to the precautionary			side of the
principle. This principle can			conveyance
be defined as:"When an			channel, fences
to human health or the			will be built around
environment, precautionary			the channel near
measures should be taken			settlement areas
even if some cause and effect			and overpasses
relationships are not fully			will be constructed
established scientifically.			to enable safe
			access to other
			side of the
			channel. All canal
			is intended to be
			covered with
			fences in three
			years time.
10 The Project does not	There exist no	Low	Company will
involve and is not complicity	protected (or		comply with all
In significant conversion or	proposed to be		national
habitats including those that	protected) or		regulations and
are (a) legally protected, (b)	critical habitat		take all



Safeguarding principles	Description of	Assessment of my	Mitigation
	relevance to my	project risks	measure
	project	breaching it	
		(low/medium/high)	
officially proposed for	within the project		precautions stated
protection, (c) identified by	boundary as		in the Pre-EIA and
authoritative sources for their	stated in Pre-EIA		legislations. These
recognized as protected by	page 33. Nearest		will include
traditional local communities	protected area is		release of
	at least 15 km far		environmental
	from the project		flow, fish passage
	site. Main impact		and payment to
	on landscape will		Directorate of
	be due to		Forestry for
	construction		plantation of new
	activities along the		trees along the
	channel. In order		conveyance line.
	to accelerate		Plantation of trees
	recovery of the		have started as
	site, new tree		soon as
	plantation has		construction
	been carried out		activities are
	Directorate of		completed and
	Forestry.		trees have started
	Company has also		to grow.
	made voluntary		
	contribution in		
	terms of fiddling		
	donation in		
	addition to		
	payment to		
	forestation fund.		
11.Anti-Corruption	Not relevant.	Low	No mitigation
	Turkey has ratified		measure is
	several		required for this
	conventions on		indicator
	bribery and		
	corruption		
	including OECD		
	and UN		
	conventions <sup>6</sup> .		

<sup>&</sup>lt;sup>6</sup> <u>http://www.masak.gov.tr/en/content/I-p-c-national-legislation/159</u>



# F.2. Sustainable Development matrix

Indicator	Mitigation	Relevance to	Chosen parameter	Preliminary
	measure	achieving MDG	and explanation	score
Air quality	Mitigation	7.A -Integrate the	Parameter :SO <sub>2</sub> and	
	measure is not	principles of	NOx emission	
	required for	sustainable		
	this indicator	development into		
		country policies and	Baseline:	+
		programmes and	SO <sub>2</sub> and NOx	
		reverse the loss of	emission due fossil	
		environmental	fuel combustion.	
		resources)		
		7.B -7.2 CO <sub>2</sub>		
		emissions, total, per		
		capita)		
Water quality	Ensuring that	-	Parameter: Amount	
and quantity	minimum flow		of water released	
	will be released		and disposal of	0
	from the weir to		waste water.	
	protect aquatic			
	life in the river		Baseline:	
	bed and waste		Flow of the river with	
	water is		dams at the	
	disposed		upstream	
	appropriately.			
	Project design			
	has been made			
	considering at			
	least 6.2 m³/s			
	of water			
	release <sup>7</sup> .			
Soil condition	Risk of erosion	-	Parameter:	0
	is considered		Leakage of water	
	in project		from project activity	
	design and		due to erosion,	
	plantation		sediment transport	
	along channel		and disposal of	
	route will be		excavation	

<sup>7</sup> http://www.resmigazete.gov.tr/eskiler/2003/06/20030626.htm#2



Indicator	Mitigation	Relevance to	Chosen parameter	Preliminary
	measure	achieving MDG	and explanation	score
	realized after		aggregates.	
	construction is			
	completed.		Baseline:	
	Sediment will		-Erosion exist	
	be discharged		without project	
	along the river		activity.	
	through		-Sediment is mainly	
	sediment		captured in	
	passage.		upstream dams.	
	Aggregates will		-No excavation	
	be used as		aggregate, solid or	
	filling material.		liquid waste exist.	
	Solid and liquid		-Project area is	
	wastes will be		classified as	
	collected and		degraded forest	
	disposed		land <sup>8</sup>	
	appropriately in			
	line with			
	regulations.			
	<b>.</b>			
	Area will be			
	rehabilitated			
	after			
	construction is			
	completed. Soil			
	is classified in			
	7 <sup>en</sup> group since			
	it is steep, has			
	a shallow layer			
	and does not			
	allow			
	cultivation			
	much.(Source			
	wCD report)			

<sup>&</sup>lt;sup>8</sup> Resadiye Directorate of Forestry, Forest Rehabilitation Implementation Project



Indicator	Mitigation	Relevance to	Chosen parameter	Preliminary
	measure	achieving MDG	and explanation	score
Other pollutants	There exist no	-	Parameter: Noise	0
	settlement		level during	
	close to project		construction.	
	site. Noise			
	during		Baseline:	
	construction		No dust or noise in	
	will be much		the baseline	
	lower than		scenario.	
	allowed limits.			
	Dust will be			
	minimized via			
	spraying the			
	roads and			
	other			
	measures as			
	per the EIA.			
	Liquid and			
	solid wastes			
	will be			
	collected and			
	disposed as			
	per the			
	regulations.			
	Noise and			
	vibration			
	measurements			
	will be carried			
	commissioning			
	commissioning.			
Biodiversity	Compensation	-	Parameter:	0
	payment made		Number of affected	
	for plantation of		trees,	
	new trees and		Release of sufficient	
	planting new		flow from the weir	
	trees. Existing		Functionality of fish	
	degraded		passage.	



Indicator	Mitigation	Relevance to	Chosen parameter	Preliminary
	measure	achieving MDG	and explanation	score
	forest area will be rehabilitated and new trees will be planted Releasing flow from river bed to ensure habitat quality as per the expert report. Building a functional fish passage to enable fish migration to be cross checked by experts.		Baseline: Project lies in degraded forest land. Upstream dams dominate the water flow in the river and fish migration.	
Quality of employment	Staff will be trained for the positions created during construction& operation phases. All Heath and Safety measurements will be applied according to local regulations.	-	Parameter: Number of certificates issued/trainings provided. Baseline: None. No training provided in the baseline scenario.	0
Livelihood of the poor	Payments will be made for expropriated land and passages will be build along the channel	MDG target 1.A (Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day )and 1.B	Parameter: -Payments made for expropriated land -Building overpasses and fences along the channel route	0



measure         achieving MDG         and explanation         score           route.         (Achieve full and productive         -Renovation of roads         -Renovation of           Road affected         employment and decent work for all,         Baseline:	mulcator
route.(Achieve full and productive-Renovation of roadsRoad affectedemployment and decent work for all,Baseline:willbe including womenexpropriation or	
productiveroadsRoad affectedemployment andBaseline:willbedecent work for all,No need forrepovatedincluding womenexpropriation or	
Roadaffectedemployment andBaseline:willbedecent work for all,No need forrepovatedincluding womenexpropriation or	
will be decent work for all, No need for	
renovated including women expropriation or	
and young people) overpass	
Access to No mitigation - Parameter: Fossil +	Access to
affordable and action is fuel replaced	affordable and
clean energy required for	clean energy
services this indicator.	services
Baseline:	
More than half of	
Turkey's electricity is	
generated via	
imported fossil	
fuels. <sup>9</sup>	
Project will decrease	
dependency on	
import fossil fuels	
(Natural gas, Coal	
and petroleum)	
compared to	
baseline scenario.	
Human and   No mitigation   Parameter: Number   0	Human and
institutional measure is of people	institutional
capacity required for participating	capacity
this parameter. stakeholder	
meetings.	
Baseline <sup>,</sup>	
None	
Quantitative Mitigation MDG target 1.B Parameter: Payment 0	Quantitative
employment measure is not (1.4, 1.5, 1.7 made to staff.	employment
and income required for Achieve full and	and income
generation this indicator. productive Baseline	generation
employment and None	-
decent work for all,	

<sup>&</sup>lt;sup>9</sup> <u>http://www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/istatistik2009/37(06-09).xls</u>



Indicator	Mitigation	Relevance to	Chosen parameter	Preliminary
	measure	achieving MDG	and explanation	score
		including women		
		and young people)		
Balance of	Mitigation	MDG target 8.D	Parameter:	+
payments and	measure is not	(Deal	Currency saving due	
investment	required for	comprehensively	to avoided fuel	
	this indicator.	with the debt	import.	
		problems of		
		developing	Baseline	
		countries through	Energy import is	
		national and	major cause of	
		international	foreign trade deficit <sup>10</sup>	
		measures in order		
		to make debt	Project will replace	
		sustainable in the	fossil fuel import for	
		long term)	electricity generation	
			and result in net	
			foreign currency	
			saving.	
Technology	Mitigation	MDG target 8.F (In	Parameter:	0
transfer and	measure is not	cooperation with the	Expenditures for	
technological	required for	private sector, make	equipments	
self-reliance	this indicator.	available the		
		benefits of new	Baseline	
		technologies,	There exists similar	
		especially	plant operated by	
		information and	the company in	
		communications)	other locations.	

# Justification choices, data source and provision of references

Air quality	
	Project will decrease use of fossil fuels for electricity generation and prevent particulate matter, $SO_2$ , NOx and odour which form as a result of incomplete combustion. For ease of monitoring, only $SO_2$ and $NO_x$ emissions have been selected as monitoring parameter.
	(Source: National GHG Inventory of Turkey

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http://www.maliye.gov.tr/Lists/TabMenuIcerik/Attachments/107/Macroeconomic%20Outlook%20Report%20may-june%202012.pdf



	http://unfccc.int/files/national_reports/annex_i_ghg_inventories/national_inventorie
	s_submissions/application/zip/tur_2009_crf_13apr.zip)
Water quality and quantity	Since the project activity is a run-off-river type HEPP, it does not cause any pollution or change in water quality in terms of chemical, biological oxygen demand or any other pollutants. There exists two dam type power plants at the upstream which have design flow rate of more than two fold of the proposed power plant, therefore, the proposed power plant will use only a small portion of the flow released from the dams at the upstream.
	During construction phase, water will be used for concrete production, road construction and watering which will not generate waste water. Main wastewater sources will be domestic due to domestic use of potable water by staff in plant facilities. Such waste water will be removed in accordance with principles stated in technical limitations regarding septic tanks contained in chapter two of "Technical Methods Notice on Water Pollution Control Regulations" which was published on the Official Journal number 20748 dated January 7, 1991.
	The minimum flow from proposed project has been defined as 10% by the newly issued regulations. Project will comply with all relevant regulations. In practice, actual water released from the plant will be much higher as the design flow rate of the proposed plant is less than half of the plant at the upstream. When we review the annual operating regime of the plant and natural flow, we'll see that even if the proposed project is operated at maximum capacity, the average water regulation ratio will be maximum about 77% of the natural flow. <sup>11</sup> Low released to river bed will be monitored through gauging station located at the downstream of the weir.
	(Source: Revised Feasibility Report Table 11.1, EIA Study Section V.I.13)
Soil condition	The geological survey for the project has been conducted in detail in feasibility report and before project implementation. The region has been classified as zone one as per the geological analysis made. <sup>12</sup> The project design has been made considering the risk of earthquake and erosion. Original project design has been revised and spitted into three smaller projects which will reduce the impact of erosion in the region on the project activity. The project is not expected to induce or increase risk of erosion or earthquake compared to baseline scenario. In order to prevent flow of soil into the channel due to erosion, the high risks regions at the upside of the channel will be dragged and berms will be built to levelize the area. In case of any leakage from the channel, the drainage channel and by-pass line near the powerhouse will be used to prevent any erosion caused by the leakage. Plantation along channel, the powerhouse and weir locations will be performed to

<sup>&</sup>lt;sup>11</sup> Revised feasibility report, Table 11.1

<sup>&</sup>lt;sup>12</sup> Initial EIA Report Pages 49-50



	minimize erosion. The channel route will be continuously monitored by the project owner and maintenance studies will be performed to prevent leakage from the channel.
	All wastes will be collected and disposed according to local regulation. Aggregate obtained from the excavation works are used in construction as filling material. About 27,200 tons aggregate is planned to be extracted and used as filling material in construction works. Further filling material has been supplied from existing nearby stone quarries.(Source : EIA report Table 5.1.1.1). Since, there exist several stone quarries around project site, project owner has not established a new quarry and purchased from existing ones when necessary.
	During the construction phase of the project there will be changes on the topographical structure of the land as a result of certain activities such as excavation, filling, levelling, material collection and unloading, road construction or upgrading. The excavation aggregates will either be used in road and weir construction or used as filling material and donated to locals for levelling of their lands.
	Due to the dams at the upstream, no significant sediment is expected. The sedimentation from intermediary basin will be mitigated by means of a sediment passage in the weir and a settling basin before the powerhouse.
	Top soil layer in the project site is either very thin or does not exist. The soil from the construction has been recovered where applicable and used in landscaping after construction works are completed. The soil in the project site is classified in 7 <sup>th</sup> group which limits growth of cultivated plant since the slope is steep, land slides or erosions exist and there exist a shallow soil layer. Project site is also salty and traces of sodifications are obvious. Project site for Resadiye-III Hepp is mainly slopped and rough. There exist a few decares of dry cultivated land within the area expropriated for the project activity. There exist no agricultural land classified within 1-2-3 classes within the project area (Source: Revised EIA report pages page 44-47 and Annex 9)
	(Source: EIA Report Section V.1.1, V.I.18, V.2.4, )
Other pollutants	
F	Project will not create any wastes(except domestic wastes which will be collected appropriately) during operation.
	During construction, excavation machines will cause dust and noise which will be minimized through measures as defined in EIA to minimize negative impact.
	Noise level during construction has been chosen as other source of pollutant which has also been assessed during EIA. It has been concluded that even all machines are operated at the same time; the noise limits wouldn't be reached. During construction, blasts may be used rarely for tunnel construction where compulsory. Since the structural geology is very loose, small ripping blasts will be sufficient.



	Since the blasts will be made in tunnel, the dust formation will be limited to the inside of the tunnel. The noise will also be limited at the outside of the tunnel.
	For operational period, noise and vibration will be measured and further precautions will be issued if necessary.
	Other solid wastes generated during the construction and operation will be separated for recycling metals, paper etc and deposited appropriately as required by regulations. Solid waste of residential nature generated at the site will be stored in covered containers suitable for short term storage and they will be emptied periodically into the organized waste land of nearest settlement.
	"Solid Waste Control Regulation" which became effective upon publishing on the Official Gazette and other relevant regulations will be observed and wastes will be removed accordingly.
	Dust formation has been calculated within the scope of EIA and is not expected to reach significant levels. In order to minimize the dust formation, aggregates will be washed and sifted. Also, trucks will be covered with tarps and loaded below maximum levels to prevent dust formation during transport.
	(Source: EIA Section V.1.8, V.1.15)
Biodiversity	Project site does not include any protected plant species, endemic species or those having extinction risk. Most significant impact on project site will be on vegetation along the conveyance canal. The project lies in a region where soil layer is not stable and the risk of erosion is high. Therefore, in order to prevent erosion to the canal and prevent flooding, the vegetation along the canal route will be cleaned in high erosion risk regions. After construction is completed, plantation will be carried in this route to prevent further erosion and for landscaping. About 0.6km <sup>2</sup> land owned by Directorate of Forestry will be used for the project activity. Forestation will be done both to prevent erosion and also as a part of landscaping component of the project activity. Species planted will be decided by Directorate of Foresty considering the natural species in the region which are mainly pine trees and deciduous trees (FIA Report Section V 1 10)
	The proposed project is located at the downstream of two dam type HEPP, namely Kiliçkaya and Çamlıgöze Dam having installed capacities of 120MW and 32MW respectively each having 162 m <sup>3</sup> /s design flow rate. Hence, these plants significantly affect the operating regime of the proposed project as the proposed projects have no reservoir. Compared to the plants at the upstream, proposed projects have lower installed capacities and flow rates.
	Since the minimum water flow determined by DSI (6.2 $m^3/s$ ) is continuously released to river bed and weir design involves a fish passage enabling upward migration, impact on biodiversity is not considered as significant. The design of the passage is made to enable flow from the passage to enable fish migration and act as attacking flow to direct the fishes. As the appropriate mitigation measures are taken during construction, the indicator was scored as zero. During the site visit, it has been confirmed by local workers in the plant that they observe upstream fish migration from the weir.
	An increase shall occur in the amount of nutrition for the aquatic ecosystem



	present in the reservoir area section with the formation of a still water at the field; waterfowls shall come to the site for resting, feeding, sheltering and incubation purposes. The fish species to be grafted into the reservoir ecosystem with the right planning shall also increase the fauna wealth of the site. Water flow regimes shall be bypassed with derivation channel during construction of the weir. Muddiness may be experienced in construction of derivations structures and diversion dams. These impacts shall be at minimum level and temporary only for the duration of construction. These impacts shall be kept at the minimum level and be temporary during the course of construction. The water kept in the weir (impoundment) shall directly be used in energy generation without being subjected to any proceedings; and shall present no chemical or similar changes.
	In order to determine the endemic and endangered plant species amongst the species listed in the above list, 'Red Data Book of Turkish Plants' Turkish nature Protection Association and Van 100. Yil University 2000 titled has been scanned; and no endangered plant species have been determined. In addition, there are no species taken under protection in accordance with the National and International Conventions.
	The bird species identified in the region has been given in EIA report together with their status wrt Berne Convention. No population density of the protected species according to Berne convention has been identified based on literature survey, observations and questionnaires.(Table 4.2.11.2 of EIA Report)
	For sediment transport, a passage has been included in weir design to prevent accumulation. Since the project is a runoff river type hepp, it cannot store sediment like dam type plants otherwise all the weir will be filled by sediment and project will be useless. For the proposed project, dams at the upstream stores the sediment at the upstream of the basin. Sediment from the basin between dam at the upstream and the proposed project will pass from the sediment passage which also includes a continuous flow to prevent accumulation. In addition to passage at the weir, the stilling basin before the powerhouse also precipitate the sediment and these sediment will be conveyed to the river bed through a bypass channel between conveyance channel and river bed.
	(Source: Feasibility Report Section 7.2, EIA Section V.2.11)
Quality of employment	Due to Health and Safety regulations and technical skills required for operating equipments, training will be provided to relevant staff. Also, some of the board operators will have training to get certificate for working at high voltage level as requested by local regulations. Trainings and certificates provided will increase their capacity compared to baseline level. The trainings will be renewed periodically if necessary. For simplification of monitoring, this indicator was scored as zero.
	(Source: Certificates & evidence for trainings to be provided during verification)
Livelihood of the poor	Income of local people employed in the plant will increase as a result of project activities which will also have impact on overall spending in the settlements near

	project site. According to State Planning Organization statistics, Reşadiye District is ranking as 803r <sup>d</sup> among 872 District in Turkey in terms of per capita income.
	In order to prevent any harm to the locals, company has placed additional fences along the channel which have been confirmed during SFR meeting. In terms of contribution to locals, company has made in kind and in cash donations for infrastructure of settlements in the region.
	Expropriation of land will be decided and carried out by relevant government agencies including experts from Directorate of Agriculture, Local Representatives(Village Head) and a jurat. Company will have no incentive on the value of land. Either the landowner or the company can apply for appeal if the value is not satisfactory for them. The valuation of the land has been made accordingly. Two meetings have been made, one being after construction is completed and no issue has been raised about the value of land.
	( <u>http://www.kirklareli.gov.tr/90planlama/90diger/dokuman/dpt_ilcelerin_sosyo_ekon</u> omik_gelismislik_siralamasi_arastirmasi_2004.pdf_page 205)
Access to affordable and clean energy services	The project will reduce dependency on fuel and energy import through use of local and renewable resources and help meet national energy demand and enable diversification in the energy supply. According to projections, electricity demand of Turkish grid will increase significantly in coming year. Using local sources will reduce dependency on import fossil fuel and will lead to more sustainable energy services in Turkey. Therefore, this indicator was scored as positive.
	(Source: Capacity projection 2008-2017, http://www.teias.gov.tr/YayinRapor/APK/projeksiyon/KAPASITEPROJEKSIYONU2 008.pdf figure 1., page 5)
Human and institutional capacity	Educational activities which are not part of the usual schooling system, such as environmental training, awareness raising and knowledge dissemination will increase through stakeholder meetings. Also, pproject will increase human and institutional capacity of the workers in terms of technical skills. (Source: LSC report, trainings provided to workers)
Quantitative employment and income generation	More than 200 people will be employed directly during construction and 15 people during operation. This will create a significant contribution to the local economy.
	(Source: Social security and insurance payment documents, and ( <u>http://www.kirklareli.gov.tr/90planlama/90diger/dokuman/dpt_ilcelerin_sosyo_ekon</u> <u>omik_gelismislik_siralamasi_arastirmasi_2004.pdf</u> page 217))
Balance of	
payments	Turkey is heavily dependent on import fossil fuel, especially natural gas which is



and investment	imported, for electricity generation. Project will reduce fuel import and result in net foreign currency saving proportional to electricity generation.		
	(Source: TEIAS: <a href="http://www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/istatistik2009/3">http://www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/istatistik2009/3</a> 7(06-09).xls , http://www.maliye.gov.tr/Lists/TabMenuIcerik/Attachments/107/Macroeconomic%2		
	0Outlook%20Report%20may-june%202012.pdf )		
Technology			
transfer and	Project will assist in transfer of new technology for company and in addition,		
technological	Technological skills of local suppliers and technicians are also expected to		
self-reliance	increase as a result of trainings provided by the equipment manufacturers.		
	However, since the impact will be limited to the company, indicator has been scored neutral.		



# SECTION G. Sustainability Monitoring Plan

No		1
Indicator		Air Quality
Mitigation measure		N/A
Chosen parameter 1.1		SO <sub>2</sub> emissions by thermal power plants
Current situation of parameter 1.1		Project has started generating renewable energy and thus has started contributing improvements in air quality.
Estimation of baseline situation of parameter		Total SO <sub>2</sub> emission related to electricity generation is about 936.1 Gg for 2007 according to National Inventory of Turkey <sup>13</sup> . Considering that electricity generation in 2007 is 183,339.7 GWh, SO <sub>2</sub> emission per MWh is calculated as 5.1 kg/MWh.
Future target for parameter 1.1		SO <sub>2</sub> emission reduction corresponding to 158.22 GWh generation is calculated as about 809 tons per year.
Chosen parameter 1.2		NOx emissions by thermal power plants
Current situation of parameter 1.2		Project has started generating renewable energy and thus has started contributing improvements in air quality
Estimation of baseline situation of parameter		Total NOx emission related to electricity generation is about 202.9 Gg for 2007 according to National Inventory of Turkey. NOx emission per MWh is calculated as 1.1 kg.
Future target for parameter 1.2		NOx emission reduction corresponding to 158.22 GWh generation is calculated as 171 ton per year.
Way of monitoring	How	Electricity generated by Resadiye-III HEPP and $NO_X$ and $SO_2$ emission data from GHG inventory of Turkey will be used as reference in calculation of the emission reduction.
	When	Yearly
	By who	Project Owner

No	2
Indicator	Water Quality and Quantity
Mitigation measure	Release of minimum flow to protect aquatic life
Chosen parameter 2.1	Flow rate of water released from the weir.
Current situation of parameter 2.1	Project has been commissioned and flow is continuously released from river bed.
Estimation of baseline situation of parameter	Natural flow of river course
Future target for parameter 2.1	Minimum 6.2 m <sup>3</sup> /s which will be will be redefined upon the results of the independent expert study which is subject to review by

<sup>13</sup> 

<u>http://unfccc.int/files/national\_reports/annex\_i\_ghg\_inventories/national\_inventories\_submissions/a</u> <u>pplication/zip/tur\_2009\_crf\_13apr.zip</u>\_,Worksheet:Table1s1 **)** 



		DOE and the GS. Three gauging stations have been installed upon request by DSI. Those are located at inlet of conveyance channel, outlet and downstream of the weir for minimum flow which will be used for monitoring the environmental flow. For monitoring of minimal flow released to river bed, gauging station located right after weir located in river bed will be used
Way of monitoring	How	Flow released from the weir will be calculated via subtracting flow used for electricity generation from incoming flow data obtained from DSI until gauging stations are installed. This approach will be reviewed by the independent expert and respective expert opinion will be provided to the DOE and the GS. Gauging stations installed has been functional on 21/11/2011 until which flow released has been fixed via gate openings at the weir.
		After gauging stations are installed, flow measurement will be monitored continuously from both gauging stations located at downstream of the weir.
		Flow released will be assessed by an independent expert with relevant background and experience will assess the adequacy of flow released considering local conditions. The expert report will include fieldwork and observation as required by GS and refer to relevant analysis methods additional measures/recommendations if any.
	When	Continuously
	By who	Project Owner
Chosen parameter 2.2		Waste water
Current situation of parameter 2.2		All waste water is collected and disposed properly.
Estimation of baseline situation of parameter		No waste water is generated
Future target for parameter 2.2		Disposal of wastewater as required by the relevant regulations.
Way of monitoring	How	Checking disposal records.
	When	Annually
	By who	Project Owner

No	3
Indicator	Soil Condition
Mitigation measure	Excavation wastes used in construction and disposed along the channel for building access road. Sediment passages to enable sediment transport and planting new trees after construction works.
Chosen parameter 3.1	Storage of excavation wastes in appropriate locations.
Estimation of baseline situation of parameter	None as there exist no excavation waste in the baseline scenario
Current situation of parameter 3.1	All excavation aggregates are used as filling material or stored at appropriate places determined by local authorities.



Future target for parameter 3.1		Disposal of excavation wastes appropriately.
Way of monitoring	How	Observing disposal of excavation aggregates around the project site and interviews with locals to ensure that no aggregate is disposed.
	When	Once after completion of the construction
	By who	Project Owner
Chosen parameter 3.2		Sediment Transport
Current situation of parameter 3.2		Sediment transport is enabled through sediment passages
Estimation of baseline situation of parameter		Natural transport and accumulation of sediment along the river bed. Dams at the upstream captures most of the sediment.
Future target for parame	eter 3.2	
Way of monitoring	How	Observation of sediment accumulation around weir and diverted section
-	When	Yearly
	By who	Project Owner
Chosen parameter 3.3		Soil Erosion
Current situation of para	ameter 3.3	
		Measures including creating terrace sets and plantation have been applied. No erosion has taken place due to project activity.
Estimation of baseline situation of parameter		In the baseline, erosion occurs in the region in the absence of project activity.
Future target for parameter 3.3		No erosion or leakage due to project activities.
Way of monitoring	How	Checking evidence of erosion through site visits.
	When	Yearly
	By who	Project Owner



No		4
Indicator		Biodiversity
Mitigation measure		Releasing minimal environmental flow which is determined as 6.2 m <sup>3</sup> /s by DSI, building a fish passage and monitoring proper functioning of fish passage. An independent expert assessment will be conducted and minimal flow will be increased as per the expert recommendations if necessary.
Chosen parameter		Evaluation of conformity of fish passage design for upward migration and adequacy of flow released.
Current situation of para	ameter	Min. flow is continuously released from the river bed.
Estimation of baseline	situation of	Natural flow of river which is dominated by upstream dam
parameter		type plants.
Future target for parameter		Building a fish passage appropriate for local species in the river and releasing adequate amount of water.
Way of monitoring	How	Observing free flow from the fish passage and calculating released flow from flow data records.
	When	Observing free flow from the fish passage and calculating released flow from flow data records and passage design. The functionality of the passage will also be assessed by an expert. The assessment/opinion of independent expert on effectiveness of the fish passage will be included in monitoring report. Expert assessment will be supported by references and local data. Alternatives, additional measures and recommendations will also be discussed in the expert report.
	By who	Project Owner

No	5
Indicator	Balance of payments
Mitigation	Decrease dependency on fossil fuel through increasing use of local
measure	resources.
Chosen	Currency saving.
parameter	
Current situation	Project has started generating electricity and has enabled significant savings
of parameter	since commissioning. Exact figures will be submitted during verification.
Estimation of	In 2007, about 20.5 billion m <sup>3</sup> natural gas been used for about 95,000 GWh
baseline situation	electricity generation and about € 5 billion has been spent.
of parameter	
	Source:
	http://www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/ist2007/43
	<u>.xls</u> and
	http://www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/ist2007/36
	( <u>06-07).xls</u> for generation and fuel consumption.
	http://www.esgaz.com.tr/dogalgazfiyatlari.asp for natural gas price.
Future target for	Decrease natural gas consumed for electricity generation. In parallel with
parameter	generation.



Way of monitorin g	How	Through comparing electricity generated by the proposed project and natural gas that would be used to produce the same amount of electricity according to baseline scenario.
	Whe	Yearly
	n	
	Ву	Project Owner
	who	

No			6			
Indicator			Livelihood of the poor			
Mitigation measure			Building ov	erpasses an	d fences al	ong the canal
magaalon modeare			banang of	mont orogo		ong the banar
			near settle	ment areas.		
Chosen parameter			Building a	overpasses,	bridges a	and installing
-			fences in	places arou	nd settlem	ent areas as
			requested	hy locale		
Current situation of	parameter		The chann	el is built alor	ng a steep l	hillside. There
RESADIYE H	IES-3		exist some	e roads for a	access to s	settlements in
0+003	ÜSG		the upside	of the hills.	Passades a	are built along
0+673	ÜSG		the channe	l ac bolow:	5	5
1+248	ÜSG					
1+418	ASG		Locatio	Overpass/	Locatio	Overpass/
1+850	USG		n (km)	Undernas	n (km)	Undernas
1+872	USG			Chacipas		Chacipas
2+185	USG			S		S
2+590	LISG		0+003	0	5+026	U
2+880	ÜSG		0.072	0	5,200	0
2+892	ÜSG		0+673	0	5+300	0
3+481	ÜSG		1+248	0	5+460	0
3+740	ÜSG		1+/18	11	6+520	11
5+026	ASG		11410	0	01320	0
5+300	ÜSG		1+850	0	6+672	U
5+460	USG		1+872	0	6+840	0
6+520	ASG		0.405	0	7.440	0
6+840	LUSG		2+185	0	7+143	0
7+143	ÜSG		2+590	U	7+367	U
7+367	ASG		2+614	$\circ$	7+505	11
7+505	ASG		21014	0	7:303	0
7+748	ÜSG		2+880	0	7+748	0
7+960	ASG		2+892	0	7+960	U
8+293	ASG		2:002	0	0.000	
8+420	JUSG		3+481	0	8+293	U
and the second s			3+740	0	8+420	0
Estimation of headeling			N	<b>f</b>	a ala alia a	
Estimation of baselin	ne situation (	of parameter	. No need	for overpas	s, chain o	r tence since
			there exist no channel			
Future target for parameter			Overpasses and fences built on appropriate			
			leastions clong the channel			
vvay of monitoring	HOW	I nrough interviews with locals.				
		When	Annually.			
		By who	Project Ow	/ner		

No	7
Indicator	Biodiversity and Soil Condition
Mitigation measure	Plantation of new trees along the channel route
Chosen parameter	Payment made to Forestation Fund of Directorate of Forestry for planting new trees



Current situation of parameter		Compensation payments have been made to Directorate of Forestry. In addition, saplings have been donated to Directorate of Forestry and plantation of trees have been completed.
Estimation of baseline situation of parameter		Project area is classified as degraded forest area.
Future target for parame	eter	Reforestation of the area affected by the project activity
Way of monitoring	How	Checking receipts for forestation and on site observation.
	When	Once after construction is completed. Forestation of the project site will be carried out by Directorate of Forestry after construction works are completed. Payment has been made already and Directorate is waiting for completion of the construction works to initiate plantation.
	By who	Project Owner

No		8
Indicator		Quality of Employment (DNH 8)
Mitigation measure		All recruited technical staff will be trained for operation and maintenance of equipment and Health and safety measures. Also, staff working with high voltage equipment will be certified (also required by regulations). The trainings will be renewed for new staff and existing staff when necessary.
Chosen parameter		Number of personnel certified/trained
Current situation of parameter		Trainings have been provided and staff working with high voltage equipment certified by relevant authorities.
Estimation of baseline situation of parameter		None as there exist no staff before project implementation.
Future target for parameter		All staff to be trained for Health and safety issues and relevant staff should be certified for working at high voltage environment.
Way of monitoring	How	Through review employment records and training documents/certificates
	When	Yearly
	By who	Project Owner

No	9
Indicator	Soil condition
Mitigation measure	Disposal of solid and liquid wastes
Chosen parameter	Disposal of used oil in equipment and other solid wastes
Current situation of parameter	All wastes are collected and disposed to the nearest settlements land fill station. Liquid wastes are collected and disposed as required by local regulations.
Estimation of baseline situation of parameter	No solid or liquid waste in baseline scenario.
Future target for parameter	Only solid waste will be due to domestic use during operation period. All solid wastes should be collected and disposed appropriately. Since equipments are new, it is not expected to generate any waste oil in first years however, in case any waste oil is generated, it will be disposed as per the



		regulations via licensed oil collecting companies.
Way of monitoring How		Via checking maintenance records and disposal records for waste oil. For solid waste, observations around project site will be made to ensure solid wastes are disposed appropriately.
	When	Yearly
	By who	Project Owner

No		10
Indicator		Livelihood of the poor
Mitigation measure		Renovation of damaged part of the road and building passages for locals
Chosen parameter		Proper functioning of the road and implementation of passages
Current situation of parameter		New roads have been constructed for locals and affected roads have been renovated. Under&Overpassages should be built for access to other side of the channel.
Estimation of baseline situation of parameter		There exists several primitive bridges and unpaved roads for settlements at the upside of the channel route.
Future target for parameter		Proper functioning of the roads. 26 underpass&overpass are planned to be built along the conveyance line.
Way of monitoring	How	Confirmation during site visits via interviews with locals that the roads have been built and working properly.
	When	Once after construction of the plant is completed
	By who	Project Owner

No		11
Indicator		Quantitative Employment and Income Generation
Mitigation measure		Recruitment of local staff to work in the plant during operation
Chosen parameter		Number of local staff recruited in the plant.
Current situation of parameter		15 staff has been recruited.
Estimation of baseline	situation of	No staff will be recruited in the baseline scenario and the
parameter		locals will either work in other jobs or stay as unemployed
Future target for parameter		About 30% of the locals are expected to be recruited from
		locals if they have the necessary skills.
Way of monitoring	How	Checking employment records.
	When	Annually
	By who	Project Owner

No	12
Indicator	Livelihood of the poor
Mitigation measure	All landowners should be paid as valued by the relevant institutions.
Chosen parameter	Compensation payments made to landowners
Current situation of parameter	All payments determined by Government Institutions have been made to land owners.
Estimation of baseline situation of parameter	No need for payment or expropriation in the baseline scenario.



Future target for parameter		All payments to landowners should have been made.
Way of monitoring	How	Checking payment records.
	When	Once after construction is completed.
	By who	Project Owner

No		13
Indicator		Access to affordable and clean energy services
Mitigation measure		No mitigation measure is required.
Chosen parameter		Fossil fuel saving.
Current situation of parameter		20.5 billion m <sup>3</sup> of Natural Gas is used for 95,000 GWh of electricity (according to 2007 TEIAS figures). Which will be reduced proportional to the generation from the plant.
Future target for parameter		Assuming that about 50% of the Turkish energy mix is from import natural gas <sup>14</sup> , project is expected to reduce NG consumption by about 19.7 million m <sup>3</sup> in return for 158.22 GWh generation.
Way of monitoring	How	Electricity generation statistics of Turkey will be used for calculating avoided natural gas import.
	When	Yearly
	By who	Project Owner

No		14	
Indicator		Air Quality	
Mitigation measure		Watering construction site and roads to minimize dust.	
Chosen parameter		Dust formation	
Current situation of parameter		Project has been commissioned. No dust is emitted anymore.	
Estimation of baseline situation of		Natural dust formation due to wind etc.	
parameter			
Future target for parameter		Minimum disturbance to locals due to dust formation and	
		watering the project site.	
Way of monitoring	How	Taking pictures of watering during construction	
	When Once after construction is completed.		
	By who	Project Owner	

No		15	
Indicator		Livelihood of the poor	
Mitigation measure		Building fences around the conveyance line	
Chosen parameter		Fences built along the conveyance line.	
Current situation of parameter		Fences have been built along the channel near bridges and overpasses and also near the settlement areas.	
Estimation of baseline situation of parameter		No need for fence in baseline scenario.	
Future target for parameter		Length of fences are planned to be increased each year and eventually all channel is planned to be fenced.	
Way of monitoring	How	Confirmation during site visits and documents for fence installations(pictures, contracts or invoices)	

<sup>&</sup>lt;sup>14</sup> <u>http://www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/ist2007/43.xls</u>



	When	Annually until all channel is fenced.	
	By who	Project Owner	
No		16	
Indicator		SP1	
Mitigation measure		Ensuring that water is available for locals for irrigation and	
		other purposes	
Chosen parameter		Release of sufficient flow to the river bed	
Current situation of para	ameter	Flow is continuously released from the weir and monitored	
		via gauging stations.	
Estimation of baseline	situation of	There is limited agricultural activity in the region which does	
parameter		not require significant irrigation. No other water usage exist in	
		project site	
Future target for param	eter	Sufficient flow should always be available for irrigation and	
		other needs.	
Way of monitoring	How	Interviews with locals	
	When	Annually	
	By who	Project Owner	

No		17	
Indicator		Other Pollutants-Noise and Vibration	
Mitigation measure		Measuring noise and vibration and ensuring that noise and vibration during operation of the plant is in line with the limits.	
Chosen parameter		Noise and Vibration due to operation of turbines	
Current situation of parameter		Project is operational	
Estimation of baseline situation of parameter		No noise or vibration source in baseline scenario other than natural sources.	
Future target for parameter		Noise and vibration should be within the limits for safety of staff and environment.	
Way of monitoring How When		Measurements via testing equipments	
		Once after commissioning of the plant	
By who		Project Owner	



# SECTION H. Additionality and conservativeness



# H.1. Additionality

Additionality assessment is performed according to the "Tool for the demonstration and assessment of additionality" approved by UNFCCC. Details are available in PDD

# H.2. Conservativeness

Conservative approach has been followed in calculating baseline emission factors and investment analysis sections as detailed in PDD.



# ANNEX 1 ODA declarations

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Project reference:	Hamzalı and Reşadiye (Reşadiye I-II-III) Hydroelectric Power Plants	
то:	Gold Standard Foundation	
Declaration of Non-	Use of Official Development Assistance by Project Proponent;	
As Project Owner of	of the above-referenced project, acting on behalf of all project participants,	
I now make the foll [Authorised Repres	owing representations: sentative:]	
I hereby declare th	at I am duly and fully authorised by the project owner of the above referenced	
project, acting on b representations on	ehalf of all project participants, to make the following Project Proponent's behalf:	
I. Gold Standard D	Documentation	
i am familiar wit	th the provisions of Gold Standard Documentation relevant to Official chance (CDA), Lunderstand that the above referenced project is not eligible for	
Gold Standard re	clistration if the project receives or benefits from Official Development	
Assistance under t	he condition that some or all credits coming out of the project are transferred to	
above-referenced to	andy. I now expressly declare that no mancing provided in connection with the project has come from or will come from ODA that has been or will be provided	
under the condition	n, whether express or implied, that any or all of the credits [CERs, ERUs or	
VER5] issued as a country of origin of	result of the project's operation will be transferred directly or indirectly to the	
country or origin of		
II. Duty to Notify U	Jpon Discovery.	
that ODA has been	n used to support the development or implementation of the project, or that an	
entity providing O	DA to the host country may at some point in the future benefit directly or	
known to the Gold	credits generated from the project as a condition of investment, I will make this Standard immediately.	
III. Sanctions.		
I am fully aware th	at under Section 10 of the Gold Standard Terms and Conditions sanctions	
and damages may Gold Standard cre	y be incurred for the provision of failse information related to Projects and/or	
Gord Standard Cle	TURKONF-MNG -	
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Signed: Name:	Gilven BALKAN	

# ANNEX 2 Special Guidance for Run-off-River HEPP project

Management domain	
Minimum flow which guarantees habitat quality and prevents critical oxygen and chemical properties.	Minimum 6.2 $\text{m}^3$ /s of water will be released for the section between the weir and the HEPP corresponding to 10% of project design flow rate. This minimum flow shall guarantee habitat quality and prevent critical oxygen and chemical properties. <sup>15</sup>
No disconnection of lateral rivers.	There shall be no disconnection of lateral rivers. Flows of Kelkit River will be discharged back to the same river bed after being used in energy production.
Minimum water depth for fish migration during critical periods.	Min 6.2 $m^3/s$ of water shall always be released from the weir, even in dry seasons when there is not enough water for energy production, which will aid aquatic life, compared to the conditions before the construction of the project.
Lateral and vertical connectivity shall not be substantially disturbed	There shall be no disconnection of lateral rivers. Since the project is a small run of river project, it does not have a storage volume to substantially disturb the underground waters. Lateral connectivity will not be affected by the project activity. Project does not have a dam lake to disturb lateral connectivity. Flow will always be
Provides sufficient transport capacity for sediments	The weir has been designed to prevent any sediments accumulation before the weir will be released to downstream.
Landscape compartments shall not be destroyed. Flood plain ecosystems shall not be endangered.	Since the project is implemented in and does not have a dam but a small weir to regulate the waters of the brook, landscape compartments and flood plain ecosystems will not be affected by the project activity. Project will not have any impact in flooded area and does not create any new reservoir other than existing river bed. Project does not have storage capacity to change the flow regime in the river. Project will have a conveyance channel which involves construction activities. Flow will also be released to river bed to prevent drying so no impact on floodplain is expected.

<sup>15</sup> <u>http://www.resmigazete.gov.tr/eskiler/2003/06/20030626.htm#2</u>



	rehabilitated via new plantation along the channel.
Conservation of locally adapted species and ecosystems	Locally adapted species and ecosystems will not be affected by the project. <sup>16</sup> Measures will be issued to minimize impact on biodiversity as given in SD monitoring plan and EIA.
Hydropeaking	
Rate of change of water level should not impair fish and benthic population.	Project does not involve a storage capacity. A consistent flow of 6.2 m <sup>3</sup> /s shall be flowing, so that there shall not be any significant change in water level. Regarding the consistency of rate of flow after the weir, the weir shall regulate and help the consistency of the flow of water.
Reduction in water level should not lead to drying of the water course.	Same amount of water shall be released even in dry seasons.
No isolation of fish and benthic organisms when water level decreases	The weir shall prevent the isolation of fish and organisms by providing a steady minimal flow, even when water level decreases. A fish passage has also been built as a part of weir design to enable upward migration
No impairment of spawning habitat for fish	The weir will not affect the spawning habitat for fish. Necessary precautions including minimum flow, sediment and fish passage has been included in project design which will be monitored after commissioning of the plant.
Reservoir Management	Since the project is a run of river power plant, it does not feature any large storage volume, but a weir to regulate the water. Unlike the dam reservoirs, a reservoir operation policy would not be applied to this project.
Changes in reservoir levels should not impair lateral ecosystems (flood plains, river shores, )	Since the project is a run of river power plant, it does not feature any significant storage volume. Unlike the dam reservoirs, a reservoir operation policy cannot be applied to this project.
Connectivity with lateral rivers should not be impaired	There exist no lateral river affected by the project activity.
Sediment accumulation areas should be used as valuable habitats, where feasible.	The project is a small run-off-type HEPP. No significant accumulation is expected as there exist a sediment passage in the weir design and all sediments are trapped by the dam type hepps at the upstream. Sediment from intermediary basins will pass through sediment passages.(Original FSR section 4.8 and Original EIA Report Section V.1.3)
Special protection of flood plain ecosystems if they are impaired	The project is not expected to have an impact on flood plain ecosystem since it is not a dam type plant and does not have height or storage

<sup>16</sup> Revised FSR, Section 7



	capacity to impact flood plain. Project does not have flood control purposes therefore, no protection measure is required for flood plain ecosystem. Kılıçkaya and Çamlıgöze Dams located at the upstream of proposed plants and operated by State Hydraulic Works Authority are key facilities in the basin and have flood control purpose and perform regulation on waters.(Source: FSR Section 1.3.1, 4.7.2, 4.7.3,10,
Changes in reservoir levels should not impair lateral ecosystems (flood plains, river shores, )	Since the project is a run of river power plant, it does not feature any significant storage volume. Unlike the dam reservoirs, a reservoir operation policy cannot be applied to this project. As a principle, in order to operate the plant efficiently, water level should be kept at maximum level.
Sediment Monogoment	
Sediment Wanagement Sediments have to pass through the power plant.	Sediment accumulation is not desired in the weir due to functioning or the plant. Since there exist dams at the upstream, most of the sediment will be collected there. Sediment from intermediary basin will pass through the plant via sediment passage built designed according to sediment load of the basin. Sediment management will be performed and controlled by means of a sediment passage which have been designed and constructed as the integral part of the Project. <sup>17</sup> Since the project is a run of river power plant, it does not feature any storage volume therefore this criteria
deficit in sediments.	is not applicable to the proposed project activity. Sediment passage has been considered in project design already (Original FSR section 4.8 and Original EIA Report Section V.1.3)
Sediment transport should sustain morphological structures, which are typical for the river.	Sediments will pass from the radial gates and released to downstream to prevent accumulation. (Original FSR section 4.8 and Original EIA Report Section V.1.3)
No accumulation of sediments below dams	Since the project is a run of river power plant and included a sediment passage, it does not cause significant accumulation of sediment as most of the sediment is trapped in upstream dam type plants.(Original FSR section 4.8 and Original EIA Report Section V.1.3)
Riverine habitats have to be established	As all measures are defined for identified impacts, no significant impact is expected on Riverine habitats. Original FSR section 4.8 and Original EIA Report

<sup>17</sup> Original FSR, section 4.8



	Section V.1.3)
No erosion and no accumulation in the river bed below storage dams and water intakes because of a	Since the project is a run of river power plant, it does not feature any significant storage volume. Original
deficit in sediments.	FSR section 4.8 and Original EIA Report Section V.1.3)
Power Plant Design	
Free fish migration upwards and downwards.	Since there shall be always water flowing in the original river bed, free fish migration upwards and downwards will be available through the fish passage of the weir. Fish migration and impact of project will be assessed by an expert and additional measures will be issued to enable effective fish migration.
Protection of animals against injury and death stemming from power plant operations.	Necessary precautions which includes fences placed along the channel and filters placed in front of turbine inlets to prevent access of fishes will be taken in the power plant to prevent injury to animals during operation.
Social Impacts	
Cultural Landscapes	There exist no National Parks, Nature Monuments, or cultural sites within the project site and its
Ĩ	immediate surroundings. (Original EIA report section V.2.9)
	There shall not be any negative social impact on
Human heritage (including protection of special	human heritage and way of life since the power plant
ethnic groups) and preservation of life styles.	shall not be on any settlement territory.
Empowerment of local stakeholders in the decision	views about social impacts at stakeholders meetings
making process about mitigation and compensation	whereby the project owners would take the proper
of social impacts	mitigation measures.
Resettlement of local population	Settlement of local population is not affected.
Build additional social infrastructure due to	The project would not induce any migration.
migration induced by the project.	
	The downstream water quality shall not be affected,
Water quality and fishing losses affecting	since the same water flows shall be kept
downstream riverside population.	downstream. Besides, the weir shall provide fishing
	downstream population
	ao misu cum population.



## ANNEX 3. STAKEHOLDER MEETING INVITATIONS



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Category Code	Organization (if relevant)	Name of invitee	Way of invitation	Date of invitation	Confirmation received? Y/N
A	Local Participant	Necati ŞAHIR,	Invitation Letter	02.12.2010	Y
A	Local Participant	Osman ÇİÇEK,	Invitation Letter	02.12.2010	Y
A	Local Participant	Engin ÇiÇEK,	Invitation Letter	02.12.2010	Y
A	Local Participant	Ramiz YAĞCI,	Invitation Letter	02.12.2010	Y
A	Local Participant	Muammer ÖZDEMİR,	Invitation Letter	02.12.2010	Y
A	Local Participant	Mahmut BEKDEMİR,	Invitation Letter	02.12.2010	Y
A	Local Participant	Fahrettin YÜKSEL,	Invitation Letter	02.12.2010	Y



A	Local Participant	Mehmet YILDIZ,	Invitation Letter	02.12.2010	Y
A	Local Participant	İdris GÜLER,	Invitation Letter	02.12.2010	Y
A	Local Participant	Cemal ÇEVİK,	Invitation Letter	02.12.2010	Y
A	Local Participant	Lütfü ŞAHİN,	Invitation Letter	02.12.2010	Y
A	Local Participant	Bahar YÜKSEL,	Invitation Letter	02.12.2010	Y
A	Local Participant	Kemal DEMİR,	Invitation Letter	02.12.2010	Y
A	Local Participant	Mehmet GERMEÇ,	Invitation Letter	02.12.2010	Y
A	Altıparmak Village Headman	Nadir ALDEMİR,	Invitation Letter	02.12.2010	Y



A	Çavusbeyli Village Headman	Sezai İSTİPAÇ,	Invitation Letter	02.12.2010	Y
A	Local PArticipant	Muammer ÇAKIR, t	Invitation Letter	02.12.2010	Y
A	Local Participant	Hilmi YILDIZ,	Invitation Letter	02.12.2010	Y
A	Accountant	Aytaç YILDIRIM,	Invitation Letter	02.12.2010	Y
A	Driver	Ali AYDIN,	Invitation Letter	02.12.2010	Y
A	Journalist	Yakup ORAKÇI,	Invitation Letter	02.12.2010	Y
В	Municipality Staff	Kemal GÜRPINAR,	Invitation Letter	02.12.2010	Y
В	Forest Engineer	Mutlu TURAN,	Invitation Letter	02.12.2010	Y



В	Directorate	Kenan KIŞLA,	Invitation Letter	02.12.2010	Y
В	Mayor	Rafet ERDEM,	Invitation Letter	02.12.2010	Y
В	Chief Superintendent Police	Gürkan BAL,	Invitation Letter	02.12.2010	Y
В	Directorate of Education	Mustafa CAMCI,	Invitation Letter	02.12.2010	Y
В	Agricultural Directorate of Reşadiye	Mehmet DEMİRKOL,	Invitation Letter	02.12.2010	Y
В	Policeman	Tufan ÇATAK,	Invitation Letter	02.12.2010	Y
В	Security Analyst	Eftal ERDOĞAN,	Invitation Letter	02.12.2010	Y
В	Province Directorate of Environment and Forestry	İhsan Ekici	Invitation LEtter	02.12.2010	Y



С	UNFCCC Focal Point	Fulya SOMUNKIRA NOĞLU	Invitation Letter	02.12.2010	Y
D	TEMA District Representative	İsmail AVŞAR,	Invitation Letter	02.12.2010	Y
D	REC	Gülçin Özsoy	Invitation Letter	02.12.2010	Y
E	Gold Standard	Nahla Sabet	e-mail	02.12.2010	Y
E	Gold Standard	Bahar Ubay	e-mail	02.12.2010	Y
F	WWF	Buket Divrak/Ceren Ayaş	Invitation Letter/e-mail	02.12.2010	Y
F	Greenpeace	-	e-mail to bilgi@greenpe ce.org	02.12.2010	Y
F	Helio International	-	email	02.12.2010	Y



F REEP - e-mail 02.12.2010 Y
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Jale and time. 24, 12,2000			
Name participant, job/position in the community	Male/Female	Organization (if relevant)	Contact details
	<u> </u>	Signature (IMZA)	T 0090356 461 3230
Şakir YILDIZ,	Male		Çavuşbeyli Village
ocal Participant		1	4613230
Osman ÇİÇEK,	Male	Holen TILDIL	Umurca Village
Local Participant Engin ÇiÇEK,		$\sim$	Umurca Village
Loopl Participant	Iviale	Terry	
Ramiz YAĞCI,	Male		T: 0090537 723 1928
Local Participant		A .A	Altıparmak Village
Muammer ÖZDEMİR, Local Participant	Male	Land	
Mahmut BEKDEMIR, Locai		1.12	T:0090356 481 3031
Participant	Male	We	Umurca Village
Fahrettin YÜKSEL, Locai Participant	Male	find	1:0090356 481 3014
Mehmet YILDIZ,	Male	JA	T:0090356 461 4347
Local Participant			Çavuşbeyli Village
ldris GÜLER,	Male	Jul .	T:0090356 481 3047
Local Participant Cemal ÇEVİK,		MAL MAL	T:0090356 461 2780
Local Participant		Mul	Akcakolav
Lütfü ŞAHİN,	Male	About	T:0090356 461 3250
Local Participant		121	Köklü Village
Bahar YÜKSEL,	Female		T:0090356 481 3014
Local Participant		AND -	Umurca Village
Kemal DEMIR,	Male	The	Umurca Village
Local Participant		I MA	T: 0000356 461 344
İsmail AVŞAR, TEMA District Representative	Male		Resadive
Mehmet GERMEÇ, Local Participant	Male		Temiraga



Mutlu TURAN,	Male	Telebritz	T: 0090356 461 3025
Forest Engineer	Wale	1017112	Forest Directorate Of Resadiye
Nadir ALDEMİR, Altıparmak Village Headman	Male	Telefon ile	T: 0090356 461 4664 0-530 495 3 94 Altiparmak
Sezai İSTİPAÇ, Çavusbeyli Village Headman	Male	2.4	T: 0090356 461 3211 Çavuşbeyli Village
Muammer ÇAKIR, agriculturalist	Male	allat	T: 0090356 461 3398
Aytaç YILDIRIM, Accountant	Male	Applet	Köklü Village
Yakup ORAKÇI, Journalist	Male		Office Bağ- Kur of Reşadiye District
Hilmi YILDIZ, Local Participant	Male		T: 0090356 461 6667 Çavuşbeyli VIIIage
Necati ŞAHIR,	Male		T: 0090356 461 4268



Participant list stakeholder cor	sultation		
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Figure 4. Hand delivery confirmation list for initiations to stakeholders participating the first meeting





Figure 5. Emails sent to GS experts and supporting NGOs



## ANNEX 4. FEEDBACK FORMS AND SFR PARTICIPANT LIST

Name	What is your impression of the meeting?	What do you like about the project?	What do you not like about the project?
Suat Demir	The meeting has changed my negative impression about HEPPs	Clean Energy Local Employment Decrease in foreign dependency	-
İsmail Sönmez	Informing locals and increasing awareness by project owners was positive	Decreasing foreign dependency and providing job opportunities	No negative issue
Selahattin Yücel	Having information about the project and receiving wishes and requests of the villages heads impacted by the project was positive	Contribution to local economy and job opportunities for locals	Negative impact on forest and nature.
Erhan Aldemir	Information provided was useful	Contribution to local and national economy was very important	It has been realized that more careful study should be carried out regarding environmental impact during construction of the project.
Fatih Çöpoğlu	-	Renewable energy source	-
Mehmet Yıldız	We wish that these plants bring good luck to our country.	I want planting trees along the canal route	-
Recep Erdem	Iwant to have continuous communication	Positive	I want installation of fences around the canal
Medet Çiçek	Meeting was positive. It would be good to complete missing parts in time.	Positive	Nothing positive about the project
Erdal Kalın	We'd like to receive more detailed information about the climate change issue and technical information about the project.	Thanks for implementing this project.	-
Rafet Gündoğdu	It is always useful for locals and investors to come together and	I prefer energy generated in that way to energy generated	l am undecided whether locals may feel any shortage due



	discuss. This leads	using coal or oil.	to water used for
	positive outcomes		generation
Mustafa Eraslan	Meeting was useful	Contribution to local	Nothing negative
	and necessary. More	economy.	
	participation would be		
	better		
Nadir Aldemir	Very positive and my	-	Future damage to
	village road was		locals and cattle
	renovated		should be prevented
Sezai İstiraç	Meeting was positive I	What should we do to	
	wish this continues in	get water from canal	
	the same way		
Necatti Gürpınar	Our impression is	-	Installation of fences
	positive. We want		around the canal
	fence around the		
	canal		
Sefa lcır	The meeting has been	The project was a	There are some minor
	organized in a	good opportunity for	negative issues for
	professional way.	Resadiye. MY opinion	locals but i have seen
	Considering locals'	is greatly positive and	that project managers
	demand is positive	think that project is	have spent significant
		successful	effort to solve this
			issue and was happy
			to see that.



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REŞADİYE HES

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REŞADİYE HES Bilgilendirme Tonlantışı Katılımın List

14 Aralık 2010, Salı

#### REŞADİYE HES Bilgilendirme Toplantısı Katılımcı Listesi

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