

# Initial Environmental and Social Examination Report – Annex B

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## Proposed Loan and Administration of Loans Da Nhim - Ham Thuan - Da Mi Hydro Power Joint Stock Company Floating Solar Energy Project (Viet Nam)

Prepared by ERM for Asian Development bank (ADB) and Da Nhim - Ham Thuan - Da Mi Hydro Power Joint Stock Company

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# **Da Mi Floating Solar PV Project**

Environmental and Social Due Diligence Report  
(Final)

4 June 2018



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# Issue and Revision Record

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# Contents

Executive summary	1
<b>1 Introduction</b>	<b>6</b>
1.1 Overview	6
1.2 Scope of ESDD	6
1.3 Project description	7
1.3.1 Overview	7
1.3.2 Project components	7
1.3.3 Project location and footprint	8
1.3.4 Project participants	10
<b>2 Approach</b>	<b>11</b>
2.1 Overview	11
2.2 Methodology	11
2.2.1 Compliance reference framework	11
2.2.2 Risk ranking	11
2.2.3 Desktop review of available information	12
2.2.4 Site reconnaissance	12
2.2.5 Stakeholder engagement	13
<b>3 Environmental and social compliance review</b>	<b>15</b>
3.1 Overview	15
3.2 Permitting status	15
3.3 ADB Safeguard requirements	16
3.3.1 ADB project categorisation	16
3.3.2 ADB Safeguards compliance summary	21
<b>4 Action Plan</b>	<b>56</b>
4.1 Overview	56
4.2 Corrective Action Plan	57
<b>Appendices</b>	<b>1</b>
<b>A. List of documents reviewed from the Sponsor and site visit itinerary (proposed)</b>	<b>2</b>
<b>B. Stakeholder meetings attendance sheets</b>	<b>6</b>

C.	List of economically-displaced households due to land acquisition for the transmission line	7
D.	Involuntary resettlement impact categorisation checklist	10
E.	Indigenous Peoples Screening Checklist	12
F.	Project transmission line land acquisition	14
F.1	Introduction	14
F.2	Scope of Project-induced displacement	14
F.3	Potential impacts of the Project economic displacement	15
F.4	Summary of national legislation applicable to Project-induced land acquisition for transmission development	16
4.2.1	Compensation regulations on acquired agricultural land and associated assets	17
F.5	Status of Project-induced economic displacement process	22
G.	Environmental and Social Compliance Audit	24
G.1	Social Compliance Audit	<b>Error! Bookmark not defined.</b>



# Executive summary

Mott MacDonald was appointed by the Asian Development Bank (ADB) to undertake an environmental and social due diligence (ESDD) on the proposed 47.5MW floating solar photovoltaic (PV) power plant project located in Binh Thuan province, Viet Nam (the Project). In addition, an environmental and social compliance audit (ESCA) on DHD's existing hydropower assets was also undertaken to assess the environmental and social performance of the existing assets.

The ESDD and the ESCA were developed against the compliance reference framework detailed in Section 2.2.1. Detailed findings of the ESCA are presented as Appendix G.

Mott MacDonald's review of Project documentation as of 31 March 2018, findings during the site visit undertaken on 5-8 March 2018 and information gathered from stakeholder interviews during the site visit informed the development of the ESDD (this document). The assessment in the ESDD is focused on the environmental and social risks and impacts related to the Project (ie the floating solar PV plant and ancillary facilities with a total footprint of 56.65ha). The assessment in the ESCA, to be issued subsequently, will be focused on the environmental, health, and safety (EHS) performance of the Sponsor in relation to the existing hydropower assets which have been operational since 2001.

## Findings

A Project categorisation exercise against the ADB Safeguards Requirement (SR1) – Environment, ADB Safeguards Requirement 2 (SR2) – Involuntary Resettlement and ADB Safeguards Requirement 3 (SR3) – Indigenous People was undertaken as part of the ESDD. In Mott MacDonald's professional opinion, the Project should be categorised as follows:

- ADB SR1 – Category B
- ADB SR2 – Category B
- ADB SR3 – Category C

Key considerations which influenced the above categorisations are listed in Section 3.3.1.

A detailed compliance review against ADB Safeguards Requirement 1 (SR1) - Environment and ADB Safeguards Requirement 2 (SR2) – Involuntary Resettlement was undertaken, and Mott MacDonald's compliance assessment are tabulated in Table 6 and Table 7, respectively. Mott MacDonald's preliminary Indigenous Peoples (IP) screening indicates that the Project is unlikely to affect IPs; a completed IP screening checklist is provided in Appendix E.

The results of the detailed compliance review against ADB SR1 and ADB SR2 has informed the development of a Corrective Action Plan (CAP) which is presented in Chapter 4. The main gaps identified for which actions are warranted from the Sponsor are:

- Absence of a socio-economic baseline information to understand the socio-economic profile of households that will be affected by the Project activities
- Absence of an environmental baseline information to determine the extent of the Project's impacts on biodiversity (terrestrial and freshwater) and water quality (sedimentation).
- Absence of an impact assessment of solar PV shading on the thermal stratification of the water column, aquatic ecology, and fish productivity

- A very generic ESMP which does not capture measures to mitigate against or manage environmental and social impacts such as: 1) project-induced livelihood and health and safety impacts on fishing households and 2) sedimentation due to construction of floating solar PV system
- Lack of an ESMS and the organisational capacity and capability to effectively implement the ESMS in compliance with the reference framework

As a result, the following recommendations are provided:

- Undertake some additional baseline surveys listed in the CAP
- Update the ESMP to include specific measures to mitigate against or manage impacts identified from the additional baseline surveys
- Develop a Project-specific ESMS
- Appoint an Environmental Health and Safety (EHS) Officer and Community Relations Officer to manage the implementation of the ESMS or upskill existing staff through training

It is understood that revising or updating the contents of the approved EIA would trigger another approval process from the local authorities. Hence, for purposes of meeting the Lender's requirements, additional baseline studies and ESMP are recommended to be undertaken prior to construction. The Sponsor must ensure that this ESMP is communicated to the EPC Contractor and that necessary measures, through detailed engineering or other means of mitigation, are implemented throughout the construction phase.

It should be noted that Mott MacDonald does not consider the existing hydropower assets to be Associated Facilities. It is understood that the operation of the floating solar PV project is not dependent on the existence of the hydropower dam and even if it were to some extent, the dam was not built exclusively for purposes of making the floating solar PV operations viable.

Environmental and social risks and impacts related to the hydropower assets and DHD's performance in managing these risks are described in further detail in the ESCA included within Annex G.

## List of Abbreviations

<b>ADB</b>	Asian Development Bank
<b>AoI</b>	Area of Influence
<b>AH</b>	Affected Household
<b>AP</b>	Affected People
<b>BAP</b>	Biodiversity Action Plan
<b>COD</b>	Commercial Operations Date
<b>CLO</b>	Community Liaison Officer
<b>CAP</b>	Corrective Action Plan
<b>CR</b>	Critically Endangered
<b>CSR</b>	Compensation, Support, and Resettlement
<b>CIA</b>	Cumulative Impact Assessment
<b>CPC</b>	Commune People's Committee
<b>DHD</b>	Da Mi-Ham Thuan-Da Nimh Joint Stock Company (Sponsor)
<b>DMS</b>	Detailed Measurement Survey
<b>DPC</b>	District People's Committee
<b>DPAP</b>	Directly Project Affected People
<b>EPRP</b>	Emergency Preparedness and Response Plan
<b>EIAs</b>	Environmental Impact Assessments
<b>EMP</b>	Environmental Management Plan
<b>E&amp;S</b>	Environmental and Social

<b>ESAP</b>	Environmental and Social Action Plan
<b>ESDD</b>	Environmental and Social Due Diligence
<b>ESIAs</b>	Environmental and Social Impact Assessments
<b>EHS</b>	Environmental, Health, and Safety
<b>EN</b>	Endangered
<b>ESHS</b>	Environmental, Social, Health and Safety
<b>ESMF</b>	Environmental and Social Management Framework
<b>ESMP</b>	Environmental and Social Management Plan
<b>ESMS</b>	Environmental Social Management System
<b>ESIA</b>	Environmental and social impact assessment
<b>EVN</b>	Electricity Vietnam
<b>FC</b>	Financial Close
<b>GIIP</b>	Good International Industry Practice
<b>GHG</b>	Greenhouse Gas
<b>GM</b>	Grievance Mechanisms
<b>GoV</b>	Government of Vietnam
<b>HH</b>	Household
<b>HR</b>	Human Resources
<b>IBAT</b>	Integrated Biodiversity Assessment Tool
<b>IP</b>	Indigenous Peoples
<b>IFC</b>	International Finance Corporation
<b>IFIs</b>	International Financial Institutions

<b>ILO</b>	International Labour Organisation
<b>IOL</b>	Inventory of Loss
<b>IPAP</b>	Indirectly Project Affected People
<b>LESC</b>	Lenders Environmental and Social Consultant
<b>LRP</b>	Livelihood Restoration Plan
<b>LURC</b>	Land Use Right Certificate
<b>NTP</b>	Notice to Proceed
<b>NTS</b>	Non-Technical Summary
<b>OHS</b>	Occupational health and safety
<b>PAP</b>	Project Affected People
<b>PV</b>	Photovoltaic
<b>PPA</b>	Power Purchase Agreement
<b>PPC</b>	Province People's Committee
<b>ROW</b>	Right of Way
<b>SEP</b>	Stakeholder Engagement Plan
<b>SIA</b>	Social Impact Assessment
<b>SPS</b>	Safeguard Policy Statement
<b>SPVs</b>	Special Purpose Vehicles
<b>SR</b>	Safeguard Requirement
<b>WBG EHS</b>	World Bank Group General Environmental, Health, and Safety Guidelines

# 1 Introduction

## 1.1 Overview

Mott MacDonald was appointed by the Asian Development Bank (ADB – herein referred to as the Lender) as the Lender's Environmental and Social Consultant (LESC) to undertake an environmental and social due diligence (ESDD) to the proposed 47.5MW floating solar photovoltaic (PV) power plant project to be installed in the surface of Da Mi lake, Binh Thuan province, Viet Nam (the Project). In addition, an environmental and social compliance audit (ESCA) of the existing hydropower assets operated and managed by Da Nhim-Ham Thuan-Da Mi Hydropower Joint Stock Company (DHD, the Sponsor) was also undertaken as part of Mott MacDonald's scope. As the Project is seeking international finance, it is required to comply with both Vietnamese regulatory requirements and the compliance reference framework detailed in section 2.2.1.

In undertaking the ESDD, Mott MacDonald has performed an environmental and social review of the Project to identify any completion or operational risks. Where risks have been identified, mitigation strategies proposed by the Sponsor have been assessed and recommendations for amendments or additional mitigation, management and monitoring strategies have been provided. The ESDD has been based upon a review of documentation provided by the Sponsor as of 13 April 2018, a site visit and stakeholder interviews undertaken on 5-8 March 2018. Mott MacDonald's approach to the ESDD is described in further detail within Chapter 2.

An environmental and social compliance audit (ESCA) on the Sponsor's existing hydropower assets against the compliance reference framework is presented as Annex G of this ESDD report.

## 1.2 Scope of ESDD

The key objectives of the ESDD are:

- Verify that the Environmental and Social Health Impact Assessment (ESHIA) report or its local equivalent has been prepared in accordance with good international industry practice (GIIP), ADB SPS and the World Bank Group (WBG) Environmental Health and Safety (EHS) – referred to as the compliance reference framework in section 2.2.1.
- Verify that environmental and social impacts and risks were analysed for all relevant stages of the project including preconstruction, construction, operations, decommissioning, and post-closure activities such as rehabilitation or restoration.
- Verify that the ESHIA contains an environmental and social management plan (ESMP) that addresses the potential impacts and risks identified by the environmental assessment.
- Verify that the significance of project impacts and risks on biodiversity (including any potential threat to destruction of habitat and introduction of invasive alien species) and natural resources have been adequately assessed and measures to avoid, minimize or mitigate such risks to achieve no net loss or a net gain of the affected biodiversity have been considered.
- Review the proposed procedures for minimising community health, safety and security risks due to the project; and assess the compliance of procedures with Vietnamese law, ADB SPS requirements and the IFC EHS Guidelines.

- Review and assess project documentation and through a site visit if there is any full or partial, permanent or temporary economic or physical displacement resulting from any project component or related support or associated facilities and prepare a compliance gap analysis against ADB SPS SR2 on Involuntary Resettlement (Land Acquisition and Involuntary Resettlement).
- Confirm presence or absence of IPs/IP communities in the project area.
- Review the public consultation process and other stakeholder's engagement activities including the adequacy of the grievance mechanism for local communities and workers of contractors and subcontractors.
- Assess the Sponsor's compliance with the national labour laws and international standards.
- Evaluate and give an opinion about the extent to which the environmental and social assessment conducted to date responds and complies with the applicable standards. The compliance assessment also includes the evaluation of the adequacy of the Project's E&S management system and client's management plan existence, preparation, implementation and completeness.

### 1.3 Project description

#### 1.3.1 Overview

Da Nhim-Ham Thuan-Da Mi Hydropower Joint Stock Company, a direct subsidiary of Power Generation Corporation 1 under Electricity Vietnam (EVN), maintains and operates three hydropower plants in Southern and Central Vietnam. The older 160MW Da Nhim hydropower station was built in 1961 and began operating in 1964. Almost thirty years later, the 475MW Ham Thuan-Da Mi hydropower complex was developed to address the increasing power demand in Southern Vietnam. The latter was constructed in 1997, and began operating in 2001. The EIA for Ham Thuan-Da Mi hydroelectric power complex was approved by MONRE in 1996.

The floating solar PV project will be installed on the surface of Da Mi lake, which belongs to the Ham Thuan-Da Mi hydropower complex. Da Mi lake is part of the La Nga river system which is within the administrative authority of Binh Thuan province. The EIA for the floating solar PV was approved by the Binh Thuan province on 15 Sept 2017.

#### 1.3.2 Project components

DHD as the Project Sponsor will be responsible for the construction, operation and maintenance of the floating solar PV Project (defined below as "future assets"), in addition to operating and maintaining the existing hydropower plants (defined below as "existing assets").

##### 1.3.2.1 Existing assets

The following are existing assets currently operated and managed by DHD:

- 160MW Da Nhim hydropower plant located in Ninh Thuan province
- Ham Thuan-Da Mi hydropower plants (two cascading hydropower plants) with a combined capacity of 475MW, comprised of:
  - 300MW Ham Thuan hydropower plant (150MW x 2 units)
  - Da Mi hydropower plant (87.5MW x 2 units)
- Two reservoirs with a total volume of 836 million m<sup>3</sup>, comprised of:
  - Ham Thuan reservoir with 695 million m<sup>3</sup>
  - Da Mi reservoir with 141 million m<sup>3</sup>

- Transmission lines with a total of 282.km, comprised of:
  - 171.2km of 220kV line
  - 111km of 110kV line
- Four substations, with a total transformer capacity of 379MVA:
  - Bao Loc substation
  - Phan Tiet substation
  - Duc Linh substation
  - Long Thanh substation

#### 1.3.2.2 Future assets

The Sponsor intends to build the following assets by acquiring financing from the Lender:

- Floating solar power PV plant – total capacity of 47.5MW
- Substation – 22/110kV, 63MVA
- Inverter station A – total capacity of 17.5MW
- Inverter station B – total capacity of 25MW
- Transmission line – 3.3km
  - 110kV connecting from the Project substation to the Ham Thuan-Duc Linh line
  - 22kV from inverter station A to the 110kV substation

#### 1.3.2.3 Definition of project components in the context of the ESDD

For Project location and footprint

The Project is located within the following administrative boundaries :

- La Ngau commune, Tanh Linh district, Binh Thuan province
- La Da commune, Ham Thuan Bac district, Binh Thuan province
- Da Mi commune, Ham Thuan Bac district, Binh Thuan province

The Project components will have a total footprint of 56.65ha, comprised of:

- Surface water – total of 50ha for the floating solar PV system laid over Da Mi lake
- Land– 6.65ha for the construction of:
  - 110kV transmission line segment; 5.25ha
  - 22kV transmission line segment; 0.55ha
  - Inverter station A; 0.25ha
  - Inverter station B; 0.10ha
  - Substation; 0.5ha

A summary of Project land and water footprint is presented in Table 1.



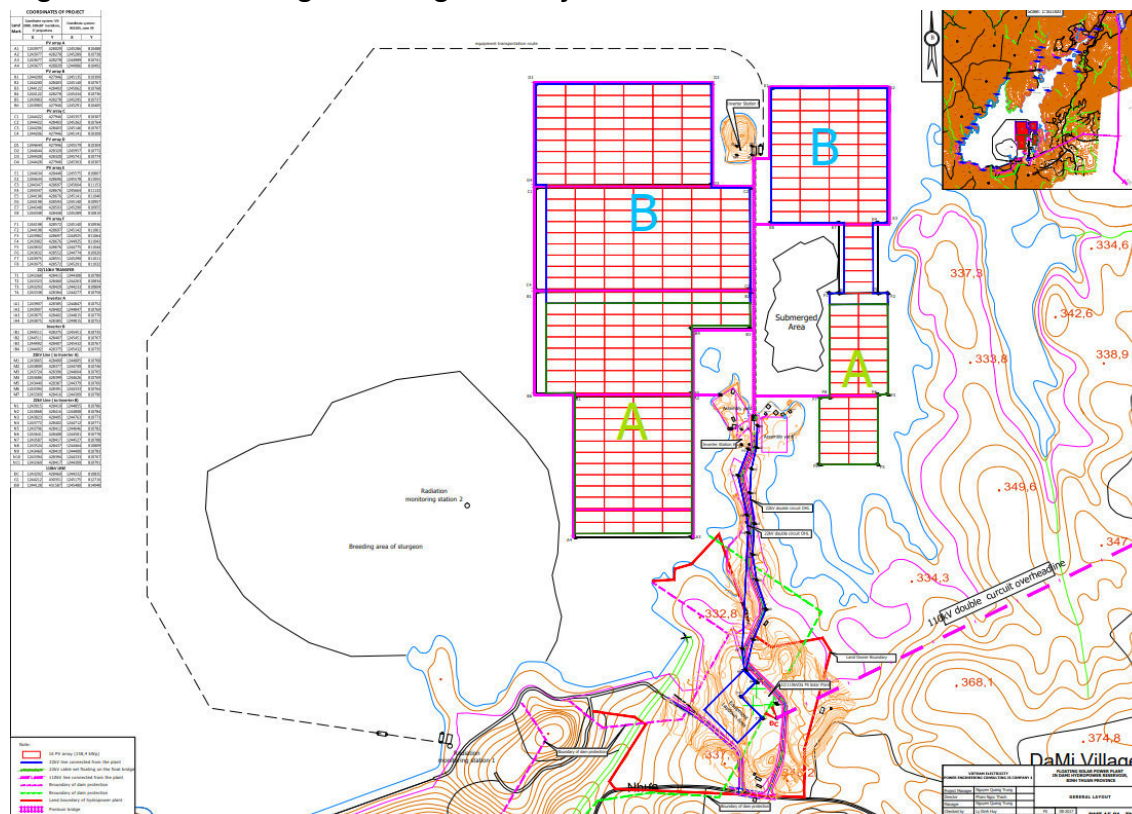
**Table 1: Summary of land and water areas for the future assets**

Project components	Total estimated land areas to be acquired per district		Total land and water use rights areas	
	Tan Linh district	Ham Thuan Bac district	Land area	Water area
Floating solar power PV plant	N/A	N/A	N/A	50 ha
110 kV transmission line (TL) (3.3 km length and 15m width)	1.8 ha	3.45 ha	N/A	N/A
Substation – 22/110kV	N/A	N/A	0.5 ha	N/A
Inverter station B	N/A	N/A	0.1 ha	N/A
1/3 22kV transmission line (170 m length and 15 m width)	N/A	N/A	0.17 ha	N/A
2/3 22kV transmission line (380 m length and 15m width)	0.38 ha	N/A	N/A	N/A
Inverter A Station	0.25 ha	N/A	N/A	N/A
<b>Sub-total</b>	<b>2.43ha</b>	<b>3.45ha</b>	<b>0.77 ha</b>	<b>50 ha</b>
<b>TOTAL</b>	<b>56.65ha</b>			

Source: DHD, 2018

Figure 1 shows the project general layout which was the basis for undertaking the EIA. The assessment in this ESDD is limited to the Project footprint mentioned above.

**Figure 1: Da Mi floating solar PV general layout**



Source: Environmental Impact Assessment (EIA) for Da Mi Floating Solar, 2017

### 1.3.3 Project participants

The Project participants are as follows:

- Sponsor – The Project will be financed through Da Mi-Ham Thuan-Da Nhim (DHD) Hydropower Joint Stock Company, a subsidiary of Electricity Vietnam (EVN). The Sponsor will also be responsible for constructing and maintaining the 3.3km 110kV transmission line.
- Power Offtaker – Electricity Vietnam (EVN) will be responsible for the purchase of energy generated by the Project under a Power Purchase Agreement (PPA).
- Power Engineering Consulting Joint Stock Company (PECC) 4 – EIA preparer
- The EPC Contractors and O&M Contractors – to be appointed

## 2 Approach

### 2.1 Overview

This section presents the approach to the environmental and social due diligence, which included a desk based review and a site visit to verify initial assumptions. Communication with DHD, clarifications and additional information sought through meetings with local village leaders, people affected by land acquisition, corporate social responsibility beneficiaries, and other stakeholders have also informed this review. The outcomes of the review were used to inform the development of the Corrective Action Plan (CAP) presented in Chapter 4 of this report.

### 2.2 Methodology

#### 2.2.1 Compliance reference framework

The compliance reference framework used in this review is based upon the specific environmental and social requirements of the Lender. Therefore, in addition to the applicable Vietnamese legislation and standards, the compliance reference framework includes international requirements listed as follows:

- ADB Safeguard Policy Statement (SPS), 2009
- ADB Social Protection Strategy, 2001
- ADB Gender and Development Policy, 1998
- ADB Public Communications Policy, 2011
- World Bank Group (WBG) Environmental Health and Safety (EHS) Guidelines in force at the time of reporting, including but not limited to the following:
  - WBG General EHS Guidelines, 2007
  - WBG EHS Guidelines for Electric Power Transmission and Distribution, 2007

The outcomes of this ESDD are presented in tabular format and sets out the compliance status of the Project against the reference framework. Where necessary, Mott MacDonald's views on project categorisation are also provided.

#### 2.2.2 Risk ranking

A risk ranking of low, medium, or high has been applied to each identified issue utilising the criteria outlined in Table 2. The risk rankings applied are based on review of the Project utilising third party and existing data and an understanding of the potential impacts and perceived sensitivity of the receiving environment, derived from the site visit.

**Table 2: Risk ranking**

Category	Definition
Low	Based on the information reviewed, Mott MacDonald is of the opinion that the risk: <ul style="list-style-type: none"> <li>• When considered from the perspective of its likelihood and impacts should not have a material impact</li> <li>• Has been allocated to an appropriate party, DHD have noted that they are currently preparing documents to mitigate the risk prior to Financial Close and the documents will be in place prior to construction commencing</li> <li>• Are already being managed according to what is regarded as good practice</li> </ul>
Medium	Based on the information provided, Mott MacDonald is of the opinion that the risk: <ul style="list-style-type: none"> <li>• When considered from the perspective of its likelihood and impacts may have a material impact, however is being managed appropriately and is not considered sufficiently high-risk to impede financial close; or</li> <li>• May not have been allocated to the most appropriate party, however is nonetheless being managed according to what is regarded as good practice</li> </ul>
High	Mott MacDonald recommends that the Project does not proceed to financial close until the allocation and/or measures defined for managing the risk are amended to enable an award of a category low (green) or medium (yellow) status
Insufficient information	Based on the information reviewed, Mott MacDonald is of the opinion that the risk on receipt of all necessary information is likely to be categorised as low (green) or medium (yellow) risk, however necessary information to provide a final categorisation is still outstanding and should be provided prior to financial close

Source: Mott MacDonald 2018

The findings of the compliance review and the assessed risk ranking have been used to identify and prioritise required actions to ensure compliance with the reference framework. These are summarised within the CAP provided within Chapter 4.

### 2.2.3 Desktop review of available information

Appendix A lists the key documents that were reviewed in undertaking the ESDD. Mott MacDonald notes that Project-specific policy and management plan documents have not yet been prepared by the Sponsor. During discussions held as part of the site visit conducted by Mott MacDonald, the Sponsor stated that they intend to use the documents prepared for the existing hydropower assets as a basis to develop plans for the Project. While generally considered a suitable approach, the documents have not been provided for review as part of this ESDD.

It is worth mentioning that majority of the project documentation provided by the Sponsor were in Vietnamese, and only the EIA for the floating solar PV project was provided in the English language. For purposes of this ESDD, a rough translation using publicly-available sources were utilised to progress with the review. Mott MacDonald cannot be held liable for misrepresentations due to errors in translation.

### 2.2.4 Site reconnaissance

A site reconnaissance was undertaken from 5 to 8 March 2018 to confirm existing site conditions and identify potentially sensitive environmental and social receptors. This was arranged by the Sponsor and attended by the following:

- Environmental Consultant from Mott MacDonald
- Social Consultant from Mott MacDonald
- Environmental Safeguards Officer from ADB
- Social Development Officer from ADB

The site visit itinerary submitted to the Sponsor is included in Appendix A.

## 2.2.5 Stakeholder engagement

In addition to the site reconnaissance, a series of interviews with stakeholder representatives from the Sponsor, relevant government agencies, a sturgeon farming business, and representatives from the local communities deemed affected by the Project have been undertaken from 5 to 8 March 2018. Table 3 lists the stakeholder interviews undertaken by Mott MacDonald. Proof of attendance at these meetings are presented in Annex B.

**Table 3: Stakeholder interviews**

Date	Agenda	Participants
5 March 2018, 8:00 AM	Courtesy meeting with DHD Introductions and laying out objectives for the visit and expected outcomes	<ul style="list-style-type: none"> <li>• DHD</li> <li>• ADB</li> <li>• Mott MacDonald</li> </ul>
5 March 2018, 11:00 AM	Meeting with La Da Commune People's Committee (CPC) Regarding Environment, Social, Health and Safety (ESHS) matters relating to the Project and DHD's existing hydropower plants	<ul style="list-style-type: none"> <li>• La Da Commune CPC</li> <li>• DHD</li> <li>• ADB</li> <li>• Mott MacDonald</li> </ul>
5 March 2018, 1:45 PM	Meeting with Ham Thuan Bac Land Center Regarding the Project-induced resettlement process	<ul style="list-style-type: none"> <li>• Ham Than Bac Land Center</li> <li>• DHD</li> <li>• ADB</li> <li>• Mott MacDonald</li> </ul>
5 March 2018, 3:00 PM	Meeting with Department of Natural Resources and Environment (DONRE) Regarding ESHS matters associated with the Project	<ul style="list-style-type: none"> <li>• DONRE</li> <li>• DHD</li> <li>• ADB</li> <li>• Mott MacDonald</li> </ul>
6 March 2018, 9:00 AM	Interview with the manager of the sturgeon farm near the project footprint Regarding ESHS associated with the Project	<ul style="list-style-type: none"> <li>• Manager of Sturgeon Farm Business</li> <li>• DHD</li> <li>• ADB</li> <li>• Mott MacDonald</li> </ul>
6 March 2018, 10:00 AM	Meeting with Da Mi commune People's Committee Regarding ESHS matters relating to the Project and DHD's existing hydropower plants	<ul style="list-style-type: none"> <li>• Da Mi CPC</li> <li>• DHD</li> <li>• ADB</li> <li>• Mott MacDonald</li> </ul>
6 March 2018, 2:00 PM	Meeting with La Ngau commune People's Committee Regarding ESHS matters relating to the Project and DHD's existing hydropower plants	<ul style="list-style-type: none"> <li>• La Ngau CPC</li> <li>• DHD</li> <li>• ADB</li> <li>• Mott MacDonald</li> </ul>
6 March 2018, 4:00 PM	Meeting with Tanh Linh district Land Center Regarding the Project-induced resettlement process	<ul style="list-style-type: none"> <li>• Tanh Linh Land Center</li> <li>• DHD</li> <li>• ADB</li> <li>• Mott MacDonald</li> </ul>
7 March 2018, 9:00 AM	Interviews with three economically displaced households from Da Mi village, La Ngau commune Regarding the Project's land acquisition process	<ul style="list-style-type: none"> <li>• Three AHs from La Ngau commune</li> <li>• ADB</li> <li>• Mott MacDonald</li> </ul>
7 March 2018, 10:30 AM	Interviews with five fishing households living by Da Mi lakeshore Regarding their existing livelihoods, living condition and Project-related environmental and social impacts	<ul style="list-style-type: none"> <li>• Five fishing households</li> <li>• ADB</li> <li>• Mott MacDonald</li> </ul>

Date	Agenda	Participants
7 March 2018, 3:00 PM	Interviews with four economically displaced households from Thon Daguri village, La Da commune Regarding the Project's land acquisition process	<ul style="list-style-type: none"> <li>Four AHs from La da Commune</li> <li>ADB</li> <li>Mott MacDonald</li> </ul>
7 March 2018, 5:00 PM	Interview with a village head of Daguri village, La Da commune Regarding the Project's land acquisition process and E&S matters	<ul style="list-style-type: none"> <li>Mr. Tran Van Tri – Daguri village head, La Da commune</li> <li>ADB</li> <li>Mott MacDonald</li> </ul>
8 March 2018, 8:30 AM	Interview with DHD's EIA Consultant – Electricity Development No. 4 Consulting Company Regarding local EIA report	<ul style="list-style-type: none"> <li>PECC4</li> <li>DHD</li> <li>ADB</li> <li>Mott MacDonald</li> </ul>
8 March 2018, 8:30 AM	Interview with La Da Cadastral Officer at La Da Commune People's Committee Regarding the Project's land acquisition process	<ul style="list-style-type: none"> <li>Mr. B Dam Quoc – La Da Cadastral Officer</li> <li>DHD</li> <li>Mott MacDonald</li> </ul>
8 March 2018, 9:30 AM	Interviews with five displaced households in La Da Commune (including two minority ethnic households) Regarding the Project's land acquisition process and IP screening	<ul style="list-style-type: none"> <li>Mr. B Dam Quoc – La Da Cadastral Officer</li> <li>DHD</li> <li>Mott MacDonald</li> </ul>
8 March 2018, 1:30 PM	Interviews with two households living at a resettlement site in La Da commune Regarding the history of resettlement	<ul style="list-style-type: none"> <li>Two households living at a resettlement site</li> <li>DHD</li> <li>Mott MacDonald</li> </ul>
8 March 2018, 3:00 pm	Interview with Loc Nam commune, Bao Lam district, Lam Dong province Regarding the history of resettlement due to the Sponsor's two hydropower plants	<ul style="list-style-type: none"> <li>Loc Lam Commune PC</li> <li>DHD</li> <li>Mott MacDonald</li> </ul>
8 March 2018, 5:30 pm	Wrap up meeting with DHD	<ul style="list-style-type: none"> <li>DHD</li> <li>Mott MacDonald</li> </ul>

## 3 Environmental and social compliance review

### 3.1 Overview

This section presents the findings of the environmental and social compliance review against the compliance reference framework stated in section 2.2.1.

### 3.2 Permitting status

Table 4 summarises the key environmental, health and safety permits relevant to solar/floating solar developments in Vietnam. Note that this does not constitute a legal review.

**Table 4: Permitting status for Da Mi Floating Solar**

Permit/license	Description of requirement	Status as of 13 April 2018
<b>Investment Certification Permits</b>		
Decision on Investment Acceptance	Required for projects with total investment capital of more than VND 5,000 billion	Acquired per Decision No. 974 QD-BCT dated 22 March 2007
<b>Land Control Permits</b>		
Approval of land acquisition	Required if there is a need to acquire private land from private households	In progress
Approval of CSR Plan	As above	In progress
Land lease contract	Required after land acquisition process including compensation for affected households is completed	To be acquired once the land acquisition process is completed
Land Use Right Certificate (LURC)	Issued after the land lease contract is finalised and required before start of construction (ie building the transmission line)	To be acquired after the land lease contract is obtained
<b>Surface Water Permit</b>		
Surface Water Use Permit	Permission to use surface water to install the floating solar PV is required prior to floating solar PV installation	DHD has obtained a certificate of land use rights in September 2008 for the Da Mi reservoir. This certificate is valid for 50 years from date of issue, and allows DHD to make further developments on the reservoir, upon permission from the Binh Thuan province and payment of corresponding water use tax.  Currently, DHD is waiting for the detailed design to be completed to determine the actual floating solar PV footprint which will be used to compute for the water use tax.  The timeline for achieving this was not specified by DHD.
<b>Power Purchasing Agreement</b>		
Grid Connection Agreement	Required before PPA signing and before start of construction	Acquired
Power Purchasing Agreement (PPA)	Required before start of construction	Acquired



Permit/license	Description of requirement	Status as of 13 April 2018
<b>Construction Licensing</b>		
Appraisal and approval of FS (including basic design)	Required for projects with total investment capital of more than VND 5,000 billion	Acquired
Appraisal and approval of Technical Design and Construction Cost Estimate	Required before issuing the construction permit	Acquired
Certification of Fire Prevention and Fighting Design	Required before issuing the construction permit	To be acquired
Construction Permit	Required to commence construction activities	To be acquired
<b>Environmental Health and Safety Permitting</b>		
Environmental Impact Assessment Approval Letter	Required for solar projects	Acquired per Decision No. 2716 dated 15 September 2017

### 3.3 ADB Safeguard requirements

#### 3.3.1 ADB project categorisation

Mott MacDonald has undertaken this review against the pertinent provisions of the ADB Safeguard Policy Statement (SPS), particularly the following annexures to the SPS:

- Safeguard Requirement One: Environment
- Safeguard Requirement Two: Involuntary Resettlement
- Safeguard Requirement Three: Indigenous Peoples

This section provides the recommended categorisation of the Project against each safeguard requirement, and an assessment of compliance including the Project's alignment with other aspects of the ADB's safeguards system, including the Social Protection Strategy, Gender and Development Policy, and Public Communications Policy.

##### 3.3.1.1 Safeguard Requirement 1 (Environment)

Following the review of Project documentation provided by the Sponsor as of 31 March 2018, it is considered that the Project and its components fall under Category B for the purposes of ADB Safeguard Requirement 1 (SR1). The ADB SPS defines a Category B project as one where the proposed project's potential adverse environmental impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for Category A projects. An initial environmental examination (IEE), including an EMP is required. An assessment of the Project's current compliance with SR1 is presented in Table 6.

This categorisation is based on the following key considerations:

- The Project is not located within a national designated protected area or an internationally-recognised conservation area.
- The Project is not within or near areas with cultural significance (eg cultural heritage sites).
- The Project is not located in a densely populated area where resettlement and livelihood impacts are considered significant (see commentary on SR2).
- Most of the project-related adverse impacts on the environment are temporary (ie during construction only) and are unlikely to extend beyond the Project footprint.



- Most of the identified impacts can be minimised, if not avoided, through detailed engineering and environmental management measures.
- As a renewable energy project, the Project is not considered to be resource-intensive and pollutive.

### 3.3.1.2 Safeguard Requirement 2 (Involuntary Resettlement)

ABD Safeguard Requirement 2 (SR2) provides that “the involuntary resettlement impacts of an ADB-funded project are considered significant if 200 or more persons will be physically displaced from home to loss of 10% or more of their productive or income generating assets”. Based upon the review of Project documentation and consultation with Sponsor personnel and local stakeholders (as listed within Section 2.2.5), Mott MacDonald recommends that the Project be designated as Category B for the purposes of SR2.

The information and conclusions contained within Appendix D – Involuntary Resettlement categorisation checklist, informs this categorisation which is based on the following key considerations:

- No land is proposed to be acquired for the floating solar PV panels given its location on the Da Mi reservoir. However, land acquisition is required for the development of the 3.3 km transmission line and for inverter station A.
- While the land acquisition will not result in any physical displacement, it is estimated that 47 households (approximately 188 people) will potentially experience economic displacement. Mott MacDonald notes that these households are unlikely to lose more than 10% of their farmland. This information was based on the outcomes of interviews with 13 affected households and local authorities in three affected communes during the ESDD site visit.
- It should be noted that no survey on socio-economic profile of displaced persons or livelihood impacts has been carried out by either the Sponsor or the local government. In this regard, Mott MacDonald recommends that this categorisation is reviewed once the detailed measurement survey (DMS) and inventory of loss (IOL) have been undertaken in accordance with the requirements of the Land Law, 2013. This will provide greater clarity in relation to the number of households affected and the degree of economic displacement experienced.

The Project's compliance in relation to SR2 is assessed in Table 7.

### 3.3.1.3 Safeguard Requirement 3 (Indigenous People)

During the site visit, a preliminary IP<sup>1</sup> screening exercise was carried out based on documents reviewed as well as consultation with local authorities and minority ethnic households. Audit findings indicate that among three affected communes (La Da, La Ngau, and Da Mi communes), only La Da commune is considered to contain groups and households potentially categorised as minority ethnic groups. The population of La Da commune is comprised of 80% ethnic minority groups (belonging to K-Ho, Ray, Cham, Tay, Muong, and Hoa)<sup>2</sup> and 20% majority ethnic group of Viet Nam (Kinh people)<sup>3</sup>. Information obtained during the site visit indicates that only three

<sup>1</sup> Indigenous peoples is defined as distinct social and cultural groupings exhibiting the following characteristics to some extent: (i) self-identification as a member of a distinct cultural group and recognition of this identity by others; (ii) collective attachment to a geographically-distinct habitat or ancestral territory and to the natural resources therein; (iii) customary cultural economic, social, and/or political institutions that are separate from those of the dominant society or culture; and (iv) a language which often different from the official language of the country or region (Adapted from ADBSPS 2009).

<sup>2</sup> The breakdowns of minority ethnic groups were not provided during the interview with the La Da Cadastral Officer. It is noted that the most populous group within the Da La Commune is K-Ho minority ethnic group.

<sup>3</sup> The population of Vietnam comprises 54 ethnic groups. Kinh people (or the Vietnamese people) is a majority ethnic group of Vietnam, comprising of 86% of the population. 15% of population belong to 53 minority ethnic groups, such as Tay, Thai, H'Mong, Muong, Hoa, and K-ho etc.

households from K-Ho minority ethnic group are likely to be affected due to land acquisition for the transmission line<sup>4</sup>. The ethnicity of these households was confirmed through an interview with the Cadastral Officer from La Da commune. Given that DMS and IOL have not started yet at the time of site visit, Mott MacDonald cannot exclude the possibility that households belonging to other ethnic minority groups will be directly impacted by the Project. The exact number and type of not-yet-defined minority ethnic people affected due to the Project's land acquisition should be confirmed through the DMS, IOL, or socio-economic baseline of PAPs. In case there are any additional AHs identified to be part of other minority ethnic groups, the Sponsor is recommended to undertake another IP screening assessment to determine whether they are considered to be IP as per ADB SR3 requirements. It should be noted that Mott MacDonald has conducted a desk-based review of the other minority ethnic groups of La Da commune. The review shows that it is unknown whether the other minority ethnic groups (including Ray, Cham, Tay, Muong, and Hoa) are considered as IP under ADB SR3 requirements. Based on the interviews with Land Centres during the site visit, the DMS and IOL process conducted by the local authorities were expected to be carried out in April 2018. A more detailed description of the land acquisition and resettlement process are provided within Appendix F.

Based on information provided to date, of 47 economically-displaced HHs, only three affected HHs are K-Ho ethnic minority people. The remainder belongs to the Kinh majority ethnic group. This information was confirmed based on the outcome of ESDD site visit's consultations. Table 5 presents a rapid IP screening assessment of the three AHs belonging to K-Ho ethnic minority, to assess if they meet the IP definition contained within SR3.

**Table 5: Summary of IP screening assessment**

ADB considerations	Mott MacDonald commentary	IP evaluation
Self-identification as members of a distinct indigenous cultural group and recognition of this identity by others	<p>La Da Commune is comprised of approximately six different minority ethnic groups, in which the largest population within the commune belongs to K-Ho people. Although K-Ho people have their own languages and beliefs and are recognised by others as a distinct ethnic group, they are fluent with the official language of Viet Nam (Vietnamese) and have integrated well into the broader Kinh community. This commune is not recognised as an isolated ethnic community under the Vietnamese minority ethnic policy (i.e. Decision No. 2085/QĐ-TTg)<sup>5</sup>. K-Ho society and other ethnic group societies within this commune area are not closed societies.</p> <p>During consultation with La Da commune's government officials and affected K-Ho households, Mott MacDonald noted that these minority ethnic HHs did not refer to themselves as IP, which is generally applied to isolated communities. The two K-Ho participants during the interview expressed that they were not categorised as an isolated tribe or a remote indigenous community by the Commune People's Committee (CPC). The outcomes of the interviews are indicative that while identifying as a separate ethnic group, the K-Ho people are not a distinct indigenous cultural group as applied with the local context.</p>	K-Ho people are not self-identifying as a member of a distinct IP group.

<sup>4</sup> The outcome of the interview with the La Da Cadastral officer shows that in terms of ethnic origin, three households whose land to be acquired due to the project are minority ethnic households (K-ho people). The household heads of these three K-Ho HHs identified include: (i) Lê Thị Hiền; (ii) K' Văn Điện; and (iii) Hoàng Thị Mập (refer to the list of displaced households in Appendix C). While Mott MacDonald's Social Consultant could conduct interviews with the first two HHs, the third HH was not available for interview during the ESDD site visit.

<sup>5</sup> Decision No. 2085/QĐ-TTg of Prime Minister dated 31 October 2016 on approving special policy on assisting socio-economic conditions for mountainous and minority ethnic people.

ADB considerations	Mott MacDonald commentary	IP evaluation
Collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories	<p>Based on information gathered during the site visit, collective attachment of the K-Ho people to land in the Project area is not absolute due to the following:</p> <ul style="list-style-type: none"> <li>La Da commune has historically sought migrants as part of the “1961 Plan on developing new economic areas” throughout Vietnam<sup>6</sup>. Most ethnic groups in the commune, including the K-Ho people, have therefore migrated to La Da commune from other areas of Vietnam. Based on the interview with the commune Cadastral Officer (who also identifies as a member of the K-Ho ethnic group), in the past, there were few K-Ho people who originally inhabited within the commune. Others subsequently migrated to the area after 1961. According to this key informant, La Da commune is not a geographically-distinct habitat of K-Ho. While some K-Ho people have inhabited within the commune for approximately four generations, it is not considered as an ancestral territory.</li> <li>K-Ho participants during the interviews noted that they held the ownership of a land use right certificate (LURC) within the Project’s transmission line area and that their land use rights were managed in accordance with the existing Vietnamese land legislation. Based on site interviews, it is noted that all ethnic groups living in La Da commune have no land that they recognise as customary land.</li> </ul>	K-Ho people are not collectively attached to geographically distinct habitats or ancestral territories in the project area
Customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture	<p>K-Ho people are not considered distinct or separate from the dominant society and culture of the local area based on the following observations:</p> <ul style="list-style-type: none"> <li>Although the K-Ho people have a unique identity in some respects, such as language and religion, they are not separate from other communities in terms of the mainstream socio-economic, legal, and political institutions. During interviews, K-Ho participants mentioned that they had distinct cultural practices, such as the matriarch system, ceremonies, rituals, and belief. While they practice their unique culture, K-Ho people also participate extensively in social and community activities of the dominant society (Kinh people). For example, they celebrate Tet (Lunar New year celebration of Kinh people), and attend commune/village meetings and community events.</li> <li>K-Ho’s livelihood practices are the same as those of other people in the surrounding areas. For instance, their main livelihood is land-based, such as farming and perennial crop plantation.</li> <li>In terms of legal and political systems, they are governed by, and adhere to the administrative system of Vietnam from the national to grassroots levels.</li> <li>While customary leaders exist within the K-Ho community, they are not involved in matters involving broader village/commune development from a social, economic, and legal perspectives. Their roles pertain primarily to maintain and practice the K-Ho’s customary culture and beliefs.</li> </ul>	K-Ho people are not economically, socially, and politically separated from the dominant society and culture
A distinct language, often different from the official language of the country or region	<p>K-Ho people have their own language, which is different from the official language of Vietnam. It is noted that the K-Ho language is only a spoken language. They do not have their own scripts. Although they are also proficient in Vietnamese, they often verbally interact with each other in their own language. K-Ho people in the area use Vietnamese language as their primary written language.</p>	K-Ho people have their distinct language; but they are fluent with the official language.

Source: Mott MacDonald 2018

<sup>6</sup> This plan is a policy of GoV to organise and redistribute labour and population throughout the country, transferring a large population from delta areas and cities to countryside, mountainous, and coastal regions. This policy has been implemented in North Vietnam since 1961 and continued nationwide since the reunification of the nation until 1998. GoV provided incentives for those who decided to move to countryside, mountainous and coastal regions.

Mott MacDonald is of the opinion that K-Ho people do not meet ADB's criteria on the definition of IPs, although this requires confirmation based on the outcomes of the DMS and IOL. The preliminary IP screening assessment reveals that while K Ho people retain some distinctive cultural practices (such as language and celebrations), these form a small part of maintaining their own cultural identity and beliefs. All other aspects of social and economic systems as well as legal and political institutions which guide everyday life are not separate from those encountered elsewhere within Binh Thuan Province or throughout Viet Nam. The AHs belonging to K-Ho are integrated well into the mainstream socio-economic, cultural, legal, and political systems.

As a result, it is considered that the Project falls under Category C for SR3, although this requires verification following the DMS, IOL and baseline survey. ADB Safeguard Policy Statement defines a Category C project as "a proposed project is not expected to have impacts on IP. No further action is required." The IP impact screening checklist which informed this categorisation is provided in Appendix E.

### 3.3.2 ADB Safeguards compliance summary

**Table 6: Compliance review: ADB Safeguard Requirement 1 - Environment**

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
1	Use a screening process for each proposed project, as early as possible, to determine the appropriate extent and type of environmental assessment (EA) so that appropriate studies are undertaken commensurate with the significance of potential impacts and risks	<p>Per Government's Decree No. 18/2015 / ND-CP dated February 14, 2015 pertaining to "regulations on environmental protection planning, strategic environmental assessment, impact environmental assessment and commitment to environmental protection", the Project is classified under "electronics, energy and radioactivity" which requires an EIA to be submitted and approved by the People's Committee of Binh Thuan Province. This screening process was used to identify the type of environmental assessment that would need to be undertaken to comply with the national legislation.</p> <p>Screening and categorisation in line with ADB SPS for purposes of determining the type of EA to be developed has not been undertaken by the Sponsor prior to this ESDD. This ESDD includes Mott MacDonald's opinion on the project categorisation against ADB SPS SR1, SR2 and SR3 (see section 3.3.1).</p>	Based on Mott MacDonald's review of project documentation, the Project and its components fall under Category B for purposes of ADB Safeguard Requirement One – Environment (SR1). The ADB SPS defines a Category B project as one where the proposed project's potential adverse environmental impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for Category A projects.	Low
2	Conduct an environmental assessment for each proposed project to identify potential direct, indirect, cumulative, and induced impacts and risks to physical, biological, socioeconomic (including impacts on livelihood through environmental media, health and safety, vulnerable groups, and gender issues), and physical cultural resources in the context of the project's area of influence. Assess potential transboundary and global impacts, including climate change. Use strategic environmental assessment where appropriate.	<p>A local environmental impact assessment (EIA) report compliant with the Vietnamese national legislation has been developed for the Project, and was approved by the Binh Thuan province People's Committee on 15 September 2017. The local EIA includes an environmental management plan (EMP) to mitigate against or manage identified environmental and social (E&amp;S) impacts throughout the life of the Project. We note that the primary environmental baseline information gathered as part of the EIA (eg water quality, air quality and noise) have not considered the seasonal variations (ie wet and dry season).</p> <p>The development of an environmental and social management system (ESMS) in accordance with the compliance reference framework is not required as part of the Vietnamese EIA process.</p> <p>A few key gaps in the approved local EIA report have been identified against ADB SR1, in relation to the environmental and social impact assessments undertaken.</p>	Overall, there is a need to update the existing EMP to develop an environmental and social management plan (ESMP) that would be compliant with both national legislation and the compliance reference framework. In addition, the Sponsor needs to develop an environmental and social management system (ESMS) that would include: 1) a suite of specific management plans to supplement the ESMP; 2) organisational arrangements to implement the ESMS. As a minimum, the following specific	Medium

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
			<p>management plans should be developed for the Project:</p> <ul style="list-style-type: none"> <li>• Community Health and Safety Plan</li> <li>• Emergency Preparedness and Response Plan</li> <li>• Security Management Plan</li> <li>• Materials Transport and Traffic Management Plan</li> <li>• Erosion Control and Sediment Management Plan</li> <li>• Solid Waste Management Plan</li> <li>• Hazardous Waste Management Plan</li> <li>• Workers Accommodation Plan</li> <li>• Stakeholder Engagement Plan including a grievance redress mechanism</li> </ul> <p>Key contents of the above management plans are detailed as part of the succeeding assessment against the relevant ADB policy principles.</p>	
		<b>1. Environment, health, safety and security impact assessment:</b>		
		<ul style="list-style-type: none"> <li>• <b>Lack of baseline ecology within the Project footprint.</b></li> </ul> <p>A basic biodiversity screening by Mott MacDonald using the Integrated Biodiversity Assessment Tool (IBAT) informs that the project footprint is not located within or near any protected or internationally recognised areas for conservation. Further, it informs that there are 21 species classified as either endangered (EN) or critically endangered (CR) by the IUCN within IBAT's area of assessment, which covers areas within and beyond the project footprint. Of the 21 EN and CR species, three are fish species and seven are bird species.</p> <p>With the lack of baseline information in the local EIA pertaining to aquatic ecology in Da Mi lake, and terrestrial ecology in the island where Inverter Station B will be located, it is difficult to assess if the Project may or may not have an impact on species of conservation significance (EN and CR).</p>	<p>As a matter of priority, the Sponsor should allocate sufficient resources to undertake baseline freshwater and terrestrial ecology studies and assess the Project's potential to result in loss of biodiversity, especially if this triggers species of conservation significance.</p> <p>Based on the outcomes of the above studies, Sponsor should update the ESMP to include mitigation and management measures, if necessary.</p>	High

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<p>It is noted that for aquatic ecology, the Project will only occupy 50ha out of the 600ha surface of Da Mi lake. Hence, the risk of exposure of species with conservation significance to project-induced impacts is considered low.</p> <ul style="list-style-type: none"> <li>• <b>Lack of an ecological impact assessment within the Project footprint</b></li> </ul> <p>Potential impacts of floating solar PV shading on Da Mi lake have not been assessed in the EIA. In particular:</p> <ul style="list-style-type: none"> <li>- impacts of shading on temperature change in the water column which may have an impact on lake nutrient cycling</li> <li>- impacts of shading on photosynthetic activity of aquatic plants and algae</li> <li>- impacts of construction noise on aquatic and terrestrial fauna</li> <li>- synergistic impacts of the above on long term fish population</li> </ul> <p>Further, an assessment of the extent to which species with conservation significance could be affected by the transmission line construction and operations have not been undertaken as part of the local EIA.</p>		
		<ul style="list-style-type: none"> <li>• <b>Absence of an assessment on invasive species</b></li> </ul> <p>The EIA did not include an assessment of the possibility of unintended introduction of invasive species related to the project activities (eg material transport, manpower movement).</p>	Sponsor to undertake an assessment of the Project's potential to result in the accidental release of invasive species and identify mitigation measures to avoid or minimise. Where there is potential for unintended release of invasive species, the Sponsor should revise their ESMP to include mitigation measures.	Medium
		<ul style="list-style-type: none"> <li>• <b>Insufficient assessment on water quality/sediment dispersion</b></li> </ul> <p>It is noted based on the site interview with the sturgeon farm manager on 6 March 2018 that one of their concerns is the potential sedimentation that could result from the floating solar PV construction. The water needs to be "clean" in order for the sturgeon farm to be productive.</p> <p>The EIA did not include an assessment of the potential impacts of construction methodology for floating solar panel anchoring (eg piling) to other water users in the lake, such as the sturgeon farm. Further, no sediment dispersion modelling or equivalent was undertaken to predict</p>	Sponsor to verify the methods of construction to be applied by the EPC Contractor in securing the floating solar panels. Where piling or similar sediment-inducing methods are to be employed, the Sponsor or their EIA consultant are to undertake an assessment of the impacts of construction on water quality, particularly on total suspended	Medium

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		the extent to which the sediment plume would affect the water quality within the lake.	solids (TSS). This should include a prediction of the extent of sediment dispersion during construction, using a robust and defensible methodology (e.g. sediment dispersion model). The results of this assessment should inform the appropriate management and mitigation measures which should be included in the ESMP, to be implemented by the Sponsor or their EPC contractor during construction.	
		<ul style="list-style-type: none"> <li><b>Insufficient assessment on community, health, safety, and security</b></li> </ul> <p>The EIA did not include an assessment of the health and safety impacts (dust, noise, vehicle traffic) of material transport during construction specifically to households living by the lakeshore, very near inverter station A and the assembly yard. Mitigation and management measures (eg options for temporary relocation, physical barriers, alternative access) to avoid or minimise health and safety risks to these households have not been identified in the EIA.</p> <p>Security measures to prevent unauthorised public access to the floating solar after construction/during operation was not mentioned in the EIA. Unauthorised public access may pose public safety risk aside from risk of damage to the asset itself.</p>	<p>Sponsor to undertake an assessment of the Project's community health and safety impacts. Measures to mitigate against impacts identified should be included in the ESMP, or in the development of a project-specific Community Health and Safety Plan. The Community Health and Safety Plan must include additional consideration for the floating solar PV in case of dam failure (ie additional hazard to downstream communities if brought down by raging waters).</p> <p>In addition, the following detailed management plans should be developed by the Sponsor or their selected EPC Contractor, prior to construction:</p> <ul style="list-style-type: none"> <li><b>Materials Transport and Traffic Management Plan</b> - detailing the material transport route, planned road closures, alternative access, timing; to be disclosed to the local community in an appropriate</li> </ul>	Medium



No.	Policy principles	Project setting/background	Compliance review	Risk ranking
			<p>manner at least a month before mobilisation.</p> <ul style="list-style-type: none"> <li>Security Management Plan - detailing the measures that will be undertaken by the Sponsor to mitigate against potential risks during construction and operation phases.</li> </ul> <p><u>During construction phase:</u> The Security Management Plan should include specific measures to ensure the safety of the fishing households who will be potentially affected by construction vehicle access. For example, public access to materials delivery transport route and floating solar PV footprint should be prohibited during construction. In this case alternative access should be considered for these households during the entire duration of construction.</p> <p><u>During operations phase:</u> The Security Management Plan should include specific measures to protect the floating solar PV assets against accidental damage or loss, particularly in relation to unrestricted public access.</p>	
		<b>2. Social impact assessment (SIA):</b>		
		<ul style="list-style-type: none"> <li><b>Insufficient socio-economic baseline data:</b> No socio-economic baseline survey of 47 Project-affected people (PAPs) was conducted during the EIA preparation. While a preliminary socio-economic baseline section is provided within the local EIA, this information is based on secondary data sources only. This secondary data does not adequately present information pertaining to population, socio-economic and livelihood data, health,</li> </ul>	<p>As a matter of priority, the Sponsor should allocate sufficient resources to undertake socio-economic baseline survey and impact assessment on PAPs, with attention to households impacted by the land acquisition, fishermen, and</p>	High

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		and education. For example, demographic data of PAPs, existing livelihood practices, health and education systems is required. Further assessment on this item is referred to in ADB SR2 table, particularly item 3.	vulnerable groups (refer to ADB SR2 table particularly item 2 for further details). It should be noted that the socio-economic baseline survey of displaced households should be based on the outcomes of DMS and IOL.	
		<p>● <b>Insufficient social impact assessment (SIA)</b></p> <p>The local EIA does not contain a dedicated section for SIA. Social impacts must be identified by source, type, scope, and degree of severity with corresponding mitigation, management and monitoring measures developed. In the absence of socio-economic baseline survey, the social impacts as described in the local EIA do not account for actual baseline conditions and thus impact magnitude and severity cannot be appropriately assessed.</p> <p>The local EIA identifies and assesses some social impacts caused by the Project. These include, for example, land acquisition for the Project's transmission line, impacts associated with the in-migration and influx of workers, community health, safety, and security during the project construction and operation. However, the assessment of these social impacts in the local EIA is considered high level and preliminary and did not include a meaningful assessment.</p> <p>Potentially-significant adverse socio-economic impacts which are likely to occur have not been assessed within the local EIA. For example:</p> <p><u>Livelihood-related impacts:</u> Audit findings suggest that PAPs will experience livelihood impacts for the following reasons:</p> <ul style="list-style-type: none"> <li>(i) Economic displacement for the Project's transmission line</li> <p>Forty-seven (47) economically-displaced HHs will have their livelihood impacted due to the loss of productive land, standing crops and structures to the land (refer to ADB SR2)</p> <li>(ii) Loss of access to the fishing area within the 600 ha Da Mi lake</li> <p>Approximately 50 ha of the lake water area will be acquired for the Project's floating solar plant. This 50ha water surface area possessed by the Sponsor, together with the Sturgeon Farming Company's legally-occupied 50 ha surface water area, will</p> </ul>	The Sponsor must assess the Project's socio-economic, livelihood, health, and safety impacts on vulnerable groups and subsistence fishing communities, based on the outcome of the socio-economic baseline and impact study. This assessment should be carried out after the completion of DMS of the Project land acquisition and prior to construction. The assessment should target, at minimum, the total of displaced households (47 HHs, at this time of writing) and five fishing households living close to the Project footprint)	Medium

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<p>increasingly restrict access to the lake. The outcome of the site visit shows that there are a cluster of five fishing households living by the lakeshore, extremely close to the proposed inverter A and assembly yards. During the interviews with these five HHs, it was noted that their sole livelihood is from fishing in the lake. Four out of five fishing HHs are classified as poor HHs as they hold poor HH cards issued by the GoV. It is noted that these fishing HHs do not own the land on which their houses are situated, nor did they report owning houses elsewhere.<sup>7</sup> The lake water area (excluding the existing Sturgeon farm area and the Sponsor's proposed floating solar plant) is a public area. Local people, including these fishermen, can be users; but not owners of such areas. Consequently, they are ineligible to receive compensation and support when part of the water surface area is assigned for other users. There is no provision for compensation or assistance for loss of access to water resources within the Vietnamese regulatory framework. The potential livelihood impacts of the five fishing households must be assessed.</p> <p><u>Impacts associated with community health, safety, and security on the five fishing HHs:</u> as mentioned in EHS impact assessment above)</p> <p><u>Impacts to vulnerable groups<sup>8</sup> and gender differentiated impacts</u> Vulnerability of PAPs (including those directly or indirectly impacted due to the Project (such as economically-displaced</p>		

<sup>7</sup> During the ESDD site visit, all five fishing households were interviewed. Three out of five HHs mentioned that they migrated to the lakeshore to live 20 years ago. They did not build their current "houses". The houses were available and unoccupied at the time they moved in. The other two households built their houses on unoccupied land by the lakeshore. Some fishing households are family members. During the interviews, they articulated that they were aware of not having the rights to use the land. However, they were residing by the lakeshore as they did not have any properties and residential land. When being asked whether they would like to change their livelihood from fishing to land-based or unskilled-based livelihoods, they expressed that they would not change. They preferred to stay near water bodies so that they can do fishing for their subsistence.

<sup>8</sup> Vulnerable group are people who by virtue of gender, ethnicity, age, physical or mental disability, economic disadvantage, or social status may be more adversely affected by resettlement or other Project' impacts than others and who may be limited in their ability to claim or take advantage of resettlement assistance and related development benefits.

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		HHs and those living very near to the Project footprint) has not been assessed in the local EIA. The identification process of vulnerable groups must be carried out to understand their problems/concerns so that the Project can provide any assistance in compliance with ADB SPS requirements.		
		<ul style="list-style-type: none"> <li>● <b>Absence of some social impact mitigation measures and social management plans:</b> <ul style="list-style-type: none"> <li>– The local EIA provides some basic social mitigation measures for some anticipated impacts within Section 5.2 of the document. However, as noted above, they are not based on a robust impact assessment process consistent with SR1.</li> <li>– As a minimum, the ESMS should include specific management plans addressing socio-economic risks identified in SR1 and SR2.</li> </ul> </li> </ul>	The Sponsor is to develop appropriate livelihood restoration and mitigation measures for those economically displaced and adversely impacted by the Project, particular attention to vulnerable (Refer to Table 7 - ADB SR2 Compliance Review for further details).	Medium
3	Examine alternatives to the project's location, design, technology, and components and their potential environmental and social impacts and document the rationale for selecting the alternative proposed. Also consider the no project alternative.	<p>The Project was conceptualised out of a need to increase the grid capacity to meet the power demands of Binh Thuan and its neighbouring provinces, especially during the dry season when water levels from hydropower dams are low. The development of solar power projects in Vietnam is supported by the Prime Minister through Decision No. 11/2017/QĐ-TTg dated 11 April 2017.</p> <p>The results of the feasibility study (FS) for solar power development in Da Mi undertaken in May 2017 confirms the solar energy potential in the area. The floating solar PV technology was selected to minimise the need for land acquisition. Options taken to minimise land acquisition for the transmission line are further discussed in Table 7 – SR2.</p> <p>A “no project” alternative would mean status quo, wherein the government would have to find alternative ways to increase the grid capacity, either through fossil fuels or other types of renewable energy technology.</p> <p>A section on analysis of alternatives was not included in the approved EIA which was reviewed.</p>	<p>Sponsor to develop a statement on analysis of alternatives that details the process undertaken which led to the selection of the Project's location, design, and technology. The Sponsor may refer to the FS or similar studies undertaken.</p> <p>The analysis of alternatives should be able to demonstrate that it has considered the unanticipated impacts mentioned in Item No. 8 below, in the selection of the project site, configuration, design and technology.</p>	Medium
4	Avoid, minimize, mitigate, and/or offset adverse impacts and enhance positive impacts by means of environmental planning and management. Prepare an environmental management plan (EMP) that includes the proposed mitigation measures, environmental monitoring and reporting requirements, related	<p>The approved local EIA includes a general Environmental Management Plan (EMP) to be implemented during construction and operations. However, the EMP is lacking detailed mitigation and management measures related to the following:</p> <ul style="list-style-type: none"> <li>● Community health and safety impacts of materials transport to the fishing households living by the lakeshore and mechanisms to restrict unauthorised public access to the floating solar PV panels.</li> </ul>	The Sponsor needs to improve the existing EMP and develop an Environmental and Social Management Plan (ESMP) for the Project's construction and operation phases, in accordance with ADB Environmental Safeguards: Good Practices	Medium

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
	institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators	<ul style="list-style-type: none"> <li>Sedimentation due to floating solar PV anchoring at the bottom of the lake</li> <li>Potential loss of biodiversity – depending on the outcomes of baseline ecology surveys</li> <li>Unintended introduction of invasive species</li> </ul> <p>Further, the EMP lacks key performance indicators (KPI) to measure the effectiveness of the proposed mitigation measures and mechanism of reporting performance (eg Corrective Action Report).</p> <p><u>Organisational capacity</u></p> <p>In general, we note during the site visit and Sponsor interviews that some of the roles and responsibilities within DHD are not clearly defined. For example, a “DHD officer” can take on many <i>ad hoc</i> roles – such as that of a community liaison officer – if required. This means that DHD may not benefit from the skills and experience of a professional educated and trained specifically to undertake the role. Further, the Sponsor confirmed during the site visit that they have no prior experience managing the performance of the EPC Contractor and undertaking construction and operations compliance monitoring against the international standards (ie compliance reference framework).</p> <p>During the site visit, the Sponsor acknowledged the need to develop a basic understanding ADB’s requirements and are willing to send key officers for training.</p> <p>At present DHD’s EHS affairs (including compliance reporting to the relevant authorities) are being handled by a Safety Engineer, who engages the services of a subconsultant to undertake periodic environmental monitoring activities. Aside from this arrangement, there are no dedicated staffs assigned to assist the Safety Engineer in compliance monitoring activities. It is understood that the same Safety Engineer will be assigned to look after the Project’s compliance, in addition to his obligations on the existing hydropower assets.</p> <p><u>E&amp;S commitments by the EPC Contractor</u></p> <p>Part 3 – Conditions of Contract of Package DMS-8 on the “design, supply, installation and test of photovoltaic and electrical equipment” refers to the International Federation of Consulting Engineers (FIDIC) template on “conditions of contract” as benchmark of good international industry practice. Clause 4.18 – Protection of the Environment of the Conditions of Contract states that “the contractor shall take all reasonable steps to protect the environment and to limit damage and nuisance to people and property resulting from</p>	<p>Sourcebook (2012). This ESMP should include the following:</p> <ul style="list-style-type: none"> <li>an EHS Organisational Chart demonstrating that resources are in place to implement and manage the ESMP.</li> <li>Training Plan for key EHS personnel (eg DHD Project Manager, EHS Officer, Community Liaison Officer, EPC Contractor and sub-contractor’s Project Managers and EHS officers) to include basic knowledge and awareness of the key requirements of the following standards:</li> <li><a href="#">ADB Safeguard Policy Statement, 2009</a> (available in Vietnamese language)</li> <li><a href="#">ADB Good Practice Sourcebook on Safeguard Requirements, 2012</a></li> <li><a href="#">WBG/IFC General EHS Guidelines, 2007</a> (available in Vietnamese language)</li> <li><a href="#">WBG/IFC EHS Guidelines for Electric Power and Distribution, 2007</a></li> </ul> <p>The above considerations will be incorporated in the development of DHD’s ESMS such that it applies at both corporate and project level.</p>	

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		pollution, noise and... should ensure that emissions, surface discharges and effluent from the Contractor's activities do not exceed the values indicated in the Employer's Requirements". Explanatory notes on Employer's Requirements such as emission thresholds to be followed or adherence to the implementation of the EMP was not specified in the contractual arrangements between the Sponsor and the EPC Contractor.		
5	Carry out meaningful consultation with affected people and facilitate their informed participation. Establish a grievance redress mechanism to receive and facilitate resolution of the affected people's concerns and grievances regarding the project's environmental performance.	<p><b>Stakeholder Engagement activities</b></p> <ul style="list-style-type: none"> <li> <b>Project consultation and participation:</b>  The Sponsor does not have a SEP, nor does it have an assigned Community Liaison Officer (CLO) to undertake engagement with the surrounding community. No stakeholder engagement log was provided during the site visit. Consultation was undertaken as part of EIA preparation with local authorities, community representative groups (Vietnam Father Front Organisations), and affected local communities in La Da, La Ngau, and Da Mi communes. Although the methods for consultations were not described in the local EIA, the outcomes were summarised within the local EIA. Evidence of participants attending the public consultations during the EIA process were provided in the local EIA's Appendix. The evidence showed that the three affected communes' People Committees and some local residents attended public consultations organised in 2017. The topics of the consultations were about the Project information, environmental and social impacts associated with the Project, and the Sponsor's commitments to address impacts. </li> <li> During the interviews with PAPs, many participants demonstrated a low awareness of the Project and upcoming construction activities. Most of participants were not aware of previous public consultations nor have they received any information relating to the Project from the local authorities and the Sponsor. Only one interviewee noted that he participated in a public consultation organised during the EIA preparation. Most participants stated their only knowledge of the Project was through secondary sources of information within the community. However, all interviewed stakeholders noted a degree of support of the Project in general.   Mott MacDonald notes that engagement between the Sponsor and local authorities is limited to an exchange of information related to the Project-induced land acquisition process, with minimal interactions within surrounding communities. </li> <li> <b>Engagement with vulnerable and minority groups:</b>  A process to identify vulnerable groups has not yet been undertaken. </li> </ul>	<p>There is no sufficient evidence suggesting that PAPs have been adequately informed and consulted regarding the Project's activities. The cooperation between the government authorities and the Sponsor exists, but is considered inadequate. At the time of the site visit, there was no stakeholder engagement mechanism being implemented by the Sponsor that would enable PAPs and relevant stakeholders to engage throughout the life of the Project. Additionally, the Sponsor does not have a community grievance redress mechanism to receive and facilitate resolution of PAPs' concerns and grievances regarding the project's social and environment performance.</p> <p>To comply with this SR1 requirement, the Sponsor must undertake the following:</p> <ul style="list-style-type: none"> <li>Develop a stakeholder engagement plan (SEP), including a community grievance redress mechanism (GRM) – the SEP and GRM should utilise an understandable and transparent process that is gender-responsive, culturally</li> </ul>	High

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<ul style="list-style-type: none"> <li><b>Resettlement-related consultations:</b> Refer to SR2 table, particularly item 4 for the assessment.</li> </ul> <p><b>Community grievance redress mechanism:</b> The Sponsor does not have a community grievance redress mechanism to receive and facilitate resolution of PAPs concerns and grievances regarding the Project's environmental and social performance. Interviews with stakeholders show that there have been no complaints/grievances raised from local people regarding the Project to date. This could be because the Project's land acquisition process and construction activities have not commenced, as well as the fact that community members did not know who to approach in cases where they wanted to raise concerns.</p>	<p>appropriate, and readily accessible to all segments of the PAPs. It should also include measures to meet the relevant regulatory grievance procedures established as part of the land acquisition process in Vietnam.</p> <ul style="list-style-type: none"> <li>Appoint a Community Liaison Officer - the Sponsor should consider appointing an experienced and qualified Community Liaison Officer to ensure that the SEP and GRM are being implemented throughout the life of the Project. Records of implementation must be kept and reported as an indicator of E&amp;S performance.</li> </ul>	
6	Disclose a draft environmental assessment (including the EMP) in a timely manner, before project appraisal in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. Disclose the final environmental assessment.	<p>The approved local EIA included an EMP, but did not provide a non-technical summary (NTS) of the EIA within the document. Interviews with local authorities show that the Sponsor's EIA consultant provided the whole EIA documents to affected communes' Peoples Committee upon the approval of EIA. However, A NTS of EIA (including ESMP) has not yet been produced to disclose information about the Project's environmental and social impact and management measures.</p> <p>It is recommended that the NTS of EIA must be developed in a form and language understandable to PAPs and other stakeholders.</p>	<p>Although the local EIA was provided to affected communes, the Sponsor has not yet prepared and disclosed a Non-Technical Summary of the EIA including the Environmental and Social Management Plan.</p> <p>To comply with this SR1 requirement, the Sponsor must develop and disclose the Non-Technical Summary of the EIA in the local language and in a manner appropriate and accessible to the local community, such as in community notice boards/village office, through village heads one month before commencement of construction.</p>	High
7	Implement the EMP and monitor its effectiveness. Document monitoring	The Project is currently in pre-construction phase in which the only identified impact in the EMP relates to the land acquisition process,	Ongoing monitoring is required to assess future compliance of	Low



No.	Policy principles	Project setting/background	Compliance review	Risk ranking
	results, including the development and implementation of corrective actions, and disclose monitoring reports.	currently being progressed by DHD through the government (i.e. district-level Land Centre). Other than the regulatory compliance of submitting a six-monthly report to the local authorities, there is currently no provision for periodic disclosure of project performance to the public/local community.	the Project to the Vietnamese regulatory requirements and the compliance reference framework. Independent environmental and social compliance monitoring site visits and reporting against the compliance reference framework will be included as part of the loan agreement.	
8	Unanticipated Environmental Impacts: Update EA and EMP or prepare new EA and EMP to address unanticipated environmental impacts that become apparent during project implementation	Unanticipated environmental and social impacts which needed to be addressed are mentioned in Item No. 2 and Item No. 4 above.	The approved EIA needs to be supplemented with baseline information (see Item No. 2 above) to comply with the compliance reference framework. Consequently, the EMP needs to be updated to develop an ESMP that would be compliant to the reference framework. A project-specific ESMS will be developed, implemented, and maintained by the Sponsor throughout the life of the Project.	Medium
9	Ensure specific requirements are met for developments in critical habitats or areas of natural habitats. If a project is located within a legally protected area, implement additional programs to promote and enhance the conservation aims of the protected area. Apply a precautionary approach to the use of renewable natural resources.	<b>Critical and natural habitats.</b> The Project footprint is not located within areas recognised and characterised as critical habitats. The floating solar PV will be installed within a developed hydropower reservoir where commercial fishing (i.e. sturgeon farm) has been allowed, which we consider to be characteristic of a modified habitat.	Compliant	NA
		<b>Legally protected areas.</b> The Project is not located within a national or internationally-recognised protected area.	Compliant	NA
		<b>Invasive species</b> – The EIA did not include an assessment of the Project's potential to result in unintended introduction of invasive species. However, given the nature of the Project and duration of construction activities, the risk of invasive species introduction is considered low.	As in Item No. 2 above.	Low



No.	Policy principles	Project setting/background	Compliance review	Risk ranking
10	Apply pollution prevention and control technologies and practices consistent with international good practices	<ul style="list-style-type: none"> <li>• <b>Resource conservation and energy efficiency:</b> There is minimal discussion on resource efficiency in the EIA. However, this is not deemed a risk as solar projects are not considered resource intensive in terms of energy use, water use or other resource or material use.</li> <li>• <b>Wastes:</b> The EIA estimates the solid wastes from the workers (maximum of 40 people) will be minimal, and will be collected daily by DHD's contractor. Measures for waste reduction at source or waste recycling were not mentioned in the EIA. Disposal and/or management of other construction wastes (e.g. packaging materials such as wooden crates, earth spoils from excavation/land cut-and-fill activities) have not been described and assessed in the EIA.</li> <li>• <b>Hazardous materials:</b> The EIA mentioned that the Project is predicted to produce less than 600kg of hazardous waste annually. A third party hazardous waste company will be engaged to collect and treat hazardous waste until final disposal. Prior to collection, the hazardous wastes will be stored in DHD's existing hazardous waste facility. The location and condition of the existing hazardous waste storage facility was not described in the EIA.</li> </ul> <p><u>Waste classification of decommissioned solar panels:<sup>9</sup></u> Appropriate disposal of decommissioned solar PV panels was not considered in the EIA. To determine whether decommissioned solar PV panels are considered hazardous or not, DHD should check the specifications of the solar PV from the solar PV manufacturer. If the panels passed the toxicity characteristics leaching procedure (TCLP), they can be disposed of as regular solid waste. Otherwise, they would be treated as hazardous waste.</p> <ul style="list-style-type: none"> <li>• <b>Pesticide use and management:</b> There are no documented or proposed use of pesticides for Project activities, but the EIA recommends against the use of defoliants and herbicides in vegetation clearing activities.</li> <li>• <b>Greenhouse gas emissions:</b> As a solar energy project, the Project is expected to have net GHG emissions savings when compared to alternative fossil fuel equivalent.</li> </ul>	<p>The Sponsor should develop the following detailed management plans, to be communicated to all employees, sub-contractors and their employees. Collectively, the ESMP including the following detailed management plans will comprise DHD's Environmental and Social Management System (ESMS):</p> <ul style="list-style-type: none"> <li>• Solid Waste Management Plan – as a minimum, this should include concepts on: <ul style="list-style-type: none"> <li>- waste segregation</li> <li>- recycling (if possible)</li> <li>- prohibition of open burning of wastes</li> <li>- prohibition of open dumping</li> </ul> </li> <li>• Hazardous Waste Management Plan – In addition to complying with the national regulations on hazardous waste management, treatment and disposal, Sponsor is to ensure that the design of the hazardous waste storage facility is consistent with good international industry practice (GIIP) such as the IFC General EHS Guidelines - Hazardous Waste Management.</li> <li>• Materials Transport and Traffic Management Plan – a review of the transport route, existing road (and bridge) conditions, presence of sensitive receptors including other</li> </ul>	Medium

<sup>9</sup> <https://training.ny-sun.ny.gov/88-resources/facts/general-facts/207-what-are-the-waste-disposal-requirements-for-solar-pv-systems>

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<ul style="list-style-type: none"> <li>• <b>Dust:</b> According to the EIA, fugitive dust from material transport and vehicle movement will be managed through road watering and construction timing.</li> <li>• <b>Erosion and sedimentation:</b> Mitigation measures to manage sedimentation during construction is lacking. The extent of potential sediment dispersion during construction has not been established in the EIA.</li> <li>• <b>Water resources:</b> The construction and operations of the Project is not known to be water-intensive,</li> <li>• <b>Wastewater Discharge:</b> According to the EIA, majority of the wastewater during construction would come from the workers (i.e. sewage) and construction vehicle washing contaminated with oil and grease. The proposed mitigation measures were to provide portable toilets on site to address domestic wastewater and construct a drainage system for construction wastewater. Provision for treatment of collected wastewater from the drainage system and the portable toilets was not assessed in the EIA.</li> <li>• <b>Traffic:</b> The EIA mentioned that the floating solar PV plant's transformer will be delivered to the site via Cat Lai port in Ho Chi Minh. It is to be confirmed whether the solar PV panels are going to be delivered to the Project site using the same route. An assessment of the Project's material transport on local traffic has not been undertaken in the EIA. The project is unlikely to result in traffic congestion during operations.</li> <li>• <b>Noise:</b> Impacts of construction noise will be limited to receptors within proximity to the Project footprint. The Project is unlikely to generate noise during operations. Impacts of construction noise to aquatic and terrestrial fauna needs to be assessed.</li> <li>• <b>Land/groundwater contamination:</b> The risk of land/groundwater contamination from the Project activities is considered low to nil. It was noted during the site visit that there were a few incidents of land contamination from open dumping of the garbage (from nearby community) within DHD's property.</li> </ul>	<p>transportation constraints (eg overhead electrical and telecommunication lines) should inform the development of the Transport and Traffic Management Plan. This Plan should be disclosed to all relevant stakeholders (eg village heads, police, utility providers) at least a month before implementation.</p> <ul style="list-style-type: none"> <li>• Erosion Control and Sediment Management Plan – the outcomes of the sediment dispersion study and impact assessment will inform the development of this Plan. As a minimum, it should consider basic concepts listed in the IFC General EHS Guidelines.</li> </ul>	
11	Provide workers with safe and healthy working conditions and prevent accidents, injuries, and disease. Establish preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize,	It is understood that a maximum of 40 workers will be employed during construction. According to the EIA, workers who are not from the local community will be housed in workers' accommodation to be built within the site. However, we note during the site visit that according to the Sponsor, they will be housed within DHD's existing accommodation facility within the DHD office complex in Bao Loc.	<ul style="list-style-type: none"> <li>• Sponsor to develop a Worker's Accommodation Plan which considers GIIP such as the <a href="#">IFC/EBRD Worker's Accommodation: processes and standards, 2009.</a></li> </ul>	Low

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
	adverse impacts and risks to the health and safety of local communities.	<p>Either way, a Worker's Accommodation Plan needs to be developed to ensure that measures to maintain a safe and healthy working environment for all workers are in place.</p> <p>The Sponsor has an existing Emergency Prepared and Response Procedure (EPRP) for the existing hydropower assets which we understood was communicated to the relevant stakeholders. Mott MacDonald notes that the EPRP covered both community and workers aspects particularly in relation to flood and fire risks from the hydropower dam operations. However, the EPRP needs to be revised to consider appropriate responses to the additional community hazard and risks that the floating solar PV poses downstream, in case of dam failure.</p> <p>Chapter 6 of the draft EPC Contract pertains to labour and working conditions which the EPC Contractor needs to comply. This requires the EPC Contractor to:</p> <ul style="list-style-type: none"> <li>• Adhere to agreed working hours and payment of wages (in accordance with Vietnamese labour laws)</li> <li>• Provide accommodation and welfare facilities</li> <li>• Provide medical staff and first aid kits on site</li> <li>• Appoint a Health and Safety Officer on site</li> <li>• Maintain health and safety records</li> </ul>	<p>The provisions in the Worker's Accommodation Plan should be applicable to all employees, including that of the EPC Contractor and their sub-contractors.</p> <ul style="list-style-type: none"> <li>• Sponsor to ensure that the project-specific ESMS is communicated to the EPC Contractor for implementation during construction.</li> </ul>	
12	Conserve physical cultural resources. Provide for the use of "chance find" procedures that include a pre-approved management and conservation approach for materials that may be discovered during project implementation.	The approved local EIA states that there are no items of cultural heritage within the Project area. Consultations with local authorities and PAPs during the site visit did not reveal the presence of any tangible or intangible cultural heritage that may be impacted by the Project. At the time of the site visit, a chance finds procedure has not been developed and provided.	No compliance concerns at this stage. However, to comply with the ADB SR1 requirement, the Sponsor must develop a basic chance finds procedure to prepare for any future physical cultural resources identified throughout the life of the Project. This procedure can be incorporated within the Sponsor's ESMP.	Low

**Table 7: Compliance review: ADB Safeguard Requirement 2 – Involuntary Resettlement**

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
1	Involuntary resettlement should be avoided wherever possible	<p>The Project main footprint is situated on a 50ha surface water of Da Mi Lake – the hydropower reservoir owned by the Sponsor. The Project has been designed to minimise displacement impacts and has not resulted in any physical displacement. However, 5.88 hectares of private-used agricultural land and local government-owned land will need to be acquired for the Project.<sup>10</sup> The 5.88 ha land will be acquired for the 3.3 km transmission line, inverter station A, and substation (see section 0 – project location and footprint and Appendix F for further details).</p> <p>In accordance with prevailing regulations (The Land Law 2013), the land acquisition and compensation process will be a government-led process. A description of legal mechanism through which relevant government authorities will manage the resettlement process is provided within Appendix F. In</p>	<p>Involuntary resettlement cannot be avoided for this Project. While there is no physical displacement, it is estimated that 47 households (HHs) will experience economic displacement due to the development of the transmission line. A total 6.65ha of land will be acquired for the transmission line.</p> <p>Under the national requirements, the entire project-induced resettlement process will be managed by the government. The Project's economic displacement will not be based on negotiated settlement with all land owners. Therefore, the Sponsor will have limited ability to require the government to follow negotiated settlements for all land transactions as per ADB requirements. It is recommended that the Sponsor seek to become proactively involve in monitoring the compliance with the applicable regulatory</p>	Medium

<sup>10</sup> Agricultural land is owned by households. Agricultural land type in the affected area is use for perennial crops such as fruit and coffee plantation.

Local government-owned land for the Project are mainly affected communes' unoccupied land to be reserved to probably use for building common usage such as infrastructure and irrigation systems.

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<p>the context of this regulatory framework, all land acquisition led by the government will be defined as involuntary resettlement as the government is able to resort to expropriation.</p> <p>At the time of writing, the Sponsor has conducted an initial land measurement and submitted a request for project land acquisition to relevant local authorities (Land Centres of two affected districts, namely Tanh Linh and Ham Thuan Bac). By law, these local authorities will start the Project economic displacement process upon the issuance of a "Notification of project-induced land acquisition". A summary of the land acquisition, compensation, and resettlement process of the Project is described in Appendix F.</p>	<p>framework in order to bridge any gaps between national and ADB requirements. These will be further described in detail in items 2-12 below.</p>	
2	Minimize involuntary resettlement by exploring project and design alternatives	<p>As mentioned above, the Sponsor has advised that the selected transmission line avoids physical displacement. All Project-induced land acquisition will only result in economic displacement.</p> <p>Regarding the location and design of specific Project components, the following is noted in respect of minimising impacts on land acquisition or need for physical and /or economic displacement:</p>	<p>The Sponsor has demonstrated a commitment to minimising involuntary resettlement by exploring project design. While physical displacement has been avoided, all land acquisition for transmission line will only result in the economic displacement of 47 HHs.</p>	Low

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<ul style="list-style-type: none"> <li>• Floating solar plant: The location of the Project's 50ha plant (solar panels) is on the surface water of Da Mi lake. Using the water surface to install solar panels to minimise the project-induced land acquisition.</li> <li>• Inverter stations: There are two inverters to be installed. One of them – the Inverter Station B is designed to be installed on an unoccupied island within Da Mi Lake. This island belongs to the use right of the Sponsor and thus further reduces the requirement for additional land acquisition to 0.1 ha. Please refer to Section 1.3.2.2 for further details.</li> <li>• 22/110kV Substation: To minimise the land acquisition, the Sponsor has planned to build the 22/110kV substation on the 0.5 ha land area which belongs to the land use right of the Sponsor. Please refer to Section 1.3.2.2 for further details.</li> <li>• Transmission line: The transmission line is designed to avoid physical involuntary displacement. In total, 5.88ha of land will be acquired for 12 towers (225 m<sup>2</sup>) and a 15m wide right of way (ROW) for the entire 3.3 km transmission</li> </ul>		

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		corridor. Based on the current design, the development of transmission line will only result in economic displacement. It should be noted that the Sponsor has planned to use 0.17 ha of their existing land use right to build 1/3 22kV transmission line. Please refer to Section 1.3.2.2 for further details.		
3	Conducting census of displaced persons and resettlement planning	The review of local EIA shows that no socio-economic baseline survey and assessment of economic displacement impacts was conducted. It should be noted under the existing EIA legislation, there is no requirement to develop or present a socio-economic profile within a EIA document. Interviews with stakeholders show that the local authorities (Land Development Fund Centres of Tanh Linh and Ham Thuan Bac Districts – hereafter called Land Centres) have received the Sponsor's documents on requesting land to be acquired for the Project. A detailed measurement survey on acquired land (DMS) <sup>11</sup> will be conducted by local authorities upon the issuance of Project land acquisition notification. Interviews with	No census of displaced person has been conducted by either the local government or the Sponsor to date. Given the Project categorisation B and anticipated nature of impacts associated with economic displacement are identified, the Sponsor must undertake a socio-economic profile of the 47 HHs affected due to the land acquisition for the transmission line and of those significantly and vulnerably-affected by other project activities (such as five subsistence fishing households living close to the inverter A, assembly yards, and Project access road to the main site). This census is to identify all PAPs and to assess the Project's socio-economic and livelihood impacts on them.	Medium

<sup>11</sup> Detailed measurement survey on acquired land is a survey to provide a detailed inventory and measurements of land and associate assets for each household affected due to land acquisition.

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<p>local authorities also indicate that no socio-economic census of displaced persons will be conducted during the DMS and IOL. Mott MacDonald understands that a census of displaced persons and economic displacement planning is not required by the existing national regulatory framework. As there has been no census or survey undertaken to date, the potential vulnerability of displaced persons has not been assessed and identified.</p> <p>To comply with SR2 requirement, the Sponsor must conduct a census of displaced persons and economic displacement planning. The vulnerability of people affected due to the Project-induced economic displacement and other project impacts must be assessed as part of the socio-economic and social impact survey. It is recommended that this survey should be carried out based on the outcomes of DMS and IOL.</p>		
4	Carry out meaningful consultation with displaced	A comparison between the national <sup>12</sup> and ADB	The Sponsor, to a limited extent, has demonstrated	Medium

<sup>12</sup> Under the Land Law 2013, affected land user must be informed of the reasons for recovery, the schedule and plans for resettlement, compensation eligibility and if necessary, options for resettlement. This information disclosure must occur at least three months prior to the recovery of agricultural land. In addition, the approved detailed compensation plans shall be publicly posted in the land to be recovered. Plans and schedules for compensation payment, resettlement, and site clearance must also be announced. AP scan



No.	Policy principles	Project setting/background	Compliance review	Risk ranking
	persons and ensure their participation in planning, implementation, and monitoring of resettlement program	<p>requirements on information disclosure and consultation with APs during the resettlement process reveals significant gaps. In practice, under Vietnamese government-managed resettlement, resettlement-related information is often disseminated to Affected People (APs) through propaganda activities.<sup>13</sup></p> <p>The review of documents provided by the Sponsor shows that at the time of site visit, the Sponsor did not have a stakeholder engagement plan (SEP) to provide details or guidance on how it proposes to conduct information disclosure and consultation with displaced persons. No stakeholder engagement log was provided. In addition, the Sponsor did not have a designated Community Relation Officer responsible for undertaking community consultation.</p>	<p>collaboration with local authorities during the initial steps of the Project land acquisition. However, AHs have not yet been informed and consulted about the land acquisition as local authorities have not officially issued the “notification on Project-induced land acquisition”. There exist gaps between the national and ADB requirements on information disclosure and consultation with APs which must be addressed to the extent possible. This includes the following:</p> <ul style="list-style-type: none"> <li>• Develop a disclosure, consultation, and participation mechanism and relevant arrangements on economic displacement-related activities. This mechanism must be detailed within the livelihood restoration plan which is also recommended to be developed (see item 6 of this Table).</li> </ul>	

express opinions, concerns and contribute ideas for the detailed compensation plan and participate in all activities, such as the DMS, pricing, and compensation payment. Representatives of Commune People Committees (CPCs) must participate in the DMS. Displaced people must confirm the measurements.

Refer to the link

<https://country safeguards systems.net/developing-member-countries/viet-nam/involuntary-resettlement/viet-nam-involuntary-resettlement> for further information on gap analysis between Vietnam and ADB requirements on involuntary resettlement

<sup>13</sup> Propaganda has a negative connotation pertaining to the validity of information in western countries. However, in the Vietnamese context, propaganda is used where it means any form of formal communication of the government and does not imply that this information is deceptive. The main communication channels are through meetings, public speaking system, and written publications. APs often receive information at the “inform” level. They are simply informed by the local government about what have already been decided and completed.

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<p>Interviews with the stakeholders during the site visit indicate that the information on project-induced land acquisition has not yet been disclosed to economically-displaced HHs either by local authorities or the Sponsor. Interviews with local authorities reveal that no information disclosure or consultation has commenced as the Land Centres, at the time of the audit, were in the process of reviewing the land acquisition proposal submitted by the Sponsor.</p> <p>Interviewed AHs noted they learned about the project-induced land acquisition through “unofficial” channels, and expressed that they were not invited to join the Sponsor’s initial land measurement. They have learnt about the proposed land acquisition through: (i) observing the land survey team conducting measurement in their farms; (ii) seeing boundary markings or (ii) receiving secondary information through informal community channels</p> <p>Audit findings further indicate that the cooperation between the government authorities and the Sponsor exists; but is minimal.</p> <p>Interactions between these two stakeholder groups are</p>	<ul style="list-style-type: none"> <li>• Carry out stakeholder engagement activities throughout the Project economic displacement process.</li> <li>• Ensure appropriate resources are in place to implement Project’s stakeholder engagement activities.</li> </ul>	

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<p>mainly in the form of meetings at district and commune levels. At grass-root level, the Sponsor's collaboration with affected villages is assessed to be limited. The minimal cooperation between the two stakeholder groups was explained due to the early stage of the Project economic displacement process.</p> <p>It is understood that the entire responsibility for the implementation of the Project's economic displacement, under the existing national legislation, is given to local governments, rather than project developers. The Sponsor is responsible mainly for providing compensation funds. However, the ADB SR2 requires developers to play an active role in coordinating with the relevant government authorities and to conduct meaningful consultations with APs and ensure their participation in planning, implementation, and monitoring of resettlement program. In addition, the need of disadvantaged or vulnerable groups (especially those below the poverty line<sup>14</sup>, the elderly, female head households, and ethnic</p>		

<sup>14</sup> In Vietnam context, households under the poverty line are those with monthly incomes below 1,000,000 VND. These households are referred as poor households. These households will receive poor household cards provided by the local authorities (CPCs).

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		people) must be paid attention during the stakeholder engagement. The Sponsor is recommended to undertake consultations with displaced people and closely collaborate with local authorities during the Project economic displacement process.		
5	Establish grievance redress mechanism	<p>By law, resettlement-related grievances will be managed by local authorities<sup>15</sup>. For the Project, Tanh Linh, and Ham Thuan Bac DPCs will be the agencies responsible for managing grievances related to the Project-induced resettlement process<sup>16</sup>.</p> <p>As noted in Table 6 SR1, particularly item 5, the Sponsor does not have a Project community grievance redress mechanism. Interviews with local authorities show that there were no grievances associated with the Project economic displacement to date as the land acquisition process was still under the planning stage.</p>	<p>Land acquisition-related grievances are managed by local authorities under the existing national requirements. By law, the Project is only required to collaborate with the relevant local authorities in addressing the grievance and to provide additional compensation/ support when accepted by the authorities.</p> <p>To comply with the national and ADB SR2 requirement, the Sponsor must undertake the following as action item:</p> <ul style="list-style-type: none"> <li>• Develop a Project land acquisition-related grievance redress mechanism on receiving</li> </ul>	Medium

<sup>15</sup> Under the existing national legislation, government authorities are responsible for managing all resettlement-related grievances. This grievance process has been established based on Law on Grievances of 2011 and other regulations related to grievances in the current Land Law 2013.

The 2011 Law on Grievance allows AP to submit their grievances to Commune People's Committee (CPC). If the grievance is not resolved, it is forwarded to District People's Committee (DPC) and/or Province People's Committee (PPC). A project is only required to collaborate with the authorities in addressing the grievance and to provide additional compensation/ support when accepted by the authorities. A summary of government grievance redress mechanism on resettlement is further detailed in Appendix F.

<sup>16</sup> These agencies will file grievance cases to monitor the status of the grievances and to ensure that they receive proper and timely responses by the local authorities. Those who lodge complaints and appeals to CPCs, the district or province courts will be provided with free legal administration fee. It is the responsibility of the DPCs to monitor the status of grievances and ensure that they receive proper and timely responses by local authorities.

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<p>During the interviews with economically-displaced HHs, all participants expressed that they were not aware of the regulatory procedure on land acquisition and compensation process. In addition, most participants were not aware of the government grievance mechanism in place and did not know which agencies to contact in case they need to raise concerns/questions relating to land acquisition and compensation matters.</p> <p>It is understood that the local authorities are responsible for managing resettlement-related grievances. However, to comply with the national and ADB SR2 requirement, the Sponsor must develop a grievance mechanism on receiving and collaborating with the local authorities regarding the Project economic displacement. This mechanism should be provided within the LRP.</p>	<p>and collaborating with the local authorities. This mechanism should be provided within the LRP. It should be noted that the principles and procedures on receiving and collaborating with the local authorities in addressing grievances associated with the Project economic displacement must be aligned with the Project's Community Grievance Redress Mechanism, which is also recommended to be developed within the SEP (Refer to Table 6 SR1, particularly item 5)</p> <ul style="list-style-type: none"> <li>• Disclose and implement the Project grievance mechanism throughout the Project economic displacement process.</li> <li>• Ensure appropriate resources are in place to implement Project's grievance mechanism.</li> </ul>	
6	Improve or at least restore the livelihoods of all displaced persons	The comparison between national and SR2 requirements on livelihood restoration for displaced persons indicates gaps <sup>17</sup> . They include:	The Project is considered to be led the economic displacement of 47 HHs. In the absence of socioeconomic baseline and	Medium

<sup>17</sup> Under the existing legislation, a land user whose land is acquired would be provided some assistance, in addition to receiving compensation for affected land and assets. Support policies include: (i) Support in stabilising lives and production; (ii) Support in livelihood restoration or individuals' households who are economically displaced (e.g., farmers, service/business households); and (iii) Other support (which is decided by local authorities based on local context in common practice. For example, a Project might want to provide some in-kind or in-cash assistance to displaced households etc.). The current national and local policies provide a clear framework for these support policies. Types of assistance are either in-kind or cash. Most of cases, assistance for displaced HHs is in the form of cash. In practice, the assistance amount is minimal.

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<ul style="list-style-type: none"> <li>There is no requirement for household and socio-economic surveys to be undertaken to collect appropriate socio-economic baseline data of displaced persons and to determine who will be eligible for assistance, and to define alternative/additional livelihood support measures as previously discussed.</li> <li>Under the existing national legislation, there is no specific requirement on developing a livelihood restoration plan for APs whose livelihoods are impacted due to the Project (including economic displacement-related and other Project-related impacts), especially those households identified as vulnerable.</li> </ul> <p>Land acquisition for the Project will lead to the economic displacement of 47 HHs in three affected communes La Da, La Ngau, and Da Mi. It should be noted that the number of displaced households needs to be confirmed once a DMS and IOL have been undertaken in accordance with the requirements of the Land Law 2013.</p> <p>Agricultural land and attached crops/structures will be</p>	<p>livelihood impact survey, the livelihood impacts due to the economic displacement and project-related activities have not been assessed within the local EIA. For example, the consideration of impacts on disruption to the five fishing households' livelihoods due to Project construction activities, have not been considered in the local EIA.</p> <p>To comply with SR2, the Sponsor must undertake the following as an action item:</p> <ul style="list-style-type: none"> <li>An action item as per No.3 within this Table.</li> <li>Assess and identify the vulnerability of people affected due to the Project-economic displacement and other project impacts (such as fishing communities living close to the floating solar plant).</li> <li>Develop a Livelihood Restoration Plan for the Project. This LRP specifies the procedures that the Sponsor will follow and the actions that the Sponsor will take to mitigate adverse effects and provide livelihood restoration measures and development benefits to persons affected by the Project. It should be noted that the LRP is based on the outcomes of socio-economic baseline and impact survey. Livelihood restoration measures</li> </ul>	

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<p>acquired for the Project's transmission line. At the time of writing, neither a DMS on affected land and assets nor socio-economic baseline survey had been conducted. Therefore, the magnitude of livelihood impacts associated with the Project has not been assessed.</p> <p>Based on the interviews with local authorities during the ESDD site visit government officials from three affected CPCs and two Land Centres stated that all 47 HHs would potentially lose less than 10% of total productive land. In addition, interviews with 13 affected HHs in the three affected communes indicated that all of participants would lose less than 10% of total production land. Based on the outcome of these consultations, it seems that AHs are unlikely to be significantly impacted by the TL land acquisition. However, as noted above, to confirm the extent of livelihood impacts to displaced HHs and the scope of vulnerability of these 47 affected HHs, the Sponsor should undertake additional studies to precisely define the nature and significance of impacts. It is recommended that a socio-economic baseline and impact survey be undertaken</p>	<p>should be provided for both Directly Project Affected People (DPAP) (those who are economically-displaced due to the Project) and Indirectly Project Affected People (IPAP) (those who are indirectly impact by the Project implementation, such as five fishing households residing close to the Project footprint and potentially losing access to finish area).</p>	

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<p>after the DMS and IOL data are available. A social impact assessment, especially livelihood impact assessment for those economically displaced and those significantly- and vulnerably impacted by the project (e.g. five subsistence fishing households), must be carried out. In addition, it should be noted that gender impacts associated with livelihood must be assessed through the social impact assessment survey.</p> <p>As mentioned in SR1, the consideration of impacts on disruption to five fishing households' livelihoods due to specific Project activities, such as solar plant construction, increased turbidity in fishing area, and impacts to access to livelihood sources have not been considered in the local EIA. These potential livelihood impacts should be assessed as part of a socio-economic baseline and impact survey in accordance with paragraph 6 of SR2.</p>		
7	Land based resettlement strategy	Under the existing legislation, in principle, acquired land should be compensated by allocating new land for the same purpose. Where no land is available for compensation, land ownership can be compensated in cash.	Land-based resettlement strategy is not applicable to this Project. Agricultural land to be acquired will be compensated via cash payments only under the government-managed resettlement process. Refer	Low



No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		During the interviews with the two Land Centres, participants stated that a land based economic displacement strategy would not be pursued since no land was available within the area. Government officials at the Land Centres concluded that agricultural land to be acquired would be compensated via cash payments only. Compensation-related framework is provided in Appendix F for further details	to item 12 for mitigation measures.	
8	All compensation should be based on the principle of replacement cost	<p>The legal framework for valuation, compensation, and resettlement of the Project is based on the current GoV and Binh Thuan PPC policies provided in Appendix F. Under the existing legislation, compensation units are determined based on a survey process and defined pricing mechanisms, and are issued in a manner suitable to the actual local situation. The categories of assets to be compensated include:</p> <ul style="list-style-type: none"> <li>• Agricultural Land;</li> <li>• Structures attached to the land; and</li> <li>• Crops, trees, and perennials.</li> </ul> <p>ADB SR2 requires that all compensation should be based on the principle of replacement cost (i.e. market</p>	<p>All compensation rates for the Project-induced economic displacement will be based on the current national and Binh Thuan PPC policies. Under the existing legislation, there is no requirement for a third-party to value market rates for compensation units. In principle, each PPC will annually issue a land price notice to notify the local unit land price to be used for compensation. By law, this method is considered at replacement value. In practice, compensation prices for lost assets are often lower than actual market price.</p> <p>To comply with ADB SR2 requirement, the Sponsor must undertake the following as action item:</p>	Medium

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<p>value plus transaction cost). However, Vietnam does not have a typical market value system, making it difficult to compare the government policy framework to the ADB standards.</p> <p>The land value is determined by the GoV based on the value/use of land and full replacement cost is set by the GoV as a matter of policy. According to existing laws and regulations, replacement cost is calculated based on actual successful transactions in the stable market condition of the Project area at the time of replacement, or based on the AP's income and market value of the properties they use. In case more than one method is applicable, the cost calculation based on actual transactions in the stable market condition is preferable.</p> <p>In terms of replacement cost for affected assets crops and trees, compensation unit prices for affected assets, structures, trees, and crops are in line with current market prices. Unit prices are determined based on a survey process as well as existing regulations and take into consideration the actual local situation and crop productivity.</p> <p>Under the existing legislation, there is no requirement for a third-party to value market</p>	<ul style="list-style-type: none"> <li>• Conduct stakeholder engagement with APs and relevant stakeholders to understand whether the compensation prices are at replacement cost once the compensation prices are decided.</li> <li>• Provide livelihood restoration assistance where deemed necessary as a means to close any gaps between compensation levels proposed and the principles of full replacement cost.</li> </ul>	

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		<p>rates for compensation units. Each PPC will annually issue a land price notice to notify the local unit land price to be used for compensation. By law, this method is considered as replacement value. However, in practice, compensation prices for lost assets are often lower than actual market price.</p> <p>At the time of ESDD site visit, the government was yet to start the land acquisition and resettlement process and Mott MacDonald therefore cannot provide commentary on the actual compensation values</p> <p>It is understood that local authorities manage the entire project-induced resettlement process. However, to comply with ADB SR2 requirement, the Sponsor should conduct stakeholder engagement with APs and relevant stakeholders to understand whether the compensation prices are at full replacement cost. In cases where the compensation rates are below full replacement cost, the Sponsor must propose appropriate mechanisms (generally through livelihood restoration assistance for APs) to ensure that this gap is minimised to the extent allowed by local authorities.</p>		
9	Provide relocation assistance to displaced persons	Based upon information from the Sponsor, there will be no	Not applicable	Not applicable

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		physical displacement associated with the development of the Project's transmission line. Further, the Sponsor has confirmed that five fishing households living at the lakeshore will not be physically displaced as they are not living within the Project footprint.		
10	Ensure that displaced persons without title to land or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of non-land assets.	<p>In Vietnam, people do not own land. Instead, the State owns the land. The private ownership of land is not permitted in Vietnam. However, the Land Law 2013 allows the ownership of a right to use land.</p> <p>Under the national legislation on land, legal land users are to be compensated when the Government acquires land. In another word, land users who hold LURCs or are in the process of acquiring LURCs or are eligible to acquire LURC will be compensated for the loss of land and assets. The existing Land Law stipulates that in the event of APs who do not have legal rights to the land/assets they occupy or use, or do not have enough required legal documentation for compensation, local authorities are responsible for providing support for such cases by review and consideration of case by case.</p> <p>The review of the Binh Thuan provincial policies on compensation, and assistance</p>	The approach being taken by the local government ensures that AHs using land for which they have no recognisable legal claims will be compensated for crops and assets. It is reported that the potential displaced HHs have recognisable legal rights to the land they occupy. This will need to be confirmed after the completion of the DMS, IOL, and the land origin investigation process.	Low

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		and resettlement (Decision No. 59-2014-UBND) shows that in case land users who have no formal legal rights, there will be no compensation for land; but full replacement cost for non-land assets and investment on land (before a cut-off date) <sup>18</sup> .  Local government officials during the interviews state that AHs whose land to be acquired for the Project transmission line have recognisable legal rights to the land they occupy. These households are holding their LURCs on their land.		
11	Pay compensation and provide other resettlement entitlements before physical or economic displacement	The review of the existing national legislation shows that the requirements on compensation payment and associated entitlement timeframe are aligned with the ADB SR2 requirement <sup>19</sup> . During the site visit, participants in the meetings with local authorities expressed that the compensation and assistance	Local government officials during the interviews indicate that all AHs would receive compensation payments prior to any economic displacement. It is recommended that the Sponsor monitor the government-managed land acquisition and compensation process to ensure compliance with the applicable national	Low

<sup>18</sup> A cut-off date is the date designated by the Project to determine its obligation to compensate affected assets of eligible APs. After the cut-off date, affected land, structures, trees, crops, or other assets are not compensated. In Vietnam, People Committees (PC) of affected districts formally announce the cut-off date. The cut-off date is often the date that district PCs issue their decisions on approving detailed plans for compensation and support for AHs for a project. The cut-off date is after the DMS. As for the Project, Ham Thuan Bac and Thanh Binh Districts' People Committees will issue their decisions on detailed compensation and assistance based on the final results of DMSs. The cut-off dates will be the dates that such decisions are issued.

<sup>19</sup> Under the Land Law 2013, affected PCs will issue decisions on Compensation, Support, and Resettlement (CSR) for each AH. The approved CSRs must be publicly posted at commune headquarters and the schedules of compensation and assistance payment must be announced to AHs. Compensation and assistance payment should be paid prior to physical or economic displacement. A summary of legal requirements on land acquisition, compensation and assistance process is provided in Appendix F.

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		payment process would comply with the relevant regulations. Compensation and support will be in the form of cash. Entitlements for compensation and support will be disclosed to each AH. Compensation for AHs would be one-off payment and would be paid prior to economic displacement.	and international regulations. This recommendation is further detailed in the below item.	
12	Monitor and assess resettlement outcomes, their impacts on the standards of living of displaced persons.	<p>There are no national regulations on monitoring and evaluation of resettlement outcomes and livelihood restoration nor are there policies that overtly refer to monitoring activities. In practice, the evaluation of grievance might be used for evaluating and investigating resettlement issues.</p> <p>The Project's economic displacement process has not yet occurred. As mentioned above, livelihood restoration supports for economically-displaced households will legally include transition and life stabilisation supports and are in the form of cash. It is unlikely that the monitoring of the Project economic displacement outcomes and associated livelihood impacts will be undertaken by the local government. Audit findings indicate that no monitoring and evaluation program has been developed by either local authorities or Sponsor.</p>	<p>The review of existing national requirements on monitoring resettlement outcomes and livelihood impacts shows that there are no requirements for monitoring and evaluation of resettlement outcomes and associated livelihood impacts on displaced persons. In addition, findings of the ESDD site visit indicate that no monitoring and evaluation program has been developed by either local authorities and the Sponsor.</p> <p>To comply with ADB SR2 requirement, the Sponsor must undertake the following as action items:</p> <ul style="list-style-type: none"> <li>Establish a monitoring and evaluation mechanism to evaluate the implementation of economic displacement and livelihood restoration process. This mechanism is contained within the LRP. The monitoring and evaluation approach will be focused on the project-affected communities,</li> </ul>	Medium

No.	Policy principles	Project setting/background	Compliance review	Risk ranking
		The Sponsor is recommended to develop a monitoring and evaluation mechanism throughout the land acquisition, compensation, and livelihood restoration process of the project.	<p>especially the most vulnerable groups.</p> <ul style="list-style-type: none"> <li>Implement the monitoring and evaluation procedures as per the LRP and take corrective actions as necessary.</li> </ul>	

## 4 Action Plan

### 4.1 Overview

This section presents a Corrective Action Plan (CAP) for the Project to meet the requirements of the compliance reference framework. Only material compliance issues that have been assigned a risk rank of either medium or high have been carried forward and translated into actions with the CAP. Any actions given a risk ranking of low are still to be noted and addressed if required, however due to the risk ranking methodology adopted these matters are generally considered to be managed within the existing management framework adopted by DHD and therefore inclusion as CAP items is not warranted.

This CAP is based on our understanding of the project documentation provided, project status at the time of writing and requirements of the Lenders moving forward. The CAP must be reviewed and amended in discussions between the Lenders and the Sponsor to ensure that all parties are aware of the obligations imposed by the CAP and accept the obligations herein. Any changes to the Project description or any of the documentation provided will require the CAP to be reviewed and amended if considered necessary. The implementation of the CAP is the responsibility of the Sponsor, however they may enlist the support of various specialists to discharge the action or formally transfer obligations to an EPC contractor.

The CAP contained within Table 2 sets out:

- The proposed measures or actions based on findings of our review and recommendations to achieve compliance with the reference framework
- The specific guideline for which each action is designed to achieve compliance with
- Recommended responsibility for implementing the action
- The deliverable or key performance indicator (KPI) that demonstrates the action has been completed
- Timeline to resolve the action, usually referenceing financial close, commencement of construction or operation
- Estimated budget to achieve the deliverable or KPI, stated as a range or estimated limit.



## 4.2 Corrective Action Plan

Measure and / or corrective action	Reference framework	Responsibility	KPI (deliverable / measurement)	Deadline	Estimated budget (USD)
<b>Social action plan</b>					
<p>S1 <b>Socio-economic baseline and impact survey</b> DHD must conduct a socio-economic baseline survey and impact assessment on project-affected people (PAPs). It is recommended that this survey be undertaken after the DMS and IOL of economic displacement are available.</p> <p>This survey would include, but not limited to the following:</p> <ul style="list-style-type: none"> <li>• Develop a socio-economic profile of the economically-displaced HHs and of those adversely-affected by other project activities (such as five subsistence fishing households living very close to the proposed inverter A, assembly yards, and Project access to the main site). At the time of writing this report, it is estimated that the number of PAPs for the socio-economic survey is 52, in which 47 displaced HHs and five fishing households living very close to the Project footprint.</li> <li>• Assess and identify the vulnerability of PAPs affected due to the Project economic displacement and other Project-related impacts.</li> <li>• Identify whether there are any HHs having cumulative resettlement-related impacts due to the land acquisition of the proposed Project and the existing Ham Thuan – Da Mi hydropower plants. In case where HHs are identified as being affected by the historical dam land acquisition in addition to the proposed Project-induced resettlement, the Sponsor is recommended to assess cumulative livelihood impacts on these HHs and determine if there are any specific vulnerabilities or impacts that may need to be addressed through differentiated livelihood restoration measures.</li> <li>• Assess the Project's socio-economic, livelihood, health, and safety impacts on PAPs, with attention to vulnerable groups and subsistence fishing communities.</li> <li>• Develop mitigation measures for identified social impacts, with attention to vulnerable groups and subsistence fishing communities.</li> </ul>	ADB SPS	DHD	Socio-economic baseline and impact assessment report	After the completion of DMS/IOL of Project land acquisition and prior to construction	15,000
<p>S2 <b>Development of a Project Stakeholder Engagement Plan</b> DHD is to develop a stakeholder engagement plan (SEP) to enable stakeholders to engage throughout the life of the Project. A Project community grievance redress mechanism must also be provided within this SEP</p>	ADB SPS	DHD	SEP	After the completion of detailed measurement survey of	8,000

	Measure and / or corrective action	Reference framework	Responsibility	KPI (deliverable / measurement)	Deadline	Estimated budget (USD)
					land acquisition and prior to construction	
S3	<p><b>Development of a Livelihood Restoration Plan</b></p> <p>DHD is to develop a livelihood restoration plan to ensure that livelihood standards of living of displaced persons and adversely and vulnerably affected people are improved or at least restored. The outline of the plan is provided in Annex 2 to Appendix 4 of the 2009 ADB Safeguard Policy Statement. This plan would include, but not limited to the following:</p> <ul style="list-style-type: none"> <li>• Determine the magnitude of impacts associated with the Project economic displacement and assess socio-economic impacts on PAPs groups</li> <li>• Develop appropriate livelihood restoration measures, assistance as well as mitigation measures for those economically displaced and adversely impacted by the Project. Livelihood restoration measures should be provided for both Directly Project Affected People (those who are economically-displaced due to the Project) and Indirectly Project Affected People (IPAP) (those who are indirectly impact by the Project implementation, such as five fishing households residing close to the Project footprint (proposed solar plant, inverter A, and assembly yards) and potentially losing access to fishing area), particularly for vulnerable groups. These measures must be provided based on outcomes of the socio-economic baseline and impact survey as well as stakeholder engagement during the land acquisition process.</li> <li>• Develop a disclosure, consultation, and participation mechanism and relevant arrangements on activities associated with the Project economic displacement. The mechanism for stakeholder engagement associated with the economic displacement process must be aligned with the SEP.</li> <li>• Develop a Project grievance redress mechanism associated with the Project economic displacement on receiving and collaborating with the local authorities. It should be noted that the principles and procedures on receiving and collaborating with the local authorities in addressing land acquisition-related grievances must be aligned with the Project's Community Grievance Redress Mechanism, which is also recommended to be developed within the SEP.</li> <li>• Establish a monitoring and evaluation mechanism to evaluate the implementation of economic displacement and livelihood restoration</li> </ul>	ADB SPS	DHD	Livelihood Restoration Plan	After the completion of detailed measurement survey of land acquisition and prior to construction	15,000 (please note that this estimated budget is for the development of the plan only)

	Measure and / or corrective action	Reference framework	Responsibility	KPI (deliverable / measurement)	Deadline	Estimated budget (USD)
	process. The monitoring and evaluation approach will focus on the project-affected communities, especially the most vulnerable groups.					
S4	<p><b>Government-managed economic displacement process for the Project's transmission line</b></p> <p>For the government-managed economic displacement process, DHD is to undertake the following:</p> <ul style="list-style-type: none"> <li>Develop a database of displaced households to determine the magnitude of land acquisition-related impacts and develop appropriate livelihood restoration measures. This database is based on the outcomes of DMS, IOL, SCR, and socio-economic baseline and impact survey.</li> <li>Conduct stakeholder engagement with APs and relevant stakeholders to understand whether the compensation prices are at replacement cost once the compensation prices are decided.</li> </ul> <p>Collaborate with local authorities and undertake monitoring and reporting during the government-led economic displacement process.</p>	<p>Vietnam legislation on resettlement</p> <p>ABD SPS</p>	DHD	<p>A database of displaced households and vulnerable groups</p> <p>Stakeholder Engagement Log</p> <p>Grievance Mechanism Register</p> <p>Semi-annual resettlement monitoring report</p>	Ongoing engagement and monitoring until the government-managed economic displacement process is completed	
S5	<p><b>Implementation of the Livelihood Restoration Plan</b></p> <ul style="list-style-type: none"> <li>The Sponsor is to implement and monitor livelihood restoration-related activities as per the LRP Plan and take corrective actions as necessary.</li> </ul>	ABD SPS	DHD	<p>Stakeholder Engagement Log</p> <p>Grievance Mechanism Register</p> <p>Semi-annual resettlement monitoring report</p>	Ongoing until the livelihood of PAPs is assessed to be improved or at least restored by a third-party audit	Internal labour cost
S6	<p><b>Project consultation and participation</b></p> <ul style="list-style-type: none"> <li>Carry out Project-related stakeholder engagement activities throughout the life of the Project as per SEP.</li> <li>Have appropriate resources in place to implement Project's stakeholder engagement activities.</li> </ul>	ADB SPS	DHD	<p>Records of stakeholder engagement activities</p> <p>Appointment of a Community Liaison Officer</p>	Ongoing throughout the project life	Internal labour cost

	Measure and / or corrective action	Reference framework	Responsibility	KPI (deliverable / measurement)	Deadline	Estimated budget (USD)
S7	<b>Project Community Grievance Redress Mechanism</b> <ul style="list-style-type: none"> <li>Implement the Project's community grievance redress mechanism as per SEP</li> <li>Have appropriate resources in place to implement the Project's community grievance redress mechanism.</li> </ul>	ADB SPS	DHD	Evidence of disclosure activities  Grievance Redress Mechanism Register	Ongoing throughout the project life for implementing the community GRM	Internal labour cost
S8	<b>Human Resource Policy</b> The Sponsor to develop strategies within its existing HR policy to increase female participation within the DHD workforce.	ADB SPS	DHD	Evidence of strategies	During construction and operation	Internal labour cost
<b>Environmental action plan</b>						
E1	<b>Allocate resources to undertake additional baseline studies</b> Sponsor to allocate resources to undertake baseline study to assess the Project's impacts to the following: <ul style="list-style-type: none"> <li>Freshwater and terrestrial species which can be found within the Project footprint (including their conservation significance). Sponsor to undertake an assessment of the extent to which the Project may have an impact to biodiversity (no change/net loss/net gain).</li> <li>Extent of sediment dispersion during construction</li> <li>Impact assessment of solar PV shading on thermal circulation, lake nutrient cycling and aquatic flora and fauna</li> <li>Impact assessment of construction noise on aquatic and terrestrial fauna</li> <li>Health and safety impacts of material transport on five households living by the lakeshore, near the proposed assembly yard</li> <li>Assessment on unintended introduction of invasive species</li> </ul>	ADB SPS, IFC General EHS Guidelines	DHD/external consultant	Appointment of an external consultant  Baseline survey and impact assessment report	Prior to start of construction	20,000 - assuming Vietnamese local experts will be engaged
E2	<b>Update the ESMP</b> Based on the outcomes of the additional environmental (E1) and socio-economic baseline (S1) surveys requested, the ESMP needs to be updated to include:	Vietnamese regulations, ADB SPS, IFC General EHS Guidelines	DHD/external consultant	Updated ESMP  Proof of disclosure to the EPC Contractor	At least one month prior to construction	30,000 (for ESMS including specific management)

Measure and / or corrective action	Reference framework	Responsibility	KPI (deliverable / measurement)	Deadline	Estimated budget (USD)
<ul style="list-style-type: none"> <li>Measures to mitigate or manage project-induced livelihood impacts on vulnerable groups (ie subsistence fishing communities)</li> <li>Measures to mitigate or manage community health and safety impacts</li> <li>Measures to avoid unauthorised access to the project footprint</li> <li>Measures to mitigate or manage impacts of solar PV anchoring on lake water quality and sedimentation</li> <li>Measures to mitigate against or manage potential loss of biodiversity, if required</li> </ul> <p>The ESMP should include details on resources, capacity building and budget allocation for successful implementation compliant with ADB SR1.</p> <p>The implementation of the updated ESMP should be included in the EPC Contractor's contractual obligations. Therefore, DHD should ensure that this is communicated to the EPC Contractor.</p> <p>A mechanism of reporting by the EPC Contractor to DHD on the Project's compliance with the ESMP during construction must be established.</p>			EPC Contractor's Monthly Construction Progress Report – to include EHS performance		plans- assuming this will be outsourced to an external consultant with track record and experience in ESMP and ESMS development
<p><b>E3 Develop an ESMS</b></p> <p>To mainstream the Project's E&amp;S compliance against the requirements of the compliance reference framework, an ESMS will be developed to include the following contents:</p> <ul style="list-style-type: none"> <li>DHD's environmental and social policy</li> <li>Organisational capacity to implement the ESMS: <ul style="list-style-type: none"> <li>EHS Organisational Chart (to appoint a Project EHS Officer and Community Liaison Officer)</li> <li>EHS Capacity Development and Training Plan</li> </ul> </li> <li>Updated ESMP (see E2 above)</li> <li>Suite of project-specific management plans such as but not limited to the following: <ul style="list-style-type: none"> <li>Community Health and Safety Plan</li> <li>Emergency Preparedness and Response Plan (Sponsor to check adaptability of the existing EPRP to the Project)</li> <li>Security Management Plan</li> <li>Materials Transport and Traffic Management Plan</li> <li>Erosion Control and Sediment Management Plan</li> <li>Solid Waste Management Plan</li> <li>Hazardous Waste Management Plan</li> </ul> </li> </ul>	ADB SPS, IFC General EHS Guidelines, IFC/EBRD Worker's Accommodation: processes and standards	DHD/external consultant	ESMS to include the following specific management plans: <ul style="list-style-type: none"> <li>Community Health and Safety Plan</li> <li>Emergency Preparedness and Response Plan</li> <li>Security Management Plan</li> <li>Materials Transport and Traffic Management Plan</li> <li>Erosion Control and Sediment</li> </ul>	Within three months from the start of construction	

Measure and / or corrective action	Reference framework	Responsibility	KPI (deliverable / measurement)	Deadline	Estimated budget (USD)
<ul style="list-style-type: none"> <li>- Workers Accommodation Plan</li> <li>- Stakeholder Engagement Plan including GRM (see item S2 above)</li> </ul> <p>The ESMS should be communicated to all project levels including the EPC Contractor and their sub-contractors.</p> <p>A mechanism whereby the EPC Contractor would report on the Project E&amp;S performance to the Sponsor should be included in the ESMS.</p>			<p>Management Plan</p> <ul style="list-style-type: none"> <li>• Solid Waste Management Plan</li> <li>• Hazardous Waste Management Plan</li> <li>• Workers Accommodation Plan</li> <li>• Stakeholder Engagement Plan including a grievance redress mechanism</li> </ul> <p>Proof of ESMS disclosure to all project levels, including EPC Contractor and subcontractors</p>		
<p>E4 <b>Compliance monitoring</b></p> <p>DHD should develop mechanisms to ensure that the Project's compliance against the compliance reference framework is sufficiently monitored throughout the life of the Project. Where non-compliance to the ESMP and specific management plans are identified, this should be recorded in a Corrective Action Report which is to be regularly updated by the Sponsor. The Corrective Action Report/Log should include the following details:</p> <ul style="list-style-type: none"> <li>• Detail on non-compliance or potential non-compliance (near miss)</li> <li>• Date of occurrence</li> <li>• Name of reporter</li> <li>• Proposed actions to resolve the issue</li> <li>• Responsible person/department to resolve the issue</li> </ul>	<p>Vietnamese national and local regulations, ADB SPS, IFC General EHS Guidelines, IFC/EBRD Worker's Accommodation: processes and standards</p>	<p>DHD</p>	<p>Compliance Monitoring Report</p> <p>Corrective Action Report/Log</p>	<p>Throughout the Project life</p>	<p>Internal labour cost</p>

Measure and / or corrective action		Reference framework	Responsibility	KPI (deliverable / measurement)	Deadline	Estimated budget (USD)
<ul style="list-style-type: none"> <li>• Deadline for undertaking the proposed actions</li> <li>• Close out status</li> </ul>						
Permitting						
P1	<b>Ensure all relevant permits are acquired prior to construction.</b> Pending permit for DHD to acquire as follows: <ul style="list-style-type: none"> <li>• Approval of land acquisition and CSR Plan</li> <li>• Land Use Right Certificate</li> <li>• Construction Permit</li> <li>• Surface Water Lease</li> </ul>	Relevant Vietnamese legislation	DHD/EPC Contractor	<ul style="list-style-type: none"> <li>• Approval of land acquisition and CSR Plan</li> <li>• Land Use Right Certificate</li> <li>• Construction Permit</li> <li>• Surface Water Lease</li> </ul>	Prior to construction	Internal labour cost

Source: Mott MacDonald 2018

# Appendices

A.	List of documents reviewed from the Sponsor and site visit itinerary (proposed)	2
B.	Stakeholder meetings attendance sheets	6
C.	List of economically-displaced households due to land acquisition for the transmission line	7
D.	Involuntary resettlement impact categorisation checklist	10
E.	Indigenous Peoples Screening Checklist	12
F.	Project transmission line land acquisition	14
G.	Environmental and Social Compliance Audit	24



## A. List of documents reviewed from the Sponsor and site visit itinerary (proposed)

Document name	Author/source
<b>Approved local EIA for Da Mi floating solar project 2017</b>	
EIA Final for the floating solar PV (English)	DHD's EIA consultant - Electricity Development No. 4 Consulting Company (PECC4)
Local EIA (Vietnamese)	DHD's EIA consultant - Electricity Development No. 4 Consulting Company (PECC4)
Appendices EIA Report	DHD's EIA consultant - Electricity Development No. 4 Consulting Company (PECC4)
Decision of People Committee on approving the EIA 2017	Binh Thuan Province People's Committee
EIA for the Ham Thuan-Da Mi hydropower plant (Vietnamese)	DHD's EIA consultant - Electricity Development No. 4 Consulting Company (PECC4)
<b>Feasibility study for floating solar</b>	
Feasibility study for floating solar	EVN PECC4
<b>Land acquisition and resettlement for Da Mi Floating Solar Project</b>	
Map on land acquisition for transmission line in La Ngau commune	DHD
Map on land acquisition for transmission line in Da Mi commune	DHD
Map on land acquisition for transmission line in La Ngau commune	DHD
Detailed data on number of AHs and land acquired per each commune	DHD
Existing laws and regulations on land acquisition and resettlement	Government of Vietnam
<b>Human Resources</b>	
DHD 2017 employee by position and gender	DHD
DHD 2017 employees	DHD
DHD professional employees	DHD
DHD Collective labour agreement	DHD
DHD Behaviour handbook	DHD
DHD Collective labour agreement	DHD
DHD Decision on culture performance	DHD
DHD Organisational chart	DHD
DHD Policy on culture performance	DHD
DHD Regulation on communications	DHD
DHD Regulation on crisis management	DHD
DHD Regulation on employee consultation	DHD
DHD Regulation on implementing democracy at work	DHD
DHD Guideline on project management	DHD
DHD Policy on managing operation offices of Ham Thuan-da Mi Hydropower Plants	DHD
DHD Regulation on training and capacity building	DHD
<b>Occupational Health, Safety, and Security (OHSS)</b>	
OHSS-related national laws and regulations	Government of Vietnam
DHD Decision on safety regulation	DHD

Document name	Author/source
DHD Plan on flood prevention plan	DHD
DHD OHS training handbook	DHD
A sample of DHD safety certificate for an employee (Mr Truong Minh Dung)	DHD's OHS training consultant (Hoang Bao Vinh OHS Consulting Company)
DHD Regulations on safety	DHD
DHD Plan on safety, hygiene, labour and fire prevention 2017	DHD
DHD Plan on safety, hygiene, labour and fire prevention 2018	DHD
DHD Regulation on using electricity equipment	DHD
DHD Record on investigating safety and hygiene 2017	DHD
Contract for checking health for employees with Da Mi Clinic	DHD and Da Mi Health Clinic
DHD Report on occupational health 2017	DHD
DHD Plan on OHS and emergency response	DHD
DHD Plan on fire prevention plan for the DHD head office & employee's accommodation	DHD
DHD Fire prevention plan of Da Mi plant	DHD
DHD Fire prevention plan of Ham Thuan plant	DHD
DHD Plan on flood prevention for Ham Thuan-Da Mi hydropower plants	DHD
<b>Environmental performance and management</b>	
Environmental-related national laws and regulations	Government of Vietnam
DHD Policy on environmental protection and management 2013	DHD
DHD Regulations on environmental protection and management 2013	DHD
DHD 2016 Annual report	DHD
DHD 2016 Report on environmental monitoring	DHD
DHD 2017 Report on environmental monitoring	DHD
DHD hazardous waste registration book	DHD
DHD hazardous waste incident response	DHD
DHD hazardous waste management handbook	DHD
DHD Report on hazardous waste management 2016	DHD
DHD Report on hazardous waste management 2017	DHD
Signed contract between DHD and Viet Uc Environment Company on hazardous waste collection and treatment	DHD and Viet Uc Environment Company
Certificate on hazardous waste collection and treatment of Viet Uc Environment Company	Ministry of Natural Resources and Environment (MONRE)
Hazardous waste collection template	Department of Natural Resources and Environment (DONRE)
Records of hazardous waste collection August and October 2017	Viet Uc Environment Company
<b>Project General and Permits</b>	
EHSS national permitting regulations	Government of Vietnam
Certificate for using water surface of Da Mi Lake	MONRE
Decision on Da Mi floating solar investment	People's Committee of Binh Thuan Province
<b>Land acquisition and resettlement due to Ham Thuan-Da Mi Hydropower plants</b>	
Decision No. 1922/QĐ-NLĐK of Ministry of Industry dated 8 August 2003 on approving plans for land acquisition and resettlement of Ham Thuan-Da Mi Hydropower plants	Ministry of Industry
List of displaced households receiving resettlement assistance to relocate to Loc Nam commune due to the resettlement of Ham Thuan-Da Mi Hydropower plants	Bao Lam District People Committee

Source: Mott MacDonald 2018

## Site visit itinerary for Da Mi Floating Solar PV Project v4 - 2 Mar 2018

Date	Itinerary	Logistics required
Sunday, 4 Mar		
13:15-14:20	Travel from Singapore to Ho Chi Minh via VN 650	Vehicle and driver to be arranged by DHD
15:30-19:30	Travel from Ho Chi Minh to Bao Loc by DHD car (MM and ADB 4 pax)	
	Overnight in Bao Loc hotel	
Monday, 5 Mar		
08:00	Vehicle pick up from hotel	Vehicle and driver to be arranged by DHD (whole day)
08:30-09:30	<ul style="list-style-type: none"><li>•Courtesy meeting with DHD</li><li>•Overview of site visit objectives and site visit activities by Mott MacDonald</li><li>•Brief presentation by DHD about the solar PV project (footprint, components, orgchart) and status of current E&amp;S performance for the hydrower plant</li></ul>	
10:00 - 11:30	Meeting with La Da Commune People's Committee	
12:00 - 13:00	Lunch	
13:30-14:30	Meeting with Ham Thuan Bac District's Land Fund Development Center	
15:00: 16:30	Meeting with Department of Natural Resources and Environment of Binh Thuan Province	
Tuesday, 6 Mar		
7:00	Vehicle pick up from hotel	Vehicle and driver to be arranged by DHD (whole day)
7:30 - 9:30	Site tour: looking at the following: <ul style="list-style-type: none"><li>•transmission line and substations (existing and proposed)</li><li>•floating solar PV footprint</li></ul>	DHD to assign a staff to accompany Mott MacDonald, preferably someone who is familiar with the key project development components (TL, substation) - existing and planned.
10:00-11:30	Meeting with Tanh Linh District's Land Fund Development Center	
12:00-13:00	Lunch	
13:30 - 14:30	Meeting with La Ngau Commune People's Committee	
15:30 - 16:30	Meeting with Da Mi Commune People's Committee	
16:30 - 18:00	Site tour (continued if needed): looking at the following: <ul style="list-style-type: none"><li>•transmission line and substations (existing and proposed)</li><li>•floating solar PV footprint</li></ul>	DHD to assign a staff to accompany Mott MacDonald, preferably someone who is familiar with the key project development components (TL, substation) - existing and planned.

18:00 - 19:00	Travel back to Bao Loc hotel	
<b>Wednesday, 7 Mar</b>		
08:00	Vehicle pick up from hotel	Vehicle and driver to be arranged by DHD (whole day)
9:00-17:00	Local community interviews - sturgeon farmers, potentially affected persons from TL/substation	DHD to assign a staff to accompany Mott MacDonald.
<b>Thursday, 8 Mar</b>		
08:00	Vehicle pick up from hotel	Vehicle and driver to be arranged by DHD (whole day)
9:00-19:00	Continuation of local community interviews (Mai)	DHD to assign a staff to accompany Mott MacDonald.
13:00	Travel to Dalat airport (Pam and ADB)	Vehicle and driver to be arranged by DHD
17:30	Flight to Ho Chi Minh via VN 1383 (Pam)	MM to arrange Pam's accommodation



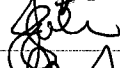
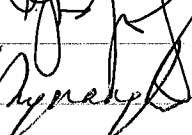


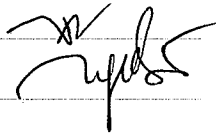
## **B. Stakeholder meetings attendance sheets**

**Subject** Courtesy meeting with DHD

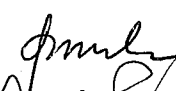


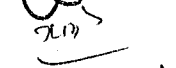


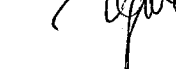
**Location** DHD Office

**Date of meeting** 5 March 2018

**Time of meeting** 8:00 -




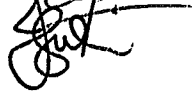
No.	Name (in full)	Position	Organisation	Signature
1	Pamela Chan	Environmental Consultant	Mott MacDonald	
2.	Mai Vo	Social Consultant	Mott MacDonald	
3.	IRISH AGUIR	SOCIAL SAFEGUARDS OFFICER	ADB	
4.	MELISSA MANGUIAT	ENVIRONMENTAL SAFEGUARDS OFFICER	ADB	
5.	Lê Văn Quang	- TGD		
6.	Lê Thành Cẩm	- T/p TCLĐ		
7.	Trình Quang Tiến	phước	- CVP	
8.	Trần Đức Trọng	-	P/P ATXD	
9.	Nguyễn Ngọc Tuấn	-	P/P ATXD	
10.	Nguyễn Thanh Long	-	CVVP	

**Subject** Meeting with La Da Commune People's Committee  
**Location** La Da Commune, Lam Dong Province  
**Date of meeting** 5 March 2018  
**Time of meeting** 11:00 Am

No.	Name (in full)	Position	Organisation	Signature
1	Pamela Chan	Environmental Consultant	Mott MacDonald	
2	MELISSA MANGUIAT	ENVIRONMENTAL SAFEGUARDS OFFICER	ADB	
3.	IRISH AQUINO	SOCIAL SAFEGUARDS OFFICER	ADB	
4.	Xim Nien	Deputy <sup>Chairman</sup> People Committee		
5.	Hoàng Xuân Thắng	Chairman	People Committee	
6.	Bồ Ring Đam	Deputy President	People Committee	
7.	Nguyen Ngoc Tuom	Deputy manager of Investment Dept.		

Subject Ham Thuan Bac Land Center  
Location Head office  
Date of meeting 5/3/18  
Time of meeting 1:45 - 3:40 pm.

No.	Name (in full)	Position	Organisation
1.	Cao Xuan Thanh	Director	Land Center
2.	Tran Quang Tien Phoc	Chief office	
3.	Nguyen Thanh Long	DEP Officer	
4.	Min Vo	Social Consultant	MM
5.	IRISH AGUILAR	SOCIAL DEBIT OFFICER	ADB

Signature  
  
  
  




5 March 2018, 3 PM

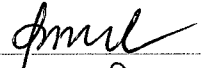
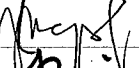

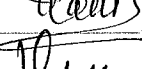



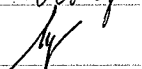

Meeting with DONRE

1. Pamela Chan Environmental Consultant Mott MacDonald
2. MELISSA MANGIAT ENVIRONMENTAL OFFICER ADB
3. Đỗ Văn Thái PGD Sở TN & MT.
4. Ngô Minh Thành Giám đốc CCBVMT
5. Nguyễn Thị Việt Nga Chuyên viên CCBVMT
6. Trần Hồng Anh Vũ Trưởng phòng, CCALPD
7. Nguyễn Ngọc Trâm Phó Phòng ĐTXD DHD

*[Handwritten signature]*

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**Subject** Meeting with La Ngau Commune People's Committee  
**Location** La Ngau commune  
**Date of meeting** 6 March 2018  
**Time of meeting** 10:00 AM

No.	Name (in full)	Position	Organisation	Signature
1	Pamela Chan	Environmental Consultant	Mott MacDonald	
2	MELISSA MANUELAT	ENVIRONMENTAL OFFICER	ADB	
3	IRISH AGUILAR	SOCIAL DEVT OFFICER	ADB	
4	HUYNH ANH VU	CHAIRMAN	DAMI VILLAGE	
5	Mai Vo	Social Consultant	MM	
6	TUAN NGUYEN NGOC		DHD	
7	DUNG TRUONG MINH		DHD	
8	DUONG NGUYEN CONG		DHD	
9	LONG NGUYEN THANH		DHD	

**Subject** 6 March 2018, Meeting with La Ngau commune  
**Location** La Ngau commune  
**Date of meeting** 6 Mar 2018  
**Time of meeting** 2:00 PM

No.	Name (in full)	Position	Organisation	Signature
1	Mai Vo	Social Consultant	Mott MacDonald	[Signature]
2	Pamela Chan	Environmental Consultant	Mott MacDonald	[Signature]
3	MELS MANGIAT	ENV. SAFEGUARDS OFFICER	ADB	[Signature]
4	IRISH AGUILAR	SOCIAL SAFEGUARDS OFFICER	ADB	[Signature]
5	Nguyen Ngoc Tuom	Deputy Investment Dept.	DHP	[Signature]
6	Truong Nhu Dung	Safety engineer	DHP	[Signature]
7	Nguyen Cong Dung		DHP	[Signature]
8	Nguyen Thanh Lay		DHP	[Signature]
9	Ha Van Linh	CT. HOND XA La Ngau.		[Signature]
10	Mang Thanh	Đội trưởng - Xây dựng XA		[Signature]
11	Nguyen Van Tien	PC. HOND XA La Ngau		[Signature]
12	Nguyen Thi Phu Mai	Đội trưởng - Công nghiệp		[Signature]

**Subject** Meeting with Vinh Linh District Land Center

### Location

**Date of meeting** 6 March 2018


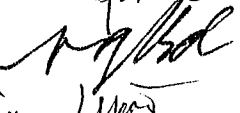

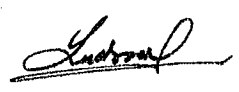




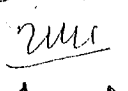
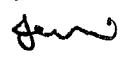
**Time of meeting** 4:00 pm

No.	Name (in full)	Position	Organisation	Signature
1	Mai Vo			
2	Nguyen Kim Thoi	Giám đốc		Chau
3	Nguyen Thien Ngoc	phó GT		Thien Ngoc
4	Vo Nam Tru	VP		Tru
5	Pamela Chan	Environmental Consultant	Mott MacDonald	Pamela Chan
6	WELISSA MANGUAT	SAFETY OFFICER	ADB	WELISSA MANGUAT
7	Nguyễn Thanh Long		DHD	Long
8	Phuong Minh Dung		DHD	Phuong Minh Dung
9	Nguyen Ngoc Tuan		DHD	Tuan
10	Nguyen Cong Dung		DHD	Nguyen Cong Dung

Da Mi Village, La Ngau Commune

Interview with households

7 March, 2018 9:00 am

	<u>Name</u>	<u>Position</u>	<u>Company/Address</u>	<u>Signature</u>
1	Pamela Chan	Environmental Consultant	Mott MacDonald	
2	Nguyễn Văn Tổng	(Thôn Đaguri xã Đa Mi) ↔ (nguồn dân)		
3	Lê Ngọc Hoàn	Người dân - Thôn Đa Mi, xã La Ngàu		
4	Nguyễn Ngọc Thành	Người dân - Thôn Đa Mi, xã La Ngàu		
5	Lê Thị Diên Trang	Chủ tịch UBND xã La Ngàu		
6	Mang Thành	Địa chủ xã La Ngàu		
7	Lê Thị Hòe	Người dân Thôn Đa Mi, xã La Ngàu		
8	Hồng Tiến Học	phó công an xã La Ngàu		
9	Nguyễn Thị Cúc	Người dân		
10	Nguyễn Văn Minh	Người dân		
11	Trần Thị Tuyết Lan	Người dân		
12	Vũ Thị Nhung	Người dân		
13	Ngô Thị Tài	Người dân		
14	IRISH AQUILAN	SOCIA SAFEGUARDS OFFICER	ADB	

**Subject**

Htt interview - Xã Đa Mi, Daguri - Xã La Đa

**Location**

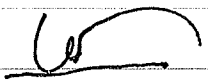
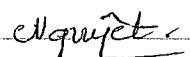
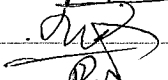
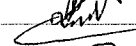

Thon Daguri (village), La Đa commune

**Date of meeting**

7 March 2018

**Time of meeting**

3:00 PM




No.	Name (in full)	Position	Organisation	Signature
1.	Dương Mỹ Linh	Thôn Daguri Xã Đa Mi		
2.	Nguyễn Thị Nguyệt	"		
3.	Chung Văn XEA	"		
4.	Phạm Quốc Hưng	"		
5.	Trần Văn Tri	Village Head		
6.				

M

M

MOTT  
MACDONALD

Subject HH Interviews & key informant interview  
 Location La Da commune  
 Date of meeting 8/3  
 Time of meeting 8:30 am

No.	Name (in full)	Position	Organisation	Signature
1	Bô Đua Quốc	CB <sup>giao</sup> <del>thị</del> chính	Xây dựng	
2	Vũy Thành Đồ	Thôn Ba	La Da	
3	Nguyễn Thị Bé	Thôn Ba	La Da	
4	Đàm Văn Bách	"	"	Bách
5	Lê Thị Hiền	"	"	Hiền

Interviews re. Ham Thuan Dam Resettlement  
Loc Nam Commune, Bao Lam District, Lam Dong  
Province

8/3 : 2:15 pm - 4:00 pm

1. Võ Thuận Bình Chairman Loc Nam Commune

2. Ka Hem HH Local people Loc Nam Commune

IC ho (party officer)

3. Nguyễn Văn Hoàn Bí thư Đảng ủy Loc Nam Commune . B  
/ Chủ tịch 1988 - (12 năm)  
→ 2004

CS. Từ 2004 - 2016

BT. Từ 2016 → nay



## C. List of economically-displaced households due to land acquisition for the transmission line

No.	Full name of head of AHs	Address
<b>La Ngau Commune</b>		
1	Nguyễn Văn Tổng	Thôn ĐaGuRi, xã Đa Mi, huyện Hàm Thuận Bắc
2	Lê Ngọc Hoàn	Thôn Đa Mi, xã La Ngâu, huyện Tánh Linh
3	Kiều Thị Phương Thủy	Thôn ĐaGuRi, xã Đa Mi, huyện Hàm Thuận Bắc
4	Nguyễn Tiến	Thôn Đa Mi, xã La Ngâu, huyện Tánh Linh
5	Lê Thị Lộc	Thôn Đa Mi, xã La Ngâu, huyện Tánh Linh
6	Nguyễn Văn Hà	Thôn Đa Mi, xã La Ngâu, huyện Tánh Linh
7	Trần Thị Hoa	Thôn Đa Mi, xã La Ngâu, huyện Tánh Linh
8	Nguyễn Ngọc Nhân	Thôn Đa Mi, xã La Ngâu, huyện Tánh Linh
9	Nguyễn Ngọc Diễm	Thôn Đa Mi, xã La Ngâu, huyện Tánh Linh
10	Dương Đức Ý	Thôn ĐaGuRi, xã Đa Mi, huyện Hàm Thuận Bắc
11	Lâm Quang Cường	Thôn Đa Mi, xã La Ngâu, huyện Tánh Linh
12	Trần Văn Ái	Thôn Đa Mi, xã La Ngâu, huyện Tánh Linh
13	Đỗ Văn Dung	Thôn Đa Mi, xã La Ngâu, huyện Tánh Linh
14	Nguyễn Tín	Thôn Đa Mi, xã La Ngâu, huyện Tánh Linh
<b>Subtotal</b>	<b>14</b>	
<b>La Da Commune</b>		
1	Trần Văn Lân	Thôn 3, xã La Dạ, huyện Hàm Thuận Bắc
2	Nguyễn Văn Tổng	Thôn đaguri, xã Đa Mi, huyện Hàm Thuận Bắc
3	Quách Văn Thu	Thôn đaguri, xã Đa Mi, huyện Hàm Thuận Bắc
4	Phạm Văn Bách	Thôn 3, xã La Dạ, huyện Hàm Thuận Bắc
5	Trần Văn Quỳnh	Thôn Đaguri, xã Đa Mi, huyện Hàm Thuận Bắc
6	Vương Kinh Đô	Thôn 3, xã la dạ, huyện hàm thuận bắc
7	Nguyễn Văn Đông	Xã đức bình, huyện tánh linh
8	Hoàng Thị Mập	Thôn 3, xã la dạ, huyện hàm thuận bắc
9	Nguyễn Văn Cường	Thôn 3, xã la dạ, huyện hàm thuận bắc
10	K' Văn Điện	Thôn 3, xã la dạ, huyện hàm thuận bắc
11	Hoàng Thị Mập	Thôn 3, xã la dạ, huyện hàm thuận bắc
12	Lê Thị Hiền	Thôn 3, xã la dạ, huyện hàm thuận bắc
<b>Subtotal</b>	<b>12</b>	
<b>Da Mi Commune</b>		
1	Dương Đức Ý	140 Tuyên Quang, TP Phan Thiết, Bình Thuận
2	Lê Thiện Thạch	Huyện Tánh Linh - tỉnh Bình Thuận
3	Trần Văn Huân	Thôn Đaguri, xã Đa Mi, huyện Hàm Thuận Bắc
4	Bùi Văn Khánh	Thôn Đaguri, xã Đa Mi, huyện Hàm Thuận Bắc
5	Chu Văn Bằng	Thôn Đaguri, xã Đa Mi, huyện Hàm Thuận Bắc

No.	Full name of head of AHs	Address
6	Chung Văn Xua	Thôn Đạguri, xã Đa Mi, huyện Hàm Thuận Bắc
7	Dương Mộng Linh	Thôn ĐạGuRi, xã Đa Mi, huyện Hàm Thuận Bắc
8	Dương Mộng Linh	Thôn ĐạGuRi, xã Đa Mi, huyện Hàm Thuận Bắc
9	Trần Văn Lân	Thôn 3, xã La Dạ, huyện Hàm Thuận Bắc
10	Phạm Công Ninh	Thôn Đạguri, xã Đa Mi, huyện Hàm Thuận Bắc
11	Trịnh Đình Gia	Tà Pao
12	Nguyễn Tuất	Thôn Đạguri, xã Đa Mi, huyện Hàm Thuận Bắc
13	Nguyễn Thị Ngọc Quyên	Thôn Đạguri, xã Đa Mi, huyện Hàm Thuận Bắc
14	Nguyễn Tấn Phương	Thôn Đạguri, xã Đa Mi, huyện Hàm Thuận Bắc
15	Nguyễn Tấn Phương	Thôn Đạguri, xã Đa Mi, huyện Hàm Thuận Bắc
16	Nguyễn Tấn Phương	Thôn Đạguri, xã Đa Mi, huyện Hàm Thuận Bắc
17	Nguyễn Văn Xanh	Thôn 8 xã Lộc Nam, TP Bảo Lộc.
18	Phạm Thị Minh Thư	Thôn ĐạGuRi, xã Đa Mi, huyện Hàm Thuận Bắc
19	Trần Thị Cẩm	Thôn ĐạGuRi, xã Đa Mi, huyện Hàm Thuận Bắc
20	Phan Công Hùng	Thôn 5 xã Lộc Nam, TP Bảo Lộc.
21	Dương Đức Ý	140 Tuyên Quang, TP Phan Thiết, Bình Thuận
<b>Subtotal</b>	<b>21</b>	
<b>TOTAL OF AHs</b>	<b>47</b>	

Source: Adapted from DHD's list of affected households due to transmission line land acquisition



## D. Involuntary resettlement impact categorisation checklist

Probably Involuntary Resettlement Affects	Yes	No	Not known	Remarks
<b>Involuntary Acquisition of Land</b>				
1. Will there be land acquisition?	x			Agricultural land acquisition for a sub-station, a 3.3 km transmission line and an inverter A is required.
2. Is the site for land acquisition known	x			The total land acquired is 6.65 ha. Three affected communes are La Da, Da Mi and La Ngau. There will be a total of 47 affected households.
3. Is the ownership status and current usage of land to be acquired known	x			Based on the interviews with stakeholders, potential affected land owners hold formal land title (land use right certificates - LURC). This means that those who have LURC hold ownership of the right to use land.
4. Will easement be utilised within an existing Right of Way	x			Land within the ROW is not permanently acquired, rather DHD will secure an easement over the land in which a 4m height restriction on crops and structures will be enforced.
5. Will there be loss of shelter and residential land due to land acquisition		x		There has been no loss of shelter and residential land due to the Project-induced resettlement.
6. Will there be loss of agricultural and other productive assets due to land acquisition	x			There will be economic displacement – see 1 and 3
7. Will there be loss of crops, trees, and fixed assets due to land acquisition	x			The project-induced resettlement will impact agricultural land that is used for perennial crops (eg coffee plantations, fruit plantation, rubber plantation). In addition, there will be loss of some structures attached to the acquired land, such as well and toilet. It is noted that there are no huts to be impacted.
8. Will there be loss of businesses or enterprises due to land acquisition		x		There will be no loss of businesses or enterprise due to land acquisition.
9. Will there be loss of income sources and means of livelihood due to land acquisition	x			There is economic displacement due to lost agricultural land. It is estimated that 47 households will be affected due to land acquisition. It should be noted that none of these 47 HHs has been previously displaced due to the Sponsor's hydropower plant-induced resettlement.
<b>Involuntary restrictions on land use or on access to legally designated parks and protected areas</b>				
10. Will people lose access or natural resources, communal facilities, and services	x			The Project is designed and situated on the 50ha water surface of Da Mi lake to minimise the land acquisition. People will not lose access to communal facilities and services. However, fishing people (five households) will lose access to the lake for fishing.

Probably Involuntary Resettlement Affects	Yes	No	Not known	Remarks
11.If land use is changed, will it have an adverse impact on social and economic activities	x			There will be livelihood impacts.
12.Will access to land and resources owned communally or by the state be restricted		x		There will be no restriction on accessing to land and resources owned by the government.
<b>Information on Displaced Persons</b>				
<b>Any estimate of the likely number of persons that will be displaced by the Project? YES</b>				
<b>If yes, approximately how many?</b> 47 HH's will be economically displaced by the Project. Based on estimates of household composition provided by local authorities during the interviews, the total number of people impacted is approximately of 188 people (four heads per household in average).				
<b>Are any of them poor, female heads of households or vulnerable to poverty risks?</b> NOT KNOWN YET. The identification of vulnerable groups has not been done.				
<b>Are any displaced persons from indigenous or ethnic minority groups?</b> YES. In terms of ethnic origin, three households in La Da Commune are identified to be ethnic minority people (K-Ho people). However, the IP screening assessment reveals that they are not IP based on ADB SR3 criteria and are not considered as a distinct group as per national regulations.				
Source: Mott MacDonald 2018 (Adapted from ADB's involuntary resettlement categorisation checklist template)				

## E. Indigenous Peoples Screening Checklist

KEY CONCERNS	YES	NO	NOT KNOWN	Remarks
<b>A. Indigenous Peoples Identification</b>				
1. Are there socio-cultural groups present in or use the project area who may be considered as “tribes” (hill tribes, scheduled tribes, tribal peoples), “minorities” (ethnic or national minorities), or “indigenous communities” in the project area?	x			Only three HHs affected due to land acquisition for the Project's transmission line are ethnic minority group (K-Ho People) in terms of ethnic origin. However, they do not consider themselves as distinct to meet the definitions of IPs as per ADB SR3 paragraph 6.
2. Are there national or local laws or policies as well as anthropological researches/studies that consider these groups present in or using the project area as belonging to “ethnic minorities”, scheduled tribes, tribal peoples, national minorities or cultural communities?		x		
3. Do such groups self-identify as being part of a distinct social and cultural group?		x		
4. Do such groups maintain collective attachments to distinct habitats or ancestral territories and/or to the natural resources in these habitats and territories?		x		K-Ho people do not have customary ownership of the lands they occupy.
5. Do such groups maintain cultural, economic, social, and political institutions distinct from the dominant society?		x		
6. Do such groups speak a distinct language or dialect?	x			K-Ho people have their own language, which is different from the official language (Vietnamese). However, they are proficient in Vietnamese.
7. Has such groups been historically, socially, and economically marginalized, disempowered, excluded, and/or discriminated against?		x		
8. Are such groups represented as “Indigenous Peoples” or as “ethnic minorities” or “scheduled tribes” or “tribal populations” in any formal decision-making bodies at the national or local levels?		x		
<b>B. Identification of Potential Impacts</b>				
9. Will the project directly or indirectly benefit or target Indigenous Peoples?		x		
10. Will the project directly or indirectly affect Indigenous Peoples' traditional socio-cultural and belief practices? (e.g. child-rearing, health, education, arts and governance)		x		There is no cultural heritage of ethnic minority groups in the affected commune.

KEY CONCERNS	YES	NO	NOT KNOWN	Remarks
11. Will the project affect the livelihood systems of Indigenous Peoples? (e.g., food production system, natural resource management, crafts and trade, employment status)		x		Three affected K-Ho HHs will have their agricultural land acquired. Therefore, their livelihood will be impacted. However, this impact will not affect the livelihood systems of the ethnic minority groups in the area.
12. Will the project be in an area (land or territory) occupied, owned, or used by Indigenous Peoples, and/or claimed as ancestral domain?		x		
<b>C. Identification of Special Requirements</b>				
Will the project activities include:				
13. Commercial development of the cultural resources and knowledge of Indigenous Peoples?		x		
14. Physical displacement from traditional or customary lands?		x		
15. Commercial development of natural resources (such as minerals, hydrocarbons, forests, water, hunting or fishing grounds) within customary lands under use that would impact the livelihoods or the cultural, ceremonial, spiritual uses that define the identity and community of Indigenous Peoples?		x		
16. Establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by Indigenous Peoples?		x		
17. Acquisition of lands that are traditionally owned or customarily used, occupied or claimed by Indigenous Peoples?		x		

Source: Mott MacDonald 2018 (Adapted from ADB's indigenous peoples impact screening checklist template)

## F. Project transmission line land acquisition

### F.1 Introduction

During the site investigations and consultation with DHD personnel and government authorities, it was noted that the land acquisition for the floating solar project had entered its early phases. While no land acquisition has taken place to date and limited documentation is available, this section provides an overview of the likely scope of displacement, the process that will be followed and the description of actions taken to date.

### F.2 Scope of Project-induced displacement

The outcomes of the interviews during the ESDD site visit and the review of land acquisition-related documents show that there will be no residential houses in the Project footprint; and therefore, physical displacement is unlikely. It is also noted that there are no graves, cultural heritage, and public building impacted by the Project. While there is no physical displacement, an estimated 47 AHs will be economically displaced due to the Project's land acquisition for transmission line (TL) development through the loss of agricultural land, affected structures, and standing crops. It should be noted that the AH numbers presented herein are those provided by the Sponsor as part of the outcomes of initial land measurement and as of March 2018. As such, this number is indicative only. The number of economically-displaced HHs must be validated based on the outcomes of DMS/ IOL and final CSR documents.

It is anticipated that the economic displacement due to the Project land acquisition for TL will impact an estimated area of 5.88 hectares of privately-used agricultural land<sup>20</sup>. It should be noted that this estimated figure includes two parts including:

- (i) total agricultural land area to be permanently acquired for constructing eleven 225m<sup>2</sup> tower pads and the inverter A; and
- (ii) total agricultural land area to be affected due to the ROW corridor requirements, which is not to be permanently acquired but likely to be subject to use restrictions.

The breakdown between these two parts were not provided since the DMS/IOL had not been conducted during the ESDD site visit. However, it is worth noting that the total area of agricultural land to be permanently acquired for the Project will be much lesser than the total affected productive land area of 5.88 hectares<sup>21</sup>.

The affected productive land areas are situated across the three communes, namely La Da and Da Mi Communes of Ham Thuan Bac District and La Ngau Commune of Tanh Linh District. Table 8 provides a summary of estimated land acquisition areas and the number of economically-displaced HHs across the affected communes due to the Project's TL development. As stated previously, this information is subject to be updated by the Sponsor when the local authorities complete their DMS/IOL and issue CSR plans.

<sup>20</sup> It should be noted that the total land area required for developing 3.3 km transmission line and associated facilities (i.e. two inverter stations and a substation) is 6.65 ha (Refer to Section 1.3.2 for further details). The area of 5.88 ha is the estimated total area of agricultural land to be affected due to the Project transmission line development. The remaining 0.77 ha land area (for building a 225m<sup>2</sup> tower pad, a substation, an inverter B, and 1/3 of 22kV transmission line with 170 m long) is under the land use right ownership of the Sponsor. It is reported that this land area was acquired under the dam-induced resettlement.

<sup>21</sup> Based on the information provided by the Sponsor, Mott MacDonald's Social Consultant made an initial calculation of the total productive land area to be permanently acquired for building eleven 225m<sup>2</sup> tower pads and one inverter A station. The calculation shows that around 4,975 m<sup>2</sup> of productive land area are estimated to be permanently acquired for the Project's TL development. This figure is based on the following formula: (225m<sup>2</sup> x 11 tower pads) + (2,500m<sup>2</sup> of the inverter A station) = 4,975 m<sup>2</sup> (equivalent to 0,4975 ha).



**Table 8: Summary of estimated agricultural land areas and number of HHs to be affected due to the Project economic displacement for transmission line development.**

Project's items	Total estimated land areas to be affected per each district		Number of economically-displaced HHs per each affected commune		
	Tanh Linh District	Ham Thuan Bac District	La Da Commune	Da Mi Commune	La Ngau Commune
110 kV transmission line (TL) (3.3 km length and 15m width)	1.8 ha	3.45 ha	Not known	Not known	Not known
2/3 22kV transmission line (380 m length and 15m width)	0.38 ha	N/A	Not known	Not known	Not known
Inverter A Station	0.25 ha	N/A	Not known	Not known	Not known
<b>Sub-total</b>	<b>2.43ha</b>	<b>3.45ha</b>	<b>12</b>	<b>21</b>	<b>14</b>
<b>TOTAL</b>	<b>5.88 ha</b>		<b>47 HHs</b>		

Source: Mott MacDonald 2018 (Adapted from the Sponsor's initial land measurement data provided as of March 2018)

### F.3 Potential impacts of the Project economic displacement

Neither a regulatory DMS and IOL survey was undertaken by local authorities nor a socio-economic baseline survey was carried out at the time of ESDD site visit. As a result, the exact number of AHs and their socio-economic conditions are not available for assessing the significance of impacts associated with the Project economic displacement. Therefore, the following paragraphs provide a preliminary identification of potential impacts based on Mott MacDonald Social Specialist's observations.

Impacts associated with the Project's economic displacement due to the TL development can be summarised under the following situations:

- HHs losing part of agricultural land and assets attached to the acquired land;
- HHs having their land, standing crops/trees, and structures under the ROW corridor and hence having limited usability to land and associated assets. This is generally in the shape of a 4m or 6m height limits for all trees and structures (refer below); and
- HHs having their land, standing crops/trees, and structures being demolished as per the national requirements on the ROW corridor.

The Project-induced land acquisition for TL development will therefore result in a direct loss of agricultural land and associated assets as well as placing limitations on the usability to agricultural land areas and attachments. Impacts associated with the Project's economic displacement could be associated livelihood impacts, loss of overall incomes, change in livelihood practices, and increased poverty risks.

In conducting interviews with the local authorities and AHs, it is understood that the agricultural land of each AH which will be acquired for the Project would be a small proportion (below 10%) of their total agricultural holdings. Therefore, the potential significance of the displacement impacts is likely to be minor. However, this assessment is subject to be updated by the Sponsor when the local authorities complete DMS/IOL and officially issue details CSR plans.

Aside from the loss and restrictions placed on productive land and associated assets due to the TL land acquisition, there is loss of access to a part of common fishing area due to the development of 50-ha floating solar plant on the surface water of Da Mi lake. As detailed in the ESDD report, the five subsistence fishing households living by the lakeshore will be affected by water surface acquisition associated with the proposed solar plant. 50 ha of freshwater surface

area in Da Mi lake will be exclusively acquired for the Sponsor during the entire life of the Project. As a result, access to the fishing area for these fishing HHs will be restricted. It is understood that these five fishing HHs are not subject to the regulatory land acquisition, compensation, and assistance process.<sup>22</sup> However, since these HHs will be adversely affected due to the loss of access to fishing area and significantly impacted during the project construction phase, the Sponsor is recommended to assess Project-related impacts on these HHs and provide appropriate mitigation measures for these HHs.

#### **F.4 Summary of national legislation applicable to Project-induced land acquisition for transmission development**

Key local Vietnamese regulations on land acquisition, compensation, and support applicable to the Project are listed in ESCA. The following provides a summary of key national requirements applicable to the Project.

##### **F.4.1 Land acquisition regulations**

Land Law 2013 gives the GoV the right to expropriate land for purposes of national defence, security, and national and public development activities. If a project involves land acquisition for national development activities, a proposal is to be submitted to the State Land Authorities for approval. The Land Law states that land users must abide by the decisions on land recovery issued by the GoV. In the event that the persons with land identified for acquisition refuse to comply with the land recovery decisions, relevant local authorities (i.e. People Committees) are able to issue and act upon decisions to undertake forced eviction. Persons subject to forced eviction must abide by the decisions; however, they are afforded the right to lodge their complaints. In the context of the national regulatory framework, all land acquisition managed by the GoV will be defined as involuntary resettlement as the government is able to resort to expropriation.

Under the existing national legislation, a land compensation, support, and resettlement council (CSR Council) will be established to be responsible for implementing the CSR process. In practice, if a local Land Fund Development Centre (hereafter called Land Centre) is available, they will be appointed to be included in the CSR Council. The Land Acquisition, Compensation, and Resettlement process is summarised in Figure 2 below. It should be noted that steps involved during the Project-induced economic displacement process will be the same as provided in Figure 2. However, as the Project does not involve any physical displacement, a part of the step 5 on physical relocation will be excluded.

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<sup>22</sup> The lake water area is a public area and that local people including these five fishing HHs are allowed to be users, but not owners of such area. As a result, they are not eligible to receive compensation and support when this water surface is acquired in accordance with Vietnamese legislation. In addition, there is no provision for compensation or assistance for loss of access to lake resources regulated by Vietnamese regulation.

**Figure 2: Main steps of a regulatory land acquisition, compensation, support, and resettlement process<sup>23</sup>**



Source: Mott MacDonald 2018 (Adapted from the Land Law 2013)

#### 4.2.1 Compensation regulations on acquired agricultural land and associated assets

Compensation prices and calculation methods for permanently acquired land are stipulated in provincial Decision 05/2018/QĐ-UBND which was based on Decree No. 44/2014/ND-CP of the State. Compensation for affected land attachments (i.e. trees, crops, houses, and other structures) is calculated in accordance with provincial Decision No. 05/2018/QĐ-UBND. Under the existing laws, acquired land should be compensated by allocating new land of the same purpose. Where no land is available for compensation (e.g. due to limited areas of suitable land within the area), compensation in the form of cash is provided. The amount of cash is currently calculated based on provincial unit land prices promulgated by provincial PCs annually. Decree No. 188/2004/ND-CP and Decree No. 123/2007/ND-CP regulate land price frameworks and methods of calculating land prices. Decree 197/2004/ND-CP provides regulations on compensating for legally-constructed assets on land due to land acquisition. It is noted through interviews with the Land Centres, compensation for acquired agricultural land and associated assets will be in the form of cash since no land is available. A summary of the Government's compensation eligibilities and entitlements for those affected by Project-induced land acquisition is presented in Table 9.

<sup>23</sup> Inventory of Loss (IoL) and Detailed Measurement Survey (DMS) are conducted under the presence of members of the CSR Council and affected HHs' representative(s). IoL and DMS results will be disclosed to the PAPs for review and signature. All DMS results will be collected and sent back to the PC at provincial and district levels who is in charge of the CSR process for signing and stamping.

Detailed Compensation, Support and Resettlement (CSR) Plan: The contents of a detailed CSR include: (i) name and address of displaced households; (ii) areas, categories and origins of land acquired, quantity, weight, percentage of remaining quality of affected assets on land; (iii) Basic of calculation of compensation and support amount such as compensation prices for land, housing, and facilities, number of people and number of labours in the affected HHs, number of people living on social welfare subsidy; (iv) Amount in cash compensation and support; (v) resettlement arrangement; and (vi) relocation of facilities and structures of the government, religious organisations or local communities.

The period for detailed CSR plans disclosure and receipt of feedback from AHs is at least 20 working days. Following the disclosure, the CSR Council(s) summarises the results of comments received in writing.

#### F.4.2 Support regulations on acquired agricultural land

In addition to compensation for acquired agricultural land, AHs having land permanently acquired are entitled to receive support to restore their livelihoods. There are two types of support for those who have productive land acquired. These include the following:

- Support for production stabilisation; and
- Support for life stabilisation.

Support-related regulations for the Project-induced economic displacement are provided based on Decision No. 05/2018/QĐ-UBND. It is noted through interviews with Land centres that cash payment for life and production stabilisation will be provided for the Project. Regulatory eligibilities and entitlements for receiving supports due to the Project-induced land acquisition are summarised in Table 9.

#### F.4.3 Compensation and assistance for assets within Right of Way (ROW)

Electricity Law and Decree No. 14/2014/ND-CP provide guidance on compensation and assistance for land within the ROW corridor. The existing regulations stipulate that “houses and ancillary works for living of households and individuals shall not be completely acquired or removed if the voltage of the transmission line is 220kV or below. The owners of such houses and ancillary works shall be compensated and receive assistance due to limited land usability and impacts on living. The compensation and assistance shall be done one time only”. Compensation and assistance types are explicitly provided within Decree No. 14/2014/ND-CP.

The 15m-wide ROW corridor for the Project situated within the privately-used agricultural land is subject to compensation and assistance for limited land usability as stipulated within Decree No. 14/2014/ND-CP. Under the existing legislation, land owners under the ROW corridor will have limitation placed upon the existing uses. The Sponsor will not be entitled to attain title (in the form of an LURC) over these land areas. However, compensation and assistance are provided to allow the Sponsor to secure a form of easement and for any restriction placed on the use of the land under the ROW corridor. These restrictions are described within Article 11 of Decree No. 14/2014/ND-CP and primarily relate to the imposition of a 4m height limit for structures and plants under the overhead of 110 kV line and a 6m height limit under the overhead of 220 kV line.

Under Article 18 of Decree No. 14/2014/ND-CP, compensation and assistance associated with assets under the ROW corridor are provided under the following cases:

- Houses and associated structures having a part or their whole area within the ROW corridor, but not required to be demolished (due to being below the imposed height limits) are eligible to receive compensation. The specific compensation or assistance are stipulated by provincial People's Committee but not greater than 70% of value of houses and associated structures calculated on the area within the ROW corridor. This is calculated having regards for the principles of the Land Law 2013 as described above
- In case of demolishing a part or whole of houses and associated structures, the Project owner is responsible for making payment and compensation for the part of value of houses or structures demolished and the expenses for renovation and completion.
- Where houses and associated structures are built on land deemed ineligible for compensation for land under existing legislation (e.g. a house is built on a forest land or agricultural land), the provincial People's Committee shall consider providing support based on the practical conditions of each locality.

- For the perennial crops or production forest within the ROW corridor, the land user shall receive assistance due to the limited usability of land. The assistance shall be done once and is not greater than 30% of compensation for recovery of agricultural land calculated on the land area within the safety corridor of the overhead conducting electricity line.
- In case of demolishing a part and the other part of crops/trees, the Project owner is responsible for making payment and compensation for the part of value of crops/trees demolished and the expenses for demolishment completion.
- Table 9 below summarises a regulatory compensation and support eligibility and entitlement framework for AHs having their agricultural land and associated assets acquired and impacted due to the Project transmission line development.

**Table 9: Summary of regulatory eligibility and entitlement for the Project-induced economic displacement**

Category of impact	Eligibility	Entitlements	
		Compensation	Support
Agricultural land (i.e. cultivation and plantation land) to be acquired	<ul style="list-style-type: none"> <li>Those own land use right certificates.</li> <li>Those have not own LURCs but use the land before 1 July 2004</li> </ul>	HHs losing below 30% of agricultural land	<ul style="list-style-type: none"> <li>Cash compensation for acquired land</li> <li>Cash support for production stabilization: <ul style="list-style-type: none"> <li>VND 1,000/m<sup>2</sup> x acquired land area, for the purpose of supporting seedings and livestock for agricultural production, extension services, plant protection, veterinary services, cultivation techniques, animal husbandry and technical expertise for production services.</li> </ul> </li> <li>Cash support for poor HHs if any.</li> </ul>
		HHs losing from 30% to 70% of agricultural land	<ul style="list-style-type: none"> <li>Cash compensation for acquired land</li> <li>Cash support for production stabilization: <ul style="list-style-type: none"> <li>VND 1,000m<sup>2</sup> x acquired land area, for the purpose of supporting seedings and livestock for agricultural production, extension services, plant protection, veterinary services, cultivation techniques, animal husbandry and technical expertise for production services.</li> </ul> </li> <li>Cash support for life stabilisation: <ul style="list-style-type: none"> <li>6 months x 30kg rice monetary equivalence x number of members in AHs</li> </ul> </li> <li>Cash support for poor HHs if any.</li> </ul>
		HHs losing more than 70% of agricultural land	<ul style="list-style-type: none"> <li>Cash compensation for acquired land</li> <li>Cash support for production stabilization: <ul style="list-style-type: none"> <li>VND 1,000m<sup>2</sup> x acquired land area, for the purpose of supporting seedings and livestock for agricultural production, extension services, plant protection, veterinary services, cultivation techniques, animal husbandry and technical expertise for production services.</li> </ul> </li> <li>Cash support for life stabilisation: <ul style="list-style-type: none"> <li>12 months x 30kg rice monetary equivalence x number of members in AHs</li> </ul> </li> <li>Cash support for poor HHs if any.</li> </ul>
Assets attached to agricultural land (i.e. trees, crops, and structures) to be acquired	Owner	Cash compensation for affected assets attached to the acquired agricultural land	Not applicable

Category of impact	Eligibility	Entitlements	
		Compensation	Support
Houses and associated structures under the ROW corridor	Owner having house(s) and associated structure(s) to be kept within the ROW corridor	<ul style="list-style-type: none"> <li>Cash compensation but not greater than 70% of value of houses and associated structures calculated on the area within the ROW corridor.</li> </ul>	Not applicable
	Owner having house(s) and associated structure(s) within the ROW corridor to be demolished	<ul style="list-style-type: none"> <li>Cash compensation for the part of value of house or structures demolished and the expenses for renovation and completion.</li> </ul>	Not applicable
	Owner having house(s) and associated structures built on the land ineligible for compensation	Not applicable	Binh Thuan People's Committee shall consider the assistance based on the practical conditions of each locality
Perennial crops or production forest within the ROW corridor	Owners having crops/trees to be kept within the ROW corridor	Not applicable	<ul style="list-style-type: none"> <li>Cash support due to the limited usability of land. The assistance shall be provided once and is not greater than 30% of compensation for recovery of agricultural land calculated on the land area within the safety corridor of overhead conducting electricity line.</li> </ul>
	Owners having crops/trees to be demolished within the ROW corridor	<ul style="list-style-type: none"> <li>Cash compensation for the part of value of crops/trees demolished and the expenses for demolition completion.</li> </ul>	Not applicable

## F.5 Status of Project-induced economic displacement process

- At the time of ESDD site visit (as of 8 March 2018), the Sponsor has initiated the land acquisition process by conducting an initial acquired land measurement and submitted an application requesting project-induced land acquisition to be undertaken by the relevant local authorities. It is noted during the audit that the regulatory CSR process had not commenced. Therefore, information regarding total acquired land area and assets on land, the final number of displaced households as well as their eligibility and entitlement to compensation and support are not confirmed at the time of writing this report.
- Based on a phone conversation with the Sponsor's personnel<sup>24</sup> as of 17 April 2018, the CSR process has started in Ham Thuan Bac district. DMS and IOL surveys for AHs in La Da and Da Mi communes of Ham Thuan Bac district are underway and are expected to be completed by end of April 2018. However, the CSR process has not yet started in Tanh Linh district. As described previously, the regulatory CSR process is the five-step process. A summary of these steps including short descriptions and status updates on the Project-induced economic displacement process is presented in Table 10 below.

**Table 10: Summary and status of regulatory land acquisition, compensation, and assistance process of the Project**

Main steps of the process	Brief description of steps	Status as of 17 April, 2018
<b>Step 1</b> Issuance of Land Acquisition Notification and overall CSR plan	Based on existing cadastral data and initial land inventory and mapping survey, a notification on project land acquisition and an overall CSR plan reflecting information on the reason for land acquisition, areas of each land category acquired, and total AHs within the acquired land areas shall be developed as legally required. These land acquisition notifications and overall CSR plan are recognised as the legal basis for implementing subsequent steps in the land acquisition, compensation, and assistance process of the Project.	
	It is reported that Ham Thuan Bac District People's Committee (PC) has issued a Project land acquisition notification and an overall CSR plan for AHs in La Da and Da Mi communes.	Completed regarding Ham Thuan Bac District
	It is also reported that Tanh Linh District PC has not yet issued a land acquisition notification and an overall CSR plan for AHs in La Ngau Commune. It is expected that Tanh Linh District PC will issue the notification and the overall CSR plan by end of April 2018.	Ongoing regarding Tanh Linh District
<b>Step 2</b> Inventory of Loss (IOL) and Detailed Measurement Survey (DMS)	The Land Centres within affected districts will conduct IOL & DMS for the Project transmission line land acquisition. These surveys will be conducted under the presence of members of the CSRC and household's representative(s). IOL & DMS results will be disclosed to economically-displaced HHs for review and signatures. All DMS results will be collected and sent back to the affected Districts' People Committees for signing and stamping.	
	It is reported that as of 17 April 2018, the Land Centre of Tanh Linh District was conducting DMS and IOL surveys on AHs in La Da and Da Mi communes. Based on information provided by the Sponsor's personnel, the DMS and IOL surveys on AHs in these two communes would be completed by end of April 2018.	Ongoing regarding Ham Thuan Bac district

<sup>24</sup> Mott MacDonald's Social Specialist had a phone conversation with the Sponsor's personnel in charge of the Project's TL land acquisition – Mr. Nguyen Thanh Long on 17 April 2018 from 4:30 pm – 5pm. The purpose of the conversation was to seek updates on the status of the Project's TL land acquisition.



Main steps of the process	Brief description of steps	Status as of 17 April, 2018
	It is also reported that the DMS and IOL surveys of AHs in La Ngau commune, Tanh Linh district will commence upon the issuance of land acquisition notification and overall CSR plan.	To be conducted regarding Tanh Linh district
<b>Step 3</b> Development, approval, and disclosure of detailed CSR Plans	CSR Plan for each affected HH will be developed based on the outcomes of IOL and DMS. Compensation and assistance amount will be calculated based on the prices of land and assets on land and specific assistances promulgated by Binh Thuan. Result of CSR eligibilities and entitlements for each AH will be incorporated into a single sheet called a detailed CSR Plan. These drafted detailed CSR Plans will be then publicly posted on the information board at the PCs of affected communes for 20 working days to receive comments from the displaced HHs. Based on the final detailed CSR Plans, an official decision on land acquisition approval and then a decision on detailed CSR Plan approval for each affected case will be issued by local authorities. Such decisions will be disclosed at the PCs of three affected communes immediately after being approved. Decisions on approving the detailed CSR Plans will be also sent directly to all displaced households concurrently.	To be conducted
<b>Step 4</b> Implementation of compensation and support allowance payments	The compensation and assistance payment is required to be conducted within five working days upon the disclosure of the approved CSR Plans. The time of payment is to be noted clearly in the Decisions of CSR Plan approval.	To be conducted
<b>Step 5</b> Land acquisition for the Project transmission line development	Upon the completion of cash compensation and support payments, physical land acquisition for the Project will start. The Sponsor will need to get a LURC for acquired land areas prior to the start of construction.	To be conducted

Source: Mott MacDonald 2018

It should be noted that Mott MacDonald has provided an assessment of compliance as well as commentary on any potential risks based on the information gathered at the time of audit and review of the regulatory framework (refer to Table 7 of the ESDD on ADB compliance review against SR2 for compliance assessment on involuntary resettlement). Where appropriate, Mott MacDonald has recommended actions for inclusion within the CAP to allow for ongoing monitoring of the Project's transmission line land acquisition process.

## **G. Environmental and Social Compliance Audit**



# **Da Mi Floating Solar PV Project**

Annex G: Environmental and Social Compliance  
Audit (ESCA)

4 June 2018



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# Da Mi Floating Solar PV Project

Annex G: Environmental and Social Compliance  
Audit (ESCA)

4 June 2018

# Issue and Revision Record

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D	30 May 2018	P Chan M Vo	K Haymon	K Haymon	Revised per ADB and DHD's comments

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## Information class: Standard

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# Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Overview	1
1.2	Objectives	1
1.3	Scope and limitations	1
1.4	Applicable legislation	2
1.4.1	Environmental	2
1.4.2	Social	5
1.5	Existing assets covered within the compliance audit	6
1.5.1	Key components	7
1.5.2	DHD's Environmental Health and Safety (EHS) resources	7
<b>2</b>	<b>Environmental compliance audit findings</b>	<b>9</b>
2.1	Overview	9
2.2	Environmental assessment	9
2.3	Environmental planning and management	11
2.3.1	Status of implementation of EIS recommendations during construction	11
2.3.2	Status of implementation of EIS recommendations during operations	12
2.4	Information disclosure	12
2.5	Consultation and participation	12
2.6	Grievance redress mechanism	12
2.7	Monitoring and reporting	12
2.8	Unanticipated environmental impacts	13
2.9	Biodiversity conservation and sustainable natural resource management	13
2.10	Pollution prevention and abatement	14
2.11	Health and safety	15
2.11.1	Occupational health and safety (OHS)	15
2.11.2	Community health and safety	16
2.12	Physical cultural resources	17
<b>3</b>	<b>Social compliance audit findings</b>	<b>18</b>
3.1	Overview	18
3.2	Human resources management and gender	18
3.3	Land acquisition and involuntary resettlement due to Ham Thuan-Da Mi hydropower plants	19
3.3.1	Background	19
3.3.2	Audit findings	20
3.4	Community health, safety, and security	22
3.5	Corporate social responsibility	23

3.6	External stakeholder engagement	23
4	Summary of findings and recommendations	24



# 1 Introduction

## 1.1 Overview

Da Nhim-Ham Thuan-Da Mi Hydropower Joint Stock Company (DHD, the Sponsor), a subsidiary of Electricity Vietnam (EVN) is developing a 47.5MW floating solar photovoltaic (PV) project (the Project) on the surface of Da Mi reservoir, associated with the 475MW Ham Thuan-Da Mi hydropower plants located in Binh Thuan province, Vietnam. As part of the Project's financing from the Asian Development Bank (ADB, the Lender), Mott MacDonald was appointed as Lender's environmental and social consultant (LESC) to undertake the following:

- Environmental and social due diligence (ESDD) on the 47.5MW floating solar PV project
- Environmental and social compliance audit (ESCA, this report) on the Sponsor's existing assets, as defined in section 1.5

In addition to the applicable Vietnamese legislation and standards, the ESDD and ESCA were both undertaken considering the following specific environmental and social requirements of the Lender, collectively known as the compliance reference framework:

- ADB Safeguard Policy Statement (SPS), 2009
- ADB Social Protection Strategy, 2001
- ADB Gender and Development Policy, 1998
- ADB Public Communications Policy, 2011
- World Bank Group (WBG) Environmental Health and Safety (EHS) Guidelines in force at the time of reporting, including but not limited to the following:
  - WBG General EHS Guidelines, 2007
  - WBG EHS Guidelines for Electric Power Transmission and Distribution, 2007

## 1.2 Objectives

The objectives of this ESCA are to:

- Review the environmental and social compliance of the Sponsor's existing hydropower assets (construction and operations) against the requirements of ADB Safeguard Requirements on Environment (SR1), Involuntary Resettlement (SR2) and Indigenous Peoples (SR3)
- Identify outstanding compliance issues related to the development and operation of the existing assets and recommend measures to address these

It is understood that this ESCA will be made available to the public in accordance with the information disclosure requirements of ADB Safeguard Policy Statement (SPS) 2009.

## 1.3 Scope and limitations

This ESCA focuses on the compliance status of DHD's existing assets (defined in section 1.5) against the compliance reference framework, including their on-going management by the Sponsor.

This ESCA was undertaken through a desk-based review of documentation received from the Sponsor as of 13 April 2018, in addition to the field information gathered during the site visit which took place on 5 to 8 March 2018. The list of documents reviewed in relation to this ESCA

is presented as Annex A of the ESDD report. The site visit schedule is presented in section 2.2.5 of the ESDD report.

New information or updates to information received after 13 April 2018 (cut-off date) have not been reviewed as part of this ESCA, which may or may not substantially alter our findings and recommendations.

## **1.4 Applicable legislation**

It is important to note that at the time of development, the existing assets were only required to comply with the Vietnamese regulatory requirements hence gaps against the requirements of the compliance reference framework would be expected, as noted in our succeeding assessments.

The following national regulations are relevant to assessing regulatory compliance of DHD's existing hydropower assets:

### **1.4.1 Environmental**

#### **1.4.1.1 Environmental impact assessment requirements**

- Law on Environment Protection (LEP) 2014 dated 23 June 2014 of National Assembly.
- Decree No.18/2015/ND-CP dated 14 February 2015 of the Government on regulating environmental planning, strategic environmental assessment (SEA), environmental impact assessment (EIA) and environment protection commitment, Post-EIS (EPP).
- Circular No.27/2015/TT-BTNMT dated 29 May 2015 of MONRE on guidelines for SEA, EIA, and EPP.

#### **1.4.1.2 Air quality**

- Circular No.16/2009/TT-BTNMT dated 07 October 2009 of MONRE on defining national technical regulations on environment.
- Circular No.32/2013/TT-BTNMT dated 25 October 2013 on promulgation of national technical regulations on environment.
- QCVN 05:2013/BTNMT – National Technical Regulation on ambient air quality.
- QCVN 06:2009/BTNMT – National Technical Regulation on a number of toxic substances in ambient air.

#### **1.4.1.3 Noise and vibration**

- Circular No.39/2010/TT-BTNMT dated 16 December 2010 of MONRE on the national technical regulation on the environment.
- Circular No.24/2016/TT-BYT dated 30 June 2016 of Ministry of Health on national technical regulation on noise – permissible exposure levels of noise in the workplace.
- QCVN 26:2010/BTNMT – National technical regulation on noise.
- QCVN 27:2010/BTNMT – National technical regulation on vibration.
- QCVN 24/2016/BYT – National technical regulation on noise - permissible exposure levels of noise in the workplace.

#### **1.4.1.4 Water resources management**

- Law on Water Resources dated 21 June 2012 of National Assembly.

- Decree No.201/2013/ND-CP dated 27 November 2013 of the Government on detailing the implementation of articles of Law on Water Resources.
- Decree No.38/2011/NĐ-CP dated 26 May 2011 of the Government on amendment and supplement to a number of provisions on administrative procedures of the Decree No.149/2004/ND-C dated 27 July 2004 and the Decree No. 160/2005/ND-CP dated 27 December 2005.
- Circular No.27/2014/TT-BTNMT dated 30 May 2014 of MONRE on regulating the registration for groundwater extraction, form of dossier for issue, extension, modification, re-issue of water resource permit.
- Circular No.27/2016/TT-BTNMT dated 29 September 2016 of MONRE on determining index details and assessing results of marine environmental pollution control activities.
- Decision No.16/2008/QĐ-BTNMT dated 31 December 2008 of MONRE on promulgation of national technical regulation on environment.
- QCVN 08:2008/BTNMT – National technical regulation on surface water quality for water protection and usage.
- QCVN 09:2008/BTNMT – National technical regulation on underground water quality.
- QCVN 10:2008/BTNMT – National technical regulation on coastal water quality.
- QCVN 38:2011/BTNMT – National technical regulation on surface water quality for protection of aquatic life.
- QCVN 43:2012/BTNMT – National technical regulation on sediment quality.

#### 1.4.1.5 Wastewater

- Decree No.80/2014/ND-CP dated 06 August 2014 of the Government on the Drainage and Treatment of Wastewater.
- Decree No.154/2016/ND-CP dated 16 November 2016 of the Government on Environmental Protection Charges for Wastewater.
- QCVN 40:2011/BTNMT – National Technical Regulation on industrial wastewater.
- QCVN 14:2008/BTNMT – National Technical Regulation on domestic wastewater.
- QCVN 25:2009/BTNMT – National Technical Regulation on wastewater of the solid waste landfill sites

#### 1.4.1.6 Waste

- Decree No.38/2015/ND-CP dated 24 April 2015 of the Government on management of waste and discarded materials.
- Decree No.59/2007/ND-CP dated 09 April 2006 of the Government on Solid Waste Management.
- Decision No.16/2015/QĐ-TTg dated 22 May 2015 of the Prime Minister on Providing Regulations on Recall and Treatment of Discarded Products.
- Circular No.35/2015/TT-BTNMT dated 30 June 2015 of MONRE on the environmental protection of economic zones, industrial parks, export processing zones and hi-tech parks.
- Circular No.27/2014/TT-BTNMT dated 30 May 2014 of MONRE on regulating the registration for groundwater extraction, form of dossier for issue, extension, modification, re-issue of water resource permit.
- Circular No.36/2015/TT-BTNMT dated 30 June 2015 of MONRE on Management of Hazardous Waste.

- Circular No.47/2011/TT-BTNMT dated 28 December 2011 of MONRE on national technical regulation on environment.
- QCVN 19:2009/BTNMT – National Technical Regulation on industrial emission of inorganic substances and dusts.
- QCVN 20:2009/BTNMT – National Technical Regulation on Industrial emission of organic substances.
- TCVN 6705:2009 – Normal Solid Waste – Classification.
- TCVN 6706:2009 – Hazardous Wastes – Classification.
- TCVN 6707:2009 – Hazardous Wastes - Warning Signs.

#### 1.4.1.7 Ecology and wildlife requirements

- Biodiversity Law dated 13 November 2008 of National Assembly.
- Decree No.65/2010/ND-CP dated 11 June 2010 of the Government on guiding Law on Biodiversity.
- Decree No. 109/2003/ND-CP dated 23 September 2003 of the Government on the conversation and sustainable development of submerged areas. Decree No. 109/2014/ND-CP dated 20 November 2014 of the Government on the regulation on protection of seaport and navigable channel facilities.
- Decision No.45//QD-TTg dated 08 January 2014 of the Prime Minister on approving the planning on Vietnam's marine conservation zones through 2020.
- Decision No.82/2008/QD-BNN dated 17 July 2008 of Ministry of Agriculture and Rural Development on declaration of the list of endangered aquatic species in Vietnam which need protection, reproduction and development.
- Circular No.40/2013/TT-BNNPTNT dated 15 September 2010 of Ministry of Agriculture and Rural Development on providing list of wild fauna and flora under management of CITES.
- Circular No.01/2011/TT-BNNPTNT dated 05 January 2011 of Ministry of Agriculture and Rural Development on providing list of endangered rare aquatic species needs to be protected, recovered and developed.

#### 1.4.1.8 Soil quality

- Decision No.16/2015/QD-TTg dated 22 May 2015 of the Prime Minister on Providing Regulations on Recall and Treatment of Discarded Products
- Circular No.10/2012/TT-BTNMT dated 12 October 2012 of MONRE on regulating national technical regulations on the environment.
- QCVN 15:2008/BTNMT – National Technical Regulation on the pesticide residues in the soils.
- QCVN 03:2008/BTNMT – National Technical Regulation on the allowable limits of heavy metals in the soils.
- QCVN 43:2012/BTNMT – National Technical Regulation on sediment quality.
- QCVN 45:2012/BTNMT – National Technical Regulation on Allowed Limits of Dioxin in Soils.

#### 1.4.1.9 Occupation health, safety (OHS) requirements

- Law on Occupational Safety and Hygiene dated 25 June 2015 of the National Assembly.
- Decree No.39/2016/ND-CP dated 15 May 2016 of the Government on Detailing the Implementation of Some Articles of the Law on Occupational Safety and Sanitation. Decree No.44/2016/ND-CP dated 15 May 2016 of the Government on Details Some Articles of the

Law on Occupational Safety, Training of Occupational Safety and Sanitation and Monitoring of Occupational Environment

- Circular No.19/2016/TT-BYT dated 30 June 2016 of the Ministry of Public Health on regulating occupational sanitation, occupational health, and diseases.
- Circular No.07/2016/TT-BLDTBXH dated 15 May 2016 of MOLISA on Regulation on Occupational Health and Safety in Producing and Trading Facilities
- Decision No.3733/2002/QĐ-BYT dated 10 October 2002 of Ministry of Health on Promulgating 21 Labour Hygiene Standards, 05 Principles And 07 Labour Hygiene Measurements.
- QCVN 01/2009/BYT National Technical Regulation on Drinking Water Quality.
- TCVN 2607-78 Protective Clothing – Classification.
- TCVN 3581-81 Eye Protectors - General Technical Requirements and Test Methods.

#### **1.4.2 Social**

##### **1.4.2.1 Existing land acquisition and resettlement requirements**

###### **National regulations**

- Law No. 45/2013/QH13 on Land (referred as Land Law 2013)
- Law No. 28/2004/QH11 on Electricity (referred as Electricity Law 2004)
- Law No.02/2011/QH13 on Grievance
- Decree No. 43/2014/ND-CP dated May 15, 2014 by the Government on the implementation of certain articles of the Law of land 2013
- Decree No. 44/2014/ND-CP dated May 15, 2014 by the Government on Land Prices
- Decree No. 47/2014/ND-CP dated May 15, 2014 by the Government on Compensation, Support and Resettlement for People Whose Land is Acquired by the State
- Decree No. 01/2017/ND-CP dated January 6, 2017 by the Government on Amendments to Decrees on the Implementation of the Land Law 2013
- Decree No. 14.2014/ND-CP dated February 26, 2014 by the Government on detailing the implementation of electricity law regarding electricity safety
- Circular No. 37/2014/TT-BTNMT dated June 30, 2014 of MoNRE stipulating details on compensation, support, resettlement and land acquisition procedures, handing-over land, and leasing land of Decree 47/2014/ND-CP

###### **Provincial regulations**

- Decision No. 08/2015/QĐ-UBND dated March 25, 2015 on approval of general plan for land acquisition, compensation, and resettlement of investment projects confined within Binh Thuan Province
- Decision No. 05/2018/QĐ-UBND dated January 25, 2018 on amendment of Decision No. 08/2015/QĐ-UBND
- Decision No. 59/2014/QĐ-UBND dated March 25, 2015 on land prices within Binh Thuan Province applicable from 1 January 2015 – 31 December 2019

##### **1.4.2.2 Labour-related requirements**

- Labour Code dated 18 June 2012 of the National Assembly
- Law on Grievance dated 11 November 2011 of the National Assembly

- Decree No.45/2013/ND-CP dated 10 May 2013 of the Government on detailing some provisions of Labour Code 2012 on working time, resting time, occupational health, and sanitation
- Decree No.103/2014/NĐ-CP dated 11 November 2014 of the Government on stipulating the region-based minimum wage levels applied to labourers working for enterprises, cooperatives, cooperative groups, farms, households and individuals and agencies, organizations employing labourers
- Decree No.03/2014/ND-CP dated 16 January 2014 of the Government on detailing a number of articles of the Labour Code on employment.
- Decree No.75/2012/ND-CP on detailing some provisions of Law on Grievance 2011.
- Circular No.33/2013/TT-BLDTBXH dated 16 December 2013 of Ministry of Labour, Invalids and Social Affairs (MOLISA) on guiding the implementation on region-based minimum wage levels for labourers working for enterprises, cooperatives, cooperative groups, farms, households, individuals and other agencies, organizations employing labourers.

### 1.5 Existing assets covered within the compliance audit

This ESCA is focused on assessing compliance related to the development and operations of the 475MW Ham Thuan-Da Mi hydropower project (hereon referred to as the “existing assets”) including all associated facilities required for its successful operation (ie transmission line, substation). It is understood that the floating solar PV project will be installed on the surface of Da Mi reservoir, associated with the Ham Thuan-Da Mi hydropower plants. The following are the existing assets covered under this ESCA:

- Ham Thuan-Da Mi hydropower plants (two cascading hydropower plants) with a combined capacity of 475MW, comprised of:
  - 300MW Ham Thuan hydropower plant (150MW x 2 units)
  - Da Mi hydropower plant (87.5MW x 2 units)
- Two reservoirs with a total volume of 836 million m<sup>3</sup>, comprised of:
  - Ham Thuan reservoir with 695 million m<sup>3</sup>
  - Da Mi reservoir with 141 million m<sup>3</sup>
- Transmission lines with a total of 282.km, comprised of:
  - 171.2km of 220kV line
  - 111km of 110kV line
- Four substations, with a total transformer capacity of 379MVA:
  - Bao Loc 220kV substation
  - Phan Tiet 110 kV substation
  - Duc Linh 110kV substation
  - Long Thanh 220kV substation

The 160MW Da Nhim hydropower plant, although an existing asset operated and managed by the Sponsor, is not considered relevant to the floating solar PV Project to be financed by the Lender because its operations are independent of the 475 Ham Thuan-Da Mi hydropower plant operations. Therefore, risks related to the development and operation of the 160MW Da Nhim hydropower plant are unlikely to affect the floating solar PV project.



### 1.5.1 Key components

The specifications for the Ham Thuan-Da Mi hydropower plants are provided in Table 1 below.

**Table 1: Key components of the Ham Thuan-Da Mi hydropower plants**

Description	Unit	Ham Thuan scheme	Da Mi scheme
<b>Hydrology</b>			
Catchment area	sq.km	1280	83
Average annual inflow	million cu.m	1,598.9	110 + 1,570 = 1,680
<b>Reservoir</b>			
Normal high-water level (NHWL)	EL.m	605	325
Low water level (LWL)	EL.m	575	323
Gross storage capacity	million cu.m	695	140.8
Effective storage capacity	million cu.m	523	11.6
Area of reservoir at full supply level (FSL)	km <sup>2</sup>	25.2	6.0
Firm discharge	cu.m/s	33.0	34.6
<b>Main dam</b>			
Type		Rockfill with center core	
Height	m	93.5	69
Crest level	EL.m	609.5	329
<b>Auxiliary dam</b>			
Type		Homogeneous earth fill	
Height	m	58, 36, 43 and 6	29 and 7
<b>Spillway</b>			
Type		Gated type ogee crest with an open chuteway	
Ogee crest level	EL.m	594	325
Ogee crest length	m	55	110
<b>Intake</b>			

Source: EIA for Ham Thuan-Da Mi hydropower plant, 1997

### 1.5.2 DHD's Environmental Health and Safety (EHS) resources

DHD's Regulation on Environmental Protection sets out the requirements for managing EHS aspects within the Company. Based on our review of the English translation of this document, it is understood the Technical Department is responsible for managing and maintaining EHS within DHD. Specifically, the Safety Engineer is in-charge of reporting issues related to EHS within the company (DHD and EVN), including external reporting to relevant authorities (eg DONRE/MONRE) for purposes of regulatory compliance.

Figure 1 shows DHD's organisational chart effective 2017-2022. It should be noted that the original document provided for review was in Vietnamese, and this was translated using publicly-available language translation tools. In the organisational chart, the Technical Department is one of eight departments reporting directly to the Deputy General Manager. Further information related to the manpower composition (ie capacity and capability) of the Technical Department was not provided for review.

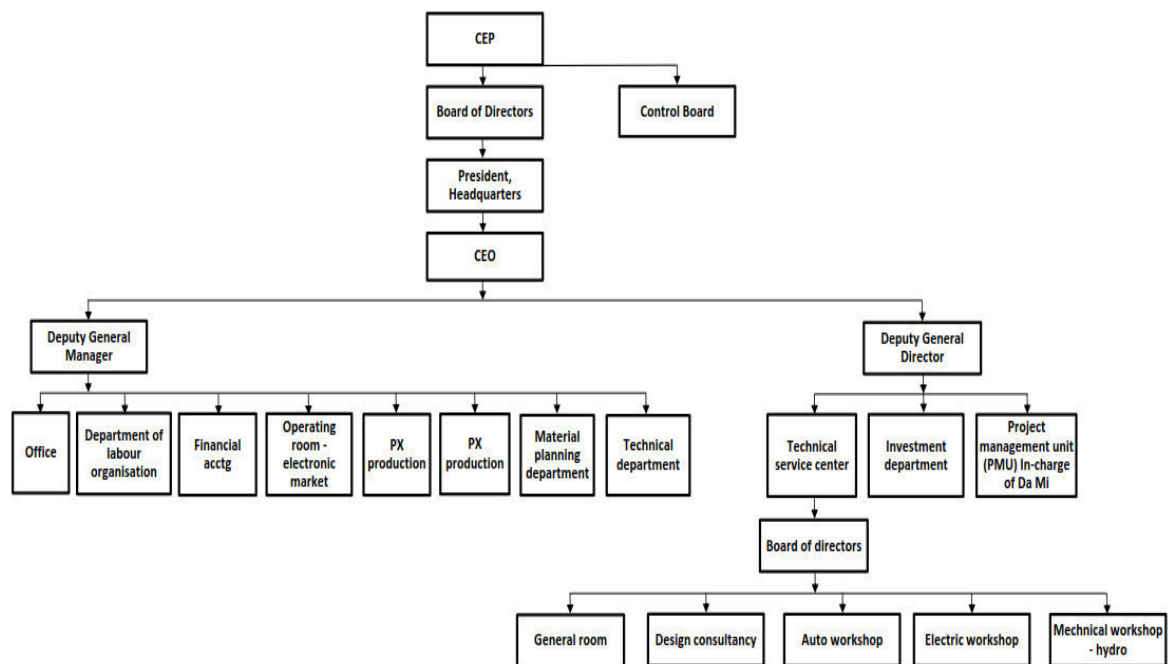
It is understood that the same resources will be utilised to manage the EHS requirements of the floating solar PV project. Mott MacDonald's opinion and further recommendations regarding organisational capacity and capability to manage and implement EHS requirements in accordance with the compliance reference framework were detailed in the ESDD.

It is important to note that at the time of developing the hydropower assets, the Sponsor was only required to comply with the Vietnamese regulatory requirements, which was then managed by the parent company, EVN. It is understood from the Sponsor that responsibilities for EHS performance during construction (between 1997 and 2000) were allocated to the EPC contractor, however records on construction EHS performance have not been maintained by DHD and provided for review. It is worth mentioning that DHD was only established in 2001, as a financially-independent subsidiary of EVN to manage the operations of the Ham Thuan-Da Mi hydropower plant. Project implementation records prior to the existing asset's operation and DHD's establishment were kept within EVN's headquarters hence have not been included in this audit.

Some operational compliance obligations such as environmental monitoring and hazardous waste management and disposal were being outsourced by DHD to third parties, the outcomes of which are being used by DHD's Technical Department to report to the local authorities for regulatory compliance. Other regulatory compliance obligations are handled by DHD's Technical Department. It is noted that DHD does not have a specific EHS team, and there was no regulatory requirement for DHD to develop and implement an environmental and social management system (ESMS) in accordance with the compliance reference framework.

Procurement of outside services are being handled by DHD, and we note from previous review of draft EPC contract for the floating solar project that EHS-related requirements were being allocated to the EPC contract. However, it was also noted that there was no requirement for the EPC Contractor to report their EHS performance to the Sponsor, as part of the EPC contract.

**Figure 1: DHD Organisational Chart (2017-2022)**



Source: DHD Organisational Chart as of 8 Feb 2018 (translated from Vietnamese to English)



## 2 Environmental compliance audit findings

### 2.1 Overview

This section provides the findings of the environmental compliance audit (ECA) which was undertaken to assess the existing asset's environmental performance against the requirements of the compliance reference framework. The findings of the ECA are presented in accordance with the following ADB SR1 principles:

- Environmental assessment
- Environmental planning and management
- Information disclosure
- Consultation and participation
- Grievance redress mechanism
- Monitoring and reporting
- Unanticipated environmental impacts
- Biodiversity conservation and sustainable natural resource management
- Pollution prevention and abatement
- Health and safety
- Physical cultural resources

The compliance review was undertaken for both construction and operation phases of the Ham Thuan-Da Mi hydropower project and its associated facilities, which we understood to have occurred according to the following timeline:

- 1991 – completion of the feasibility study (FS) for the Ham Thuan-Da Mi hydropower plant
- 1995 – development of the environmental impact statement (EIS) report for the Ham Thuan-Da Mi hydropower plant
- 1996 – approval of the EIS report for the Ham Thuan-Da Mi hydropower plant and start of land acquisition
- 1997 – start of construction
- 2001 – commercial operations

Our findings and further recommendation are presented in the succeeding sections.

### 2.2 Environmental assessment

The EIS report for the existing assets was developed in 1995, in accordance with the Vietnamese regulatory requirements and the Overseas Economic Cooperation Fund (OECF, now known as Japan Bank for International Cooperation, JBIC<sup>1</sup>) guidelines. There was no requirement for the Sponsor to develop an environmental and social impact assessment (ESIA) consistent with the requirements of the compliance reference framework.

The EIS included an assessment of potential direct and indirect impacts which could result from the construction and operations of the existing hydropower assets. A combination of primary and secondary data was utilised to inform specialist opinions in the EIS.

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<sup>1</sup> [The Japan Export-Import Bank \(JEXIM\) and Overseas Economic Cooperation Fund \(OECF\) merged in October 1999 to form JBIC.](#)

The key findings we note from the EIS are as follows:

- The hydropower project development footprint is not located within nationally-declared protected areas. Majority of the existing land use prior to hydropower development is agricultural (ie cultivated with rice, corn, tea and vegetable crops), characteristic of a modified habitat. Further, no irrigation or bulk water supply facilities exist along the La Nga river system, prior to the hydropower development.
- Two plant species listed as “protected” within the Vietnamese EIA Guideline (Circular 17/01/1992 of the Council of Ministers) were reported to be found within the surrounding areas of Ham Thuan and Da Mi river basin. These species are *Aquilaria crassna* Pierre (common name: agarwood) and *Dalbergia bariensis* Pierre (common name: Burmese rosewood). However, the EIS noted that these species were not found within planned construction sites and hence were unlikely to be affected by the hydropower development.
- The EIS noted that there were “a few rare and endangered animal species known to be inhabiting or frequenting the EIS study area”<sup>2</sup>. However, upon checking the conservation status of these EIS species list against the most recent IUCN red list, the species were categorised as either “near threatened” (NT), “least concern” (LC) or “data deficient” (DE). None of the species listed were considered “endangered” (EN) per IUCN.
- Results of the aquatic field surveys conducted in November and December 1994 in the inundated area and downstream of then planned Ham Thuan-Da Mi reservoir indicate that there were 138 algal species, 23 species of zooplankton, 16 species of zoobenthos and 59 species of fish. Of the 59 species of fish, 33 were considered commercial fishes with high capture rate. No aquatic species with conservation significance were identified.
- The construction of the Ham Thuan main dam diverted the flow segment of La Nga river to the Da Mi stream. As a result, about 50km segment of the La Nga river (from the Ham Thuan main dam up to the confluence with Da Mi stream) has experienced reduced flow. The hydrological assessment undertaken within the EIS concluded that even with the low flow, there will still be enough water to sustain wildlife in the area and groundwater levels won’t be affected. However, it did not provide any assessment on impacts to aquatic species compositions due to changes in flows and water levels. Further, the EIA did not mention details as to whether dam design has considered the probable maximum flow and climate change risks in the design of the dam and spillway.
- Reduced river flow due to dam construction may affect a few domestic water users along the 50km affected river segment. The EIS recommended for these affected water users to be compensated under the Sponsor’s compensation programme (see SCA in Chapter 3 for more details).
- Results of water quality modelling undertaken within the EIS indicate that the dam construction was unlikely to significantly alter the water quality in the river, particularly in relation to cold water phenomena and turbid water phenomena, which could affect downstream water users. The EIS also noted that there could be significant amounts of organic matter at the bottom of the Ham Thuan reservoir site, which could contain high concentrations of nitrogen and phosphorus. It was therefore recommended to clean the bottom of the reservoir prior to inundation, and consider potential eutrophication issues when deciding to use water flowing from the reservoir. The Sponsor’s action relevant to this recommendation was not verified as part of this review.

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<sup>2</sup> Examples cited in the EIS are: *Tragulus javanicus*, *Lutra lutra*, *Alcedo hercules*, *Garrulax vassali*, *Jabouillea danjoui*, *Gecko gecko*, *Varanus salvator*,

Although the EIS is considered adequate in many respects, it is noted from here that the following are lacking:

- A statement on analysis of alternatives
- An assessment on the potential introduction and management of invasive species, relevant to the proliferation of commercial fishing as a side effect of dam/reservoir construction (see commentary on unanticipated impacts, section 2.8)
- An assessment of health and safety risks and impacts relevant to dam construction and operations
- An assessment of potential climate change risks relevant to dam design, construction and operations
- A socio-economic baseline and impact assessment on households affected due to the construction and operation of the existing assets (see detailed commentary under social compliance audit, chapter 3)

Similar to our findings in the ESDD for the floating solar PV project, an environmental and social management system (ESMS) to enable compliance has not been established because this is not required for Vietnamese regulatory compliance.

### 2.3 Environmental planning and management

In addition to the points made in section 2.2, mitigation measures were recommended to be implemented in the EIS however these were not summarised in an overarching environmental management plan (EMP) and responsibilities and timelines for implementation were not specified.

We note from the review of the EIS that the following measures were to be undertaken prior to construction:

- Development of a compensation programme for households who will be affected due to:
  - reduction of water volume and flow downstream of Ham Thuan
  - land acquisition due to transmission line construction
- Development of a malaria control program
- Development of a construction plan to minimise environmental impacts including clean-up of reservoir bed and re-vegetation activities
- Development of an occupational health and safety plan

During operation, the EIS recommended the following measures:

- Water quality monitoring (quarterly)
- Overall monitoring of biological and social environment, as well as public health (frequency not indicated)

The status of the Sponsor's implementation of the above recommendations are detailed below.

#### 2.3.1 Status of implementation of EIS recommendations during construction

The status of the development and duration of implementation of the compensation programme for affected households or malaria control programmes have not been confirmed due to a lack of information provided by the Sponsor. As previously mentioned, records on environmental performance prior to or during construction were managed by EVN, as DHD was only established as an entity during the existing assets' operations. To our knowledge, construction-related reports have not been handed over to DHD by EVN.

A more detailed commentary and historical background on the compensation process related to the existing assets is presented in section 3.3 of the SCA. Apart from DHD's regulation on environmental protection and monitoring, specific environmental and social management plans (ESMP) for construction and operations have not been developed by DHD.

### **2.3.2 Status of implementation of EIS recommendations during operations**

Compliance with the suggested reporting requirements during operations are further detailed in section 2.7 – monitoring and reporting. However, there is no evidence suggesting that the Sponsor is undertaking on-going biological and social monitoring.

## **2.4 Information disclosure**

Methods of project disclosure and the extent to which the project impacts and mitigation measures have been communicated to the relevant stakeholders have not been described in the EIS. Therefore, it is difficult to assess whether sufficient information disclosure prior to the development of the existing assets were undertaken in accordance with the requirements of the ADB Public Communication Policy. While not considered a material risk, the Sponsor should consider this as part of the financing requirements for the floating solar PV.

Despite requests for information, there is also no sufficient evidence suggesting that the results of the ongoing operations phase environmental monitoring activities are being disclosed to the local communities.

## **2.5 Consultation and participation**

Evidence of stakeholder consultations and public participation including list of issues raised were not presented as part of the EIS for the existing assets. This is a compliance gap against the requirements of SR1. Further commentary on this is provided within section 3.6.

## **2.6 Grievance redress mechanism**

At the time of developing the existing hydropower assets, there was no formal grievance mechanism in place for the community to lodge their complaints. It is understood that the Sponsor has not maintained a community grievance log. This is a compliance gap against the requirements of SR1. Further commentary on this is provided within section 3.6.

## **2.7 Monitoring and reporting**

DHD's Regulation on Environmental Protection mandates the Technical Department of DHD to develop an annual operations monitoring report on the status of the Company's environmental performance against the Vietnamese legal requirements. This report is to be submitted to EVN and the relevant local authorities. In addition to the annual operations monitoring report, the following reports are also developed by DHD for regulatory compliance:

- Occupational health and safety (OHS) report – developed annually and submitted to provincial level health centre
- Environmental monitoring report – developed quarterly, submitted to DONRE

We have been able to review the Sponsor's most recent annual operations monitoring report, OHS report and environmental monitoring report as part of this ECA. It is noted that in the absence of the ESMS, there is no single report consolidating the existing assets' EHS performance.

The quarterly environmental monitoring report reviewed focused on water quality monitoring, particularly on the physico-chemical characteristics of reservoir water quality. Results of water quality monitoring undertaken in Q4 2017 suggest compliance with the requirements of the relevant regulations, as listed in section 1.4.1. A review of the historical performance of the existing assets on water quality monitoring prior to Q4 2017 has not been undertaken because previous monitoring reports have not been provided by the Sponsor for review.

The inspection team of DONRE conducts yearly site visit to verify the monitoring results submitted by the Sponsor. The most recent site inspection by DONRE was conducted in September 2017 and no compliance issues were raised. DHD is considered compliant in terms of its reporting obligations for regulatory purposes.

It is understood that there is no regulatory obligation for the Sponsor to undertake social monitoring on project-affected peoples (PAPs) affected by the hydropower project development.

## **2.8 Unanticipated environmental impacts**

It should be noted that prior to the development of the existing assets, the Da Mi and Ham Thuan reservoirs (now referred to as “lakes”) did not exist as natural lakes. These were man-made lakes formed due to dam construction. Hence one of the identified impacts in the EIS which was considered “positive” in terms of local economy is the proliferation of commercial fishing and the establishment of fishing communities. Indirect impacts due to commercial fishing, such as the unintended introduction of non-endemic or potentially invasive species to these reservoirs, have not been assessed in the EIS. No further monitoring was recommended to be undertaken to assess potential impacts of non-endemic species introduction to the local environment.

Potential health, safety and security risks arising from the establishment of fishing communities around the vicinity of the reservoirs have not been considered in the EIS, nor are there existing management plans by the Sponsor to actively monitor public health and safety and prohibit public encroachment by the lakeshore. These are considered gaps which needs to be addressed as part of the ESMS and management plans recommended to be developed for the floating solar PV project.

## **2.9 Biodiversity conservation and sustainable natural resource management**

It is understood from the EIS that prior to the hydropower development, majority of the land use was characterised by agricultural cultivation of cereal crops and vegetables. Fishing was considered uncommon because the riverbed was reported to be “rocky” by the local community, hence it was difficult to catch fish. The presence of critical and natural habitats was considered unlikely as there were already communities cultivating the area prior to hydropower development. The description of the hydropower footprint prior to development, as provided in the EIS, is characteristic of a modified habitat.

Primary and secondary baseline information on terrestrial and aquatic flora and fauna was included in the EIS. While the EIS noted that there were “a few rare and endangered animal species known to be inhabiting or frequenting the EIS study area”, upon checking the conservation status of the identified species list in the EIS against the most recent version of IUCN red list, it was found that the species were categorised as either “near threatened” (NT), “least concern” (LC) or “data deficient” (DE). None of the species listed were considered “endangered” (EN) by IUCN. Further, the EIS findings indicate that most of the fish species found in the river (prior to reservoir formation) were considered commercial fishes.

Basic biodiversity screening undertaken recently by Mott MacDonald using Integrated Biodiversity Assessment Tool (IBAT) informs that the footprint is not located within or in close proximity to any protected or internationally recognised areas for conservation. Further, it informs that there are 21 species classified as either endangered (EN) or critically endangered (CR) by the IUCN within IBAT's assessment area. Of the 21 species, three are fish species and seven are bird species. None of the species identified within the IBAT screening were found to be in the list of flora and fauna species in the EIS.

Changes in biodiversity and species composition between 1997 to present could be possible due to the hydropower development (ie permanent landscape alteration and land use change). However, with the lack of biodiversity monitoring information during construction and operations (ie information on biodiversity net loss/gain), the extent to which the existing assets had an impact on biodiversity is difficult to assess.

## 2.10 Pollution prevention and abatement

DHD's Regulation on Environmental Protection and Management covers aspects related to pollution prevention and abatement, particularly related to water quality, air quality and hazardous wastes, in compliance with Vietnamese regulatory requirements.

### 2.10.1.1 Operational performance

DHD maintains a record and periodically reports environmental performance on the following aspects during operations:

- Water quality
- Hazardous waste
- Water use

Water quality measurements are being undertaken quarterly and results are reported to DONRE as mentioned in section 2.7, on monitoring and reporting. Recent results indicate compliance with the Vietnamese regulatory requirements.

Resource use (water levels maintained and flow rates) are also being reported as part of the annual (operations monitoring) report submitted to EVN. The numbers indicate that the hydropower operations are within the allowed limits indicated in the Sponsor's water use permit.

It is understood that DHD maintains a hazardous waste storage facility in accordance with the requirements of the Vietnamese regulations. The condition of this facility was not verified during the site visit. A registered third party hazardous waste treatment company is engaged by DHD for the collection, treatment and disposal of its hazardous wastes but we have been unable to verify the registration status of this third party hazardous waste treatment company as part of this review.

Information regarding domestic waste (ie office wastes, canteen wastes) generation and disposal have not been provided, nor have we been able to review specific management plan on domestic waste management (ie waste reduction and recycling efforts) for the hydropower plant operation. We have recommended for this to be included as part of the ESMS that is to be developed for the floating solar PV.

Overall, we do not note any outstanding compliance issues relevant to pollution resulting from the hydropower operations.



#### 2.10.1.2 Construction performance

Pollution prevention and abatement measures including status of implementation during construction cannot be verified with the lack of a construction environmental management plan and construction compliance monitoring records. Stakeholder interviews with the local community and relevant government authorities did not provide any indication that there were legacy issues related to pollution resulting from the development of the existing assets.

### 2.11 Health and safety

The Sponsor has developed the following health and safety policies and procedures, in relation to the existing assets:

- Regulation on environmental protection and management
- Regulation on the use of electric equipment
- Regulation on hazardous waste disposal
- Emergency Response Plan
- Fire Prevention Plan
- Flood Prevention Plan
- Hazardous Waste Management Handbook
- Occupational Health and Safety Training Handbook

The above plans were developed in accordance with Vietnamese regulatory requirements. Copies of these documents were provided to the LESC as part of this ECA.

The Safety Engineer under the Technical Department is in-charge of the ensuring the implementation of the above plans, including reporting performance to the relevant authorities:

- Department of Natural Resources and Environment (DONRE)
- Department of Investment and Trade (DOIT)
- Department of Labour, Invalids and Social Affairs (DOLISA)

An assessment of the existing asset's health and safety performance during construction and operations are provided in the succeeding sections below.

#### 2.11.1 Occupational health and safety (OHS)

##### 2.11.1.1 Operational performance

As discussed in section 2.7, DHD's annual performance on OHS is reported to provincial level health centre as part of regulatory compliance. While considered compliant with Vietnamese regulatory requirements, the report does not include information required to assess the hydropower plant's overall OHS performance. For example, the OHS report did not include key performance indicators (KPIs) measurements such as total safe man-hours worked, lost time injury frequency rates and similar KPIs. With the lack of this information, the overall health and safety performance of the existing assets since it began operations in 2001 is difficult to assess. No major health and safety irregularities were observed during the site visit to the Ham Thuan and Da Mi power plants on 7 March 2018. Employees were observed to be wearing appropriate personal protective equipment (PPE), relevant to their role and risk exposure. However, it is worth mentioning that this observation is specific only to the control room operations as a trip to other areas of the hydropower plant's operations have not been arranged during the visit. It was noted, however, that no health and safety briefing was provided for visitors entering the power plant.

### 2.11.1.2 Construction performance

Records of OHS performance during construction have not been provided for review as they have not been managed by the Sponsor. In the absence of records on construction OHS performance, stakeholder interviews with the local community and relevant government authorities were undertaken as part of the audit. Anecdotal evidence does not suggest that there were legacy issues related to OHS incidents during construction which occurred between 1997 and 2000.

Further, a quick search on the internet was conducted which did not reveal any negative publicity related to the construction OHS performance of the existing assets. Further, there were no anecdotal evidence suggesting health and safety-related issues raised by the local community and the local authorities during the site visit. While there are improvements which need to be made in terms of health and safety monitoring and reporting, we do not consider this to be a significant compliance risk.

## 2.11.2 Community health and safety

### 2.11.2.1 Operational performance

It is noted that the Sponsor has not developed a community health and safety plan for the existing assets, as this was not required for regulatory compliance. No on-going community health and safety monitoring was also being undertaken. There were however, separate plans developed relating to emergency response, fire prevention and flood prevention which involved community health and safety aspects. The “Plan for Preventing Flooding in Downstream Area of Ham Thuan-Da Mi Hydropower Plant” approved by the Binh Thuan Province People’s Committee lists the procedures to be undertaken in case of a need to release water from the dam. DHD has installed warning stations along the river which triggers a siren to sound off before a dam release. This warning system has an effective range of 2km (radius) under fair weather conditions and 300-500 metres (radius) during rainy weather.

There were no specific emergency response procedures developed relevant to dam structural failure, however it is understood that maintaining appropriate water level (ie dam releases where necessary) is key to maintaining the dam’s structural integrity in the long-term.

Interviews with the local commune (village) leaders suggest some awareness on emergency response procedures however the extent to which this has been communicated to all commune constituents has not been verified. There were no records supporting that the above plans have been effectively communicated to the local community.

During the site visit, it was noted that the hydropower plants were situated in a sparsely-populated, isolated area hence community health and safety risks related to the power plants are considered low. However, it was noted during the site visit that there were a few household living near the four substations of the two power plants. As mitigation, the Sponsor mentioned during the interview that trainings on electrical safety were being conducted annually in these affected communities, in compliance with the requirements on the Law on Electricity. This information by the Sponsor was confirmed during the meetings with the local authorities.

### 2.11.2.2 Construction performance

Similar to the above findings, community health and safety performance records of the existing assets during construction have not been maintained by the Sponsor hence were not audited. However, there were no anecdotal evidence from the local community interviews recently undertaken suggesting that there have been unresolved issues on community health and



safety. It is also possible that the lack of a community grievance mechanism or procedures on external communication may have not encouraged and captured grievances reporting from the local community, which could include health and safety aspects.

## **2.12 Physical cultural resources**

No tangible or intangible assets were identified within the footprint of the existing assets, per EIS report developed for the Ham Thuan-Da Mi hydropower plants. Interviews with the local community as noted within the ESDD report confirmed that there were no physical cultural resources affected by the development of the hydropower assets.

## 3 Social compliance audit findings

### 3.1 Overview

The social compliance audit (SCA) was undertaken to determine the Sponsor's management performance on the existing hydropower assets against the ADB SPS, Social Protection Strategy, Gender and Development Policy, and Public Communication Policy. The SCA provides an assessment of the following social-related aspects:

- Human resource management and gender
- Land acquisition and involuntary resettlement
- Community health, safety, and security
- Corporate social responsibility (CSR) policy
- External stakeholder engagement

### 3.2 Human resources management and gender

DHD is committed to ensuring the health, safety, and welfare of all employees. This is evident in the development of human resources (HR)-related policies and plans. It is noted that general labour-related issues in DHD are managed by the HR Department. This department is responsible for contract management and keeping of personal files on employees. A copy of the organisation chart showing the number of personnel within the HR Department was not provided.

The review of HR-related documents indicates that human resources management policies and procedures are consistent with the Labour Code of Vietnam. For example, labour contracts, working conditions, grievance, discrimination, trade union membership are described in the existing policies and are considered consistent with the national regulations. In addition, personnel of DHD are entitled to all labour rights and benefits granted by the national legislation. While obligatory benefits such as annual leave, paid sick leave, maternity leave, and medical insurance are provided, DHD has further established its own benefit system for the employees. For example, this includes welfare support for employee and family events, annual medical examination for all employees, and training and capacity building for the employees.

Policy and procedure level documents relating to an employee grievance redress mechanism has been developed and is currently being implemented. The mechanism is assessed to be consistent with the national legislation on grievances and sufficiently aligned with compliance reference framework. However, it should be noted that there is no employee grievance register available to track all the grievance to date. Therefore, in this regard, Mott MacDonald is not able to provide any assessment on the implementation of worker grievance mechanism or the number and nature of employee grievances. It is recommended that the Sponsor establish a worker grievance redress register to track all worker-related grievances.

To comply with the national legislation, DHD's HR policy ensures equal rights for men and women. In particular, DHD provides equal opportunities for employment, promotion, and vocational trainings for male and female. Payment rates for personnel are based on their qualification and jobs they perform. In addition, the HR policy states that differentiation of pay rates based on gender does not have a place within DHD. No information associated with salaries and payslips were provided or reviewed during the audit. Therefore, Mott MacDonald cannot independently verify this matter.

According to the employment data provided by the Sponsor, as of 2017, the percentage of female working in DHD is 10% of the total workforce. It is noted that most operational workers are male, while female representation is higher within the administrative functions. More detailed gender-differentiated statistics (eg ratio of women/men on decision making positions, comparison of male/female payment rates, etc) are not tracked. Mott MacDonald recommends that strategies be developed to increase female participation within the DHD workforce. This recommendation is incorporated into the CAP provided within the Section 4 of the ESDD.

### **3.3 Land acquisition and involuntary resettlement due to Ham Thuan-Da Mi hydropower plants**

#### **3.3.1 Background**

Based on interviews with the Sponsor, the Ham Thuan-Da Mi hydropower project was built between 1995 to 2000 by EVN – a state-owned parent company of the Sponsor. In 2001, EVN established DHD as a subsidiary of EVN and as a financially independent entity to manage the operation of the hydropower plants. The Ham Thuan – Da Mi hydropower plants have been operational since 2001. No detailed documentation pertaining to the land acquisition was process undertaken to facilitate the development of the Ham Thuan - Da Mi Hydropower plants was available. DHD being an EVN subsidiary established after the construction phase does not hold any records of the land acquisition. Mott MacDonald has therefore relied on a review of the EIA developed in 1995 in support of regulatory approvals, a report prepared by Vietnam-Japan Joint Evaluation Team in 2008<sup>3</sup> (hereafter called the “2008 report”), as well as interviews conducted during the ESDD fieldwork.

The review of the existing document shows that both economic and physical displacement occurred due to the development of the dams. Based on the provided documents, land affected by the construction of the two hydropower plants fell into four categories, including power plants, reservoir areas, access roads, and transmission line (TL). The EIA states that people were concentrated in clusters of small villages within the proposed reservoirs, with additional dwellings situated under the area for developing electricity transmission infrastructure (including tower pads, substations, and right of way corridor). There was no cultural heritage or public buildings (eg government offices, schools, or health care facilities) affected due to the dam development. Based on the 2008 report, trees and standing crops were affected due to the dam-induced land acquisition. The EIA also states that although some forest areas were affected due to the dam construction, this forest area was assessed to have no commercial value and hence, no compensation was planned. Further, there were no residents relying on fisheries activities for their livelihood. No manufacturing and mining facilities existed in the dam areas. Other potential sources of economic displacement such as relocation of small shops and commercial premises, loss of access to the forest area for ecosystem services, and increased travel distances and times due to the presence of the reservoir were not described within the EIA.

Neither the total land intake for the dam development nor the number of physically-displaced households were confirmed in the 1995 EIA. However, based on the 2008 report, a total of 6,827 hectares of land was acquired for the dam project with the following details:

- 3,144 ha for building reservoirs
- 3,175 ha for building the two hydropower plants
- 444 ha for developing transmission lines and four substations.

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<sup>3</sup> [Vietnam-Japan Joint Evaluation Team Report on Ham Thuan-Da Mi Hydropower Project, JICA, 2008](#)

The report also notes that a total of 3,209 households were affected due to the dam-induced resettlement. It should be noted that the total number of people affected due to the dam-induced resettlement is not provided in the available documents. Of the total 3,209 HHs, 1,168 HHs were physically displaced including 823 HHs affected due to the development of the reservoirs areas and 345 HHs affected as part of the TL and substation construction. It is also reported that 2,041 HHs were economically displaced due to the loss of agricultural land and associated trees and standing crops. It is noted in the 2008 report that minority ethnic groups made up a significant part of the population in the reservoir areas and most of them are K-Ho minority ethnic. However, the number of affected minority ethnic households were not provided in the available documents. It is noted that the dam footprint was within the five affected villages across two provinces including: (i) Lam Dong province: Loc Nam, Hoa Bac, and Dong Giang villages; and (ii) Binh Thuan province: La Da and La Ngau villages).

### 3.3.2 Audit findings

During the ESDD site visit, Mott MacDonald's social consultant collected secondary information regarding the historical data on the dam-induced resettlement and associated implementation activities. However, no documentary evidence was found, apart from the local EIA document provided by the Sponsor and Decision No. 1922/QĐ-NLĐK of Ministry of Industry dated 8 August 2003 on "Approving Resettlement Assistance Plan for Ham Thuan – Da Mi hydropower plant project" provided by Loc Nam CPC. From the interviews with the three local authorities (including La Da and La Ngau CPCs of Binh Thuan Province, and Loc Nam CPC of Lam Dong Province), Mott MacDonald's consultants consulted with government officials to elicit any information regarding the dam-induced resettlement. Only two older government officials from Loc Nam CPC could provide anecdotes about the past dam-induced resettlement. Further, Mott MacDonald's social consultant engaged with some elderly local people in the areas in which are considered to have likely been impacted by the initial resettlement.<sup>4</sup> However, none of participants could remember the construction of hydro plants and associated resettlement activities.

In the absence of primary and secondary data on the dam-induced resettlement activities, the audit findings listed below are based on the review of the approved 1995 EIA, the 2008 report, the past resettlement-related national legislation, and anecdotes of participants. Given the limitations within the available data-set, Mott MacDonald cannot provide a detailed assessment on the dam-induced resettlement process (ie number of people physically and economically displaced, entitlements and resettlement outcomes), independently verify the information presented within the 1995 EIA or assess the implementation process and outcomes against ADB SPS SR2 requirements. The initial audit findings are summarised as below:

- **Scope of dam-induced resettlement:**

The collected secondary data indicates that both economic and physical displacement occurred due to the dam-induced resettlement. The total land intake for the dam development was 6,827 ha. The total of AHs physically and economically displaced due to the dam-induced resettlement was 3,209 HHs. It is noted that the total of people affected were not provided in the available documents. Based on the number of affected HHs, it is concluded that the dam-induced resettlement would have been defined as Category A for the purpose of SR2. It is noted in the 2008 report that AHs relocated to La Da Commune (Ham Thuan Bac District, Binh Thuan Province) and to Loc Nam, Bao Lam, and Hoa Bac Communes (Di Linh District, Lam Dong Province).

- **National legislation applicable to the dam-induced resettlement:**

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<sup>4</sup> La Da, La Ngau and Loc Nam communes

Based on the EIA, there were several national requirements on land acquisition and resettlement. Based on the local EIA, the key national legislation documents applicable to the dam-induced resettlement were: (i) Land Law 1993; (ii) Decree 90-CP on compensation for land recovery by the state for national defence, security, benefits, and public interest; (ii) Decree 89-CP on land fees; and (iii) Decree 87 on land prices. It should be noted that these legislative documents were out of dated in 2013. The review of these documents shows that in the case of physical displacement, HHs were eligible to receive compensation for land and associated assets. In addition, displaced HHs were entitled to receive support due to physical displacement, such as transportation for relocation, job allowances, allowance for building houses, and allowance for new settlement. Additionally, those who migrated to the area as part of the “1961 Plan on developing new economic areas” would further receive allowance for migration. It is noted within the past legislation on physical displacement that displaced HHs would receive cash compensation and assistance payments and would self-relocate. There would be no resettlement sites established for displaced HHs during that time. The Government would recommend host communities and accordingly would construct infrastructures and facilities in these host communities. Regarding economic displacement HHs were eligible to receive compensation for agricultural land and assets attached to the land. Further, economically-displaced HHs were entitled to receive support, such as job transition and life stabilisation.

Anecdotes from the participants during the ESDD site visit show that HHs affected due to the dam-induced resettlement received cash compensation and assistance packages and self-relocated to the areas that they wanted. Based on the Decision No. 1922/QĐ-NLĐK by Loc Nam CPC, there were 456 AHs (approximately 2,536 APs) who self-relocated to Loc Nam, Hoa Bac and Hoa Nam communes, Lam Dong district. The question of how many displaced HHs self-settled in other areas was not able to be resolved during the audit. Mott MacDonald is therefore also unable to define the total number of displaced people as Decision 1922/QĐ-NLĐK related only to people relocating to Loc Nam, Hoa Bac and Hoa Nam communes.

- ***Institutional arrangements associated with the dam-induced resettlement:***

It is noted that no local policies on dam-induced resettlement were provided. No such information can be found online. Therefore, Mott MacDonald is not able to assess the gap between local requirements and the compliance reference framework. Information relating to institutional arrangements was only provided by the Sponsor during the ESDD site visit. It is reported that DHD was not involved during the land acquisition, compensation, and support process as it had not yet been established at that time. Instead, EVN, in collaboration with the local governments, participated in this process. As reported by DHD during the ESDD site visit, DHD did not receive any documents relating to the resettlement process from EVN. It should be further noted that DHD did not have any long-term responsibilities for monitoring resettlement or responding to any resettlement-related grievances.

- ***Compensation and assistance packages for AHs and host communities:***

Based on the Decision No. 1922/QĐ-NLĐK and outcomes of interviews, HHs affected by the dam-induced resettlement received cash compensation for land and attached assets as well as monetary support payments (including allowances for relocation, production and life stabilisation, and removals). EVN provided funding to host communities (including La Da, Loc Nam, Bao Lam, and Hoa Bac communes) to build infrastructures (such as roads, electricity and drinking water systems, and irrigation system) and other facilities (including administrative offices, clinics, and schools).

- **Feedback relating to the development of hydropower plants:**

During the ESDD site visit, feedback from interviewees on the existing hydropower plant operations and socio-economy were positive. Participants during the interviews with local authorities articulated that the agricultural activities in the downstream has been significantly benefited because the dams not only help control flood, but also store water for the dry season. Participants further stated that due to the development of the dams, irrigation systems for agriculture have been improved. Participants during interviews with local authorities articulated that the socio-economy of affected communes have been improved due to better irrigation and infrastructure system. Local government officials also expressed that DHD has been providing some community development activities and supports to affected communes (such as Da Mi and Loc Nam communes). Such activities, for example, included charities, funding for renovating schools and commune roads, as well as other community activities. When being asked if there were any grievance/complaints regarding the operation of the dams, local governments stated that no grievances were raised at the time of site visit.

- **Cumulative resettlement-related impacts<sup>5</sup>:**

During the ESDD site visit, a preliminary assessment on cumulative resettlement-related impacts was carried out. Outcomes of the interviews show that it is very likely that HHs affected due to the floating solar project will be different to those affected due to the dam-induced resettlement. AHs participating during the interviews stated that their family members were not affected due to the dam-induced resettlement. However, since only 13 of out of 47 affected HHs were interviewed during the ESDD site visit, Mott MacDonald cannot confirm that the other 34 HHs affected due to the Project's TL land acquisition are also different from those affected due to the dam development. Therefore, the assessment of cumulative resettlement-related impacts should be carried out during the socio-economic baseline survey and impact assessment. In cases where HHs are identified as being affected by the historical dam land acquisition in addition to the proposed Project-induced resettlement, the Sponsor is recommended to assess cumulative livelihood impacts on these HHs and determine if there are any specific vulnerabilities or impacts that may need to be addressed through differentiated livelihood restoration measures. This recommendation is incorporated into the CAP provided within the Section 4 of the ESDD.

### **3.4 Community health, safety, and security**

It is noted that DHD does not have a dedicated Community Health and Safety Plan for the existing dams and the proposed Project. For community health, safety, and security risks relating to the existing dam facilities, the visits showed that associated infrastructure does not pose a safety risk to the surrounding population. It is also noted that the hydropower plants are situated in sparsely-populated locations. The only safety risk seems to be imposed on households living close to the four substations of the two power plants. It is noted during the meeting with the Sponsor that trainings on electricity safety have been conducted annually in affected communities. This information was confirmed during the meetings with local authorities. The review of the Law on Electricity shows that electricity-related project owners are required to carry out electricity safety trainings for affected communities.

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<sup>5</sup> Cumulative impacts referred in this document are the synergistic impacts of pre-project and project-related impacts.

### 3.5 Corporate social responsibility

The review of documents shows that DHD has established a Corporate Social Responsibility policy for potentially-affected and surrounding communities. The Corporate Social Responsibility policy states that the Company establishes an annual budget for undertaking CSR activities with the aim of strengthening a good relationship with local communities. The policy further indicates that members of potentially affected communities are given priority for participating in the Company's Corporate Social Responsibility activities.

Interviews with local authorities in affected communes (including La Ngau, Da Mi, and Loc Nam communes) indicate that DHD has implemented several social and community development programs in the recent past. DHD has provided funding for renovating commune roads and schools, scholarships for students, as well as cash and in-kind assistance for poor and disadvantaged households. It should be noted that DHD does not have a register in which all Corporate Social Responsibility and community engagement activities can be logged and it does not have any reporting mechanism to evaluate and disclose the outcomes of these activities. Therefore, the information associated with Corporate Social Responsibility programs is provided based on the feedback from stakeholders engaged during the ESDD process only. Mott MacDonald is not able to assess the frequency and the outcomes of these activities.

### 3.6 External stakeholder engagement

No community grievance redress mechanism has been developed for the existing dams in order to address community concerns associated with the Sponsor's facilities. As learnt from the interviews with the company staff and local authorities, the Sponsor's staff have been conducting external stakeholder engagements, as required. However, this method has a spontaneous and reactive character and is implemented only when community members raise concerns. DHD does not have a policy or procedure for engaging with neighbouring communities and other stakeholders, nor are there formalised grievance mechanism procedures in place for the stakeholders.



## 4 Summary of findings and recommendations

### Environmental compliance audit

Overall, the outcomes of the environmental compliance audit do not indicate that there were major outstanding compliance issues associated with the development of the Ham Thuan-Da Mi hydropower project, which could significantly affect the implementation of the floating solar PV project. However, further improvements need to be made on the following aspects:

- **Environmental assessment and management**  
The Sponsor needs to develop an environmental and social management system (ESMS) that would streamline DHD's environmental compliance monitoring and reporting activities. The ESMS will be compliant with the Vietnamese regulations and the compliance reference framework specified in section 1.1 of this ESCA. In addition, DHD must ensure and demonstrate that it has sufficient resources to implement the ESMS including management of its contractor's compliance. Environmental compliance gaps noted from the hydropower operations (eg waste management) will be addressed as part of the specific environmental and social management plans (ESMPs) to be developed by DHD for the floating solar PV project.
- **Health and safety**  
It is considered good practice for the Sponsor to report the status of performance of its existing and future assets, in relation to occupational and community health and safety. This should be done at least annually, using commonly measured health and safety indicators (eg total safe man-hours worked, lost time injury). A community health and safety plan needs to be developed as part of the ESMS for the floating solar PV project. This should include measures to address unanticipated health and safety impacts on fishing communities, existed as an effect of hydropower dam/reservoir construction.
- **Biodiversity**  
No biodiversity monitoring has been undertaken since the Ham Thuan and Da Mi reservoirs were constructed to quantify net biodiversity loss/gain due to the permanent inundation of about 31.2 square kilometres of land. Further, potential impacts of non-endemic and invasive species introduction due to commercial fishing after the man-made lakes were formed, has not been assessed. This historical background should be considered as part of the baseline ecological survey and assessment recommended to be undertaken as part of the floating solar PV project.

### Social compliance audit

The social compliance audit findings on the Sponsor's existing facilities warrant specific actions from the Sponsor as follows:

- **Human resource management and gender:**  
Human resource policy and management (such as labour contracts, working conditions, discrimination, and trade union membership) is assessed to be consistent with the national legislation and sufficient to the ADB applicable standards. A procedure on an employee grievance redress mechanism has been developed. However, there is no employee grievance register available for tracking. Regarding gender, DHD's HR policy ensures equal



rights for men and women and no differentiation on gender basis is provided. The percentage of female working in the DHD is 10% of total workforce and female representative is higher within the administrative functions.

The Sponsor is to develop strategies within its existing HR policy to increase female participation within the DHD workforce.

- Land acquisition and involuntary resettlement:

Regarding the dam-induced resettlement undertaken during between 1995 and 2001, in the absence of primary and secondary data on this implementation, a detailed assessment on the process (ie number of people physically displaced, entitlements, and resettlement outcomes) and on the compliance with the ADB SPS SR2 and SR3 requirements cannot be provided. However, initial audit findings show that the resettlement would have been defined as Category A based on the number of households covered in a Decision No. 1922/QD-NLKD relating only people relocating to three communes (i.e. the number of AHs moved to this host communities was 456 AHs, equivalent to 2,536 APs). No grievance associated with the past dam-induced resettlement were recorded at the time of reporting. The preliminary assessment on cumulative resettlement-related impacts shows that it is very likely that HHS affected due to the floating solar project will be different to those affected due to the dam-induced resettlement. However, since only 13 of out of 47 HHS were interviewed during the ESDD site visit, a detailed assessment of cumulative resettlement-related impacts should be carried out during the socio-economic baseline survey and impact assessment.

- Corporate social responsibility policies:

DHD established a Corporate social responsibility policy for potentially-affected and surrounding communities. DHD has also has implemented several social and community development programs for them. However, there is no Corporate social responsibility CSR and stakeholder engagement register in which all Corporate social responsibility and community engagement activities can be tracked. Therefore, the frequency and outcomes of these activities cannot be assessed in greater detail.

The Sponsor is to develop a mechanism for monitoring and reporting the effectiveness of Corporate social responsibility programmes as part of the ESMS to be developed.

- External stakeholder engagement:

Neither a dedicated stakeholder engagement plan nor a community grievance redress mechanism has been developed for the existing dams as well as the proposed Project as of the time of reporting. The Sponsor's staff have been conducting external stakeholder engagements, as required. However, this method is reactive and is implemented only when community members raise concerns.

The Sponsor is to develop a stakeholder engagement plan and grievance redress mechanism as part of the ESMS to be developed for the floating solar PV project.

It should be noted that the recommendations provided in the ESCA are to be incorporated as part of the Sponsor's CAP in Section 4 of ESDD report.

