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**ABBREVIATED RESETTLEMENT PLAN (ARAP)
FOR SOLAR INSTALLATIONS AT
DEH HALKANI AND DEH BUND MURAD (120 MW),
AND DEH MITHA GHAR (150 MW)**



**EMC Pakistan
Private Limited**



**SINDH SOLAR
ENERGY PROJECT**

	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
	Doc. No.: SSEP/ARAP/ 01	Rev.: 00	Revision Record	

Revision Record

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0	ARAP (Draft) submitted by M/s. EMC Pakistan Pvt. Ltd.	Muhammad Haseeb Raja Nizakat Ali	Syed Omar Arif	Muhammad Ali Khawaja (SSS_PMU), Dr. Arshad Hussain (ES-PMU), Rais Gul (ESDO-PMU)	Qazi Mehfooz PD-PIU	19-07-2024
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Glossary

Compensation	Payment in cash or in kind of the replacement cost of the acquired assets to be acquired or affected by a project.
Cut-off-date	The date after which people will not be considered eligible for compensation i.e., they are not included in the list of project affected persons as defined by the census. The cut-off date is the date on which the census for all land and non-land related entitlements is initiated. The cut-off-date is normally established by the borrower under government procedure that establishes the eligibility for the compensation and resettlement assistance of the project affected persons. This is also the date for announcement of Section 4 notification under the LA Act of 1894 under which any person entering the project area after the cut-off date is not eligible to receive the agreed upon entitlements. The Bank accepts the date of the baseline survey as the cutoff date for eligibility.
Detailed Measurement Survey	Detailed inventory of losses that is completed after detailed design and marking of project boundaries on the ground.
Economic Displacement	A loss of productive assets or usage rights or livelihood capacities caused by the project.
Eligibility	The criteria for qualification to receive benefits under a resettlement program.
Encroachers/Squatters	People who do not have legal title and have trespassed onto private/community land to which they are not authorized. If such people arrived before the entitlements cut-off date, they are eligible for compensation for any structures, crops, or land improvements that they will lose.
Entitlement	Range of measures comprising compensation, income restoration, transfer assistance, income substitution, and relocation, which are due to displaced persons, depending on the nature of their losses, to restore their economic and social base.
Income Restoration	Measures required to ensure that PAPs have the resources to at least restore, if not improve, their livelihoods.
Involuntary Resettlement	Land and/or asset loss which results in a reduction of livelihood level. These losses have to be compensated so that no person is worse off than he/she was before the loss of land and/or assets.
Land Acquisition	The process whereby a person is compelled by a government agency to alienate all or part of the land a person owns or possesses to the ownership and possession of the government agency for public purpose in return for compensation.
Crop Owners	Used to define persons or parties who have encroached land and are using it for agricultural purposes, where they also



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Inventory of losses	<p>employ people to work on the land and allow them to live on the land also by building structures (albeit entirely illegally). Unlike landowners or landlords, however, these persons or parties, however, have no legal claim or title to the land.</p> <p>The inventory of losses list or record that documents the extent and nature of losses incurred. It typically includes information such as the types of losses either financial or related to material, etc. This inventory is very important for assessing damage, determining compensation or recovery efforts, and for insurance or regulatory purposes.</p>
Livelihood Restoration	<p>Specific activities intended at supporting displaced peoples" efforts to restore their livelihoods to pre-project levels. Livelihood restoration is distinguished from compensation. Livelihood restoration measures typically include a combination of cash or other allowances and support activities such as training, agricultural assistance, or business enhancement. Livelihood restoration is often referred to as economic rehabilitation.</p>
Market Value	<p>It is broadly defined as the price which a willing vendor would reasonably expect to obtain from a willing purchaser. It is the value to the seller of the property in its actual condition at the time of expropriation with all its existing advantages and with all its possibilities excluding any advantage due to the carrying out of a scheme for which the property is compulsorily acquired.</p>
Project Affected Person (PAP)	<p>Any person adversely affected by any project related change or changes in use of land, water or other natural resources, or the person/s who loses his/her/their asset or property movable or fixed, in full or in part including land, with or without displacement, after the commencement and during execution of a project</p>
Rehabilitation	<p>Compensatory measures provided under the WB Environmental and Social Safeguard Standards other than payment of the replacement cost of acquired assets aimed at re- establishing incomes, livelihoods, and social systems.</p>
Relocation	<p>The physical resettlement of PAPs from his/ her pre-project place of residence.</p>
Replacement value/ Replacement cost	<p>"Replacement cost" is the method of valuation of assets that helps determine the amount sufficient to replace lost assets and cover transaction costs. In applying this method of valuation, depreciation of structures and assets should not be taken into account. The current market value of the asset plus transaction costs (e.g., taxes, stamp duties, legal and notarization fees, registration fees, travel costs and any other such costs as may be incurred as a result of the transaction or transfer of property). This compensation should be made in goods or resources that are of equivalent or greater value and that are culturally appropriate. i) Agricultural land: the market value of land of equal productive use or potential</p>



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located in the vicinity of the affected land, plus the cost of preparation to levels similar to or better than those of the affected land, and transaction costs such as registration and transfer taxes. ii) Residential land: the market value of land of equivalent area and use, with similar or improved infrastructure and services preferably located in the vicinity of the affected land, plus transaction costs such as registration and transfer taxes. iii) Houses and other structures: the cost of purchasing or building a new structure, with an area and quality similar to or better than those of the affected structure, or of repairing a partially affected structure, including labor and contractors' fees and transaction costs such as registration and transfer taxes.

Resettlement Action Plan	The time-bound action plan with budget setting out resettlement strategy, objectives, entitlements, actions, responsibilities and monitoring & evaluation. Resettlement Allowance Cash paid to cover resettlement related expenses other than losses of immovable assets. An allowance is distinguished from compensation, which reimburses the loss of an immovable asset.
Resettlement Compensation	Payment in cash or in kind for an asset or resource acquired or affected by the project
Resettlement Entitlements	Resettlement entitlements with respect to a particular eligibility category are the sum total of compensation and other forms of assistance provided to displaced persons in the respective eligibility category.
Substantial/Significant Resettlement Impacts	PAPs being physically displaced from housing, or losing more than 10 percent of their productive assets (income generating).
Severe Impact	PAPs losing more than 20% their total agricultural land are generally considered severely affected (where this allowance is restricted to those with legal title and claim to the land)
Vulnerable Household	Households that might suffer disproportionately or face the risk of being marginalized from the effects of resettlement and include: (i) female headed households; (ii) disabled- headed households; (iii) child-headed households; iv) households falling under the generally accepted indicator for poverty; (v) elderly-headed households with no means of support and landlessness; (vi) households without security of tenure; and (vii) ethnic minorities and indigenous people. Other groups may also qualify as "vulnerable" in the light of disadvantaged circumstances.



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Executive Summary

The Government of Sindh, through the Energy Department, is executing the Sindh Solar Energy Project (SSEP) which aims to increase deployment of renewable energy (RE) in Sindh Province spanning at three market segments including; utility-scale, rooftop and off-grid solar respectively. Under Component-I of this project, two solar power parks with different capacities has been proposed for development namely; 120 MW solar park at Deh Halkani and Deh Band Murad in District West and 150 MW solar park at Deh Mitha Ghar, District Malir, Karachi.

This Abbreviated Resettlement Plan (ARAP) is prepared to cover the resettlement related aspects pertaining to the two sub-projects highlighted above, ensuring compliance with the World Bank's (WBs) Operational Policies (OPs).

ES-1 Background of the Project

The Sindh Solar Energy Project aims to support the deployment of solar power in Sindh, spanning at three market segments: utility-scale, distributed generation, and at the household level, with the overall objective of the project being to increase solar power generation and access to electricity in the Sindh province. Public funding shall be used to leverage private sector investment and/ or expertise in the three segments, with an emphasis on long term sustainability, developing domestic solar PV experience, and the emergence of self-sustaining markets, where the project is designed to help steer Pakistan towards a lower carbon path to development. Further details on the three components under the project are provided below:

Component 1 – Utility Scale Solar: Component 1 will finance a series of solar parks to leverage private sector development of solar PV through the use of competitive bidding under a “solar park” model whereby the sites are identified by the Sindh Energy Department (SED) and the solar power projects are constructed and operated by private sector developers.

Component 2 – Distributed Solar: Component 2 will finance 20 MW of distributed solar PV on the rooftops and other available space on and around public sector buildings in Sindh. The buildings for installation will be identified by the Sindh Energy Department and would be developed by private sector solar developers.

Component 3 – Solar Home Systems: Component 3 encompasses provision of solar home systems to 200,000 households with no or low access to electricity through the use of partial grants.

Component 4 – Capacity Building & Technical Assistance: Component 4 consists of a range of capacity building and technical assistance activities to support the design and implementation of the project and will include activities like training for the Energy Department, participation in World Bank capacity building events and liaison with relevant experts, amongst many other activities.

ES-2 Identification of Social Impacts

Deh Halkani and Deh Bund Murad: The land at this site measures over 612 acres, where all land for the site is owned by the Government of Sindh. Nevertheless, based on a detailed census survey carried out at the sites of Deh Halkani and Deh Bund Murad, Tehsil Manghopir and District West Karachi was started on 25 June 2024. It was ascertained that there are 04 households in Deh Halkani and Deh Bund Murad, along with 16 pacca structures (05 fully built residential structures, 08 partially built residential structures, 1 commercial structure, and 02 religious structures). Out of the 16 structures identified, only 04 structures were claimed by



the 04 households in the area, where the remaining structures were not claimed by anyone. Essentially, all of these persons are encroachers on the government land, where the structures are also illegal structures, and as such will be compensated in line with provisions for squatters as defined in the Entitlement Matrix as per World Bank OP 4.12 (In total, there are over 38,543 sq feet of pacca structures, and 527.5 sq feet of katcha structures that would need to be dealt with in line with World Bank Operational Policy OP 4.12 Involuntary Resettlement).

Deh Mitha Ghar: The land at the Deh Mitha Ghar site spans a total area of 600 acres, where except for 18 acres of private land in the form of 03 separate survey numbers, the rest is all owned by the Government of Sindh. For the private land, it was finalized that no land acquisition will take place and these parcels would be excluded from site development with neither affecting their accessibility nor having interferences to the government land. The detailed census survey at site of Deh Mithaghar, Tehsil Shah Mureed, District Malir, Karachi was started on 27 June 2024. It was identified that there were 23 households (17 agricultural workers, and 06 agricultural land encroachers) alongside 17 structures, and 150 acres of agricultural land. The 17 structures identified were thatched/wooden and belonged to the agricultural workers who practice agriculture in the area. All structures and households identified at the site were essentially encroaching/ squatting on public land, where these would need to be compensated in line with the provisions for squatters as defined in the Entitlement Matrix as per World Bank OP 4.12 (In total, alongside the 150 acres of agricultural land and over 11,542 sq feet of wooden/thatched structures would have to be dealt with in line with World Bank Operational Policy OP 4.12).

Maps of both sites with the locations of affected households and assets are provided below:

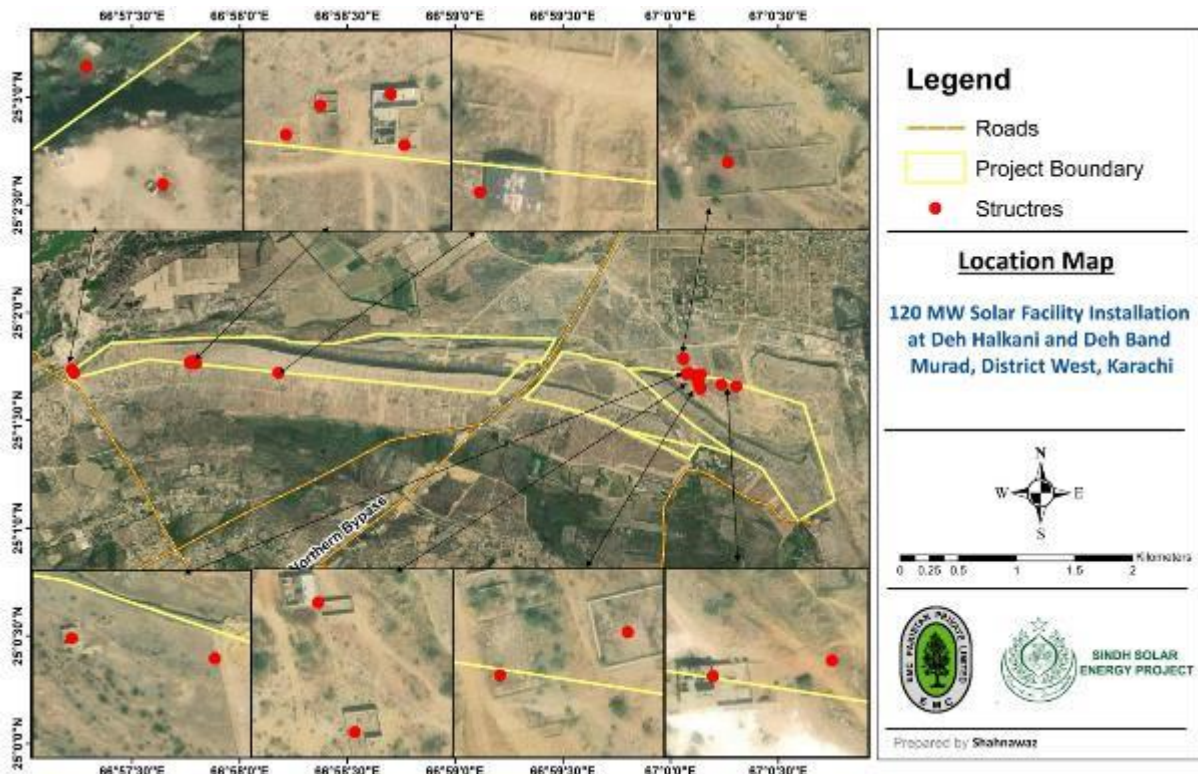


Figure 1 - Locations of Affected Households & Structures at Deh Halkani & Deh Bund Murad Site

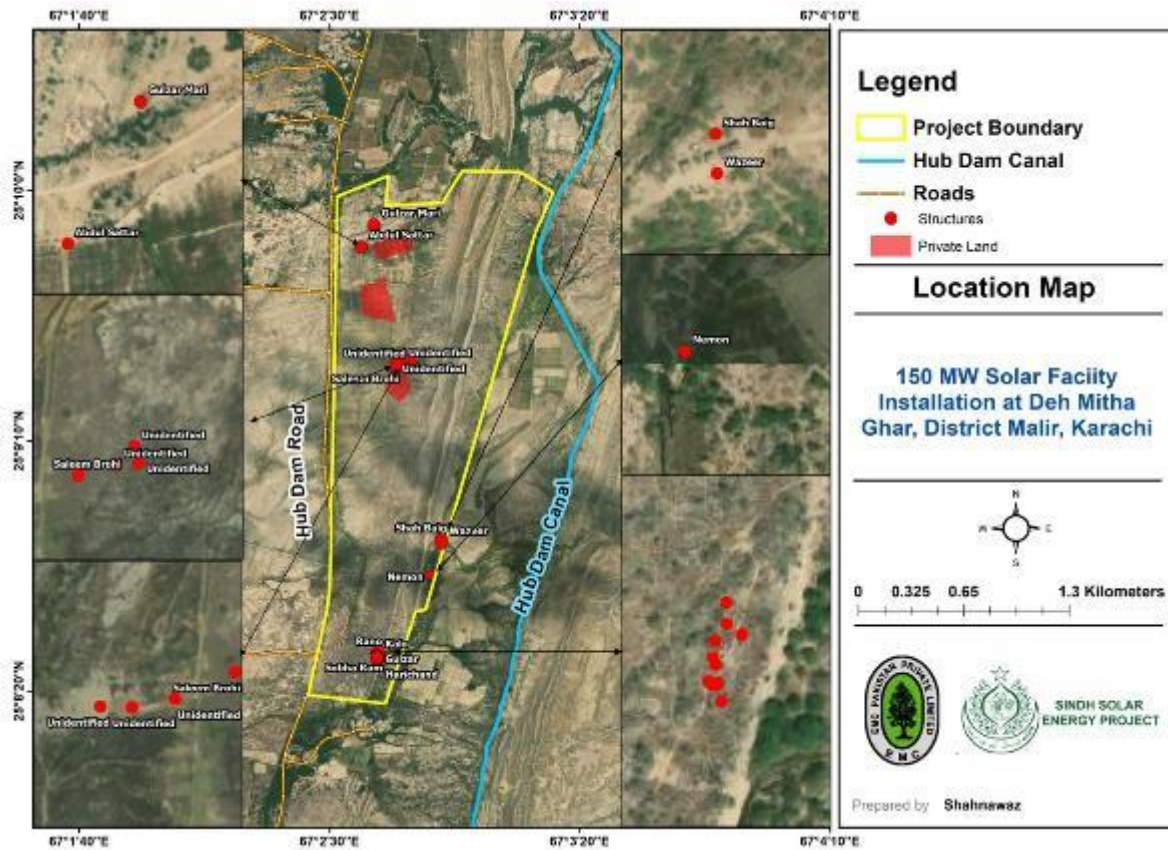


Figure ES 2 - Locations of Affected Households & Assets at Deh Mitha Ghar

ES-3 Socio-Economic Profile



After a review of the subproject information, detailed social surveys were conducted by the team to collect primary information for the subproject area. The social survey focused on specific aspects of the subproject area including health and education, infrastructure and utilities, gender, sewerage and solid waste management and the survey of land use. Findings from the baseline were used to delineate the existing conditions at the sub-project site, along with establishing benchmarks against which the sub-projects impacts could be measured and assessed.

ES-4 Public Consultation & Information Disclosure

The consultations were conducted with the PAPs, general public and other Interested Parties. The discussions were mainly focused on the resettlement requirements, valuation and compensation mechanism, timely completion of civil works, local movement will not be hindered during construction work, and provision of adequate time for relocation. The information related to the Project, its possible impacts, mitigation measures, entitlements including the grievance redress mechanism were shared with the participants during these consultation meetings. The consultations were conducted from June to July 2024, in the project area while preparing this ARAP. This ARAP, following approval, will be translated and distributed among the PAPs and disclosed on SSEP and SED websites.

ES-5 Grievance Redress Mechanism

The Grievance Redress Mechanism (GRM) proposed for project implementation will cater to all subproject affected persons and beneficiaries. The PMU office will serve as the secretariat

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for the Grievance Redress Committee (GRC) that will be responsible for providing oversight on the entire GRM process at a strategic level and monitoring of complaints management. The GRM will be consistent with the requirements of the World Bank safeguard policies as well as local laws including the Protection against Women Harassment at Workplace Act. The GRM will also ensure mitigation of community concerns, risk management, protection against women harassment at workplace, sexual exploitation, abuse.

Information about the GRM (how to use, time frame for resolution of complaints etc.) will be disseminated widely in sub-project area. Regular contact with complainants will be maintained throughout the process and their satisfaction with the system will be assessed in order to ensure that the feedback system is not closed. A record of the grievance redress system will be maintained and analyzed regularly to identify projects weaknesses and bottlenecks (if any) and user satisfaction with the GRM.

ES-6 Legal & Policy Framework

The main local legislations pertaining to land acquisition and resettlement were reviewed and their applicability and requirements from the project highlighted, where laws included the Land Acquisition Act (1894), the Land Acquisition (Sindh Amendment) Act (2009), the Karachi Development Authority Order (1957), the Sindh Katchi Abadis Act (1987) and Sindh Resettlement and Rehabilitation Policy 2023.

Alongside this the World Bank's pertinent policies, especially OP 4.12 (Involuntary Resettlement) was studied to understand the requirements associated with the projects, where a comparison of the local legislations alongside the policies was also carried out to highlight any special provisions required for specific groups of people.

ES-7 Compensation, Income Restoration, & Relocation

The involuntary resettlement requirements apply to full or partial, permanent or temporary physical displacement (relocation, loss of residential land, or loss of shelter) and economic displacement (loss of land, assets, access to assets, income sources, or means of livelihoods) resulting from involuntary acquisition of land. The entitlement matrix presented in this section, captures all PAPs, the characteristics of the impact, and the types of compensation / reinstatement due to them.

All PAPs will be entitled to a combination of compensation measures and livelihood assistance and vulnerable allowance, depending on the scope of the impact, including social and economic vulnerability of the affected persons. In this context, persons who are positively affected and are not subject to adverse impacts described above are not considered PAPs. The Entitlement Matrix (EM) for the compensation is provided in Chapter 7 of this ARAP.

The compensation will be paid to affectees via cross cheque in the name of the affected PAP, where the PMU will ensure and certify to the World Bank that all payments have been made to the affectees prior to contractor mobilization and initiation of civil works.

ES-8 Resettlement Budget

Based upon the estimates under various heads discussed in subsections above, the total resettlement cost of the proposed project has been estimated to be **34,413,681 PKR** for Deh Halkani & Deh Bund Murad, and **119,118,728 PKR** for Deh Mitha Ghar. In total, the resettlement cost for the two sites comes down to **153,532,409 PKR**. The resettlement cost is the IDA funding.



ES-9 Institutional Arrangements

The resettlement planning, preparation, implementation and monitoring of project as well as compensation/ rehabilitation program described in this ARAP involves a number of institutional arrangement and separate processes to be carried out by different agencies. SED is the owner of the proposed project, where through SSEP, it will be responsible to provide the clear land for development of the project. Whereas, PMU of SSEP will also be responsible for the implementation of the ARAP. The overall responsibility for implementing, supervising this resettlement lies with the Executing Agency, SED, through PMU of SSEP, where the PMU will also engage a Supervision Consultant that will also supervise and monitor ARAP implementation.

ES-10 Implementation Schedule

A potential implementation schedule including the various tasks and sub-tasks under the assignment has been prepared and is delineated below:

Table ES1 – Implementation Schedule (Tentative)

Sr. No.	Action	Responsibility	Proposed Date of Task Completion
1	Approval of ARAP Document	PMU and World Bank	End of August 2024
2	Urdu Translation of ARAP Summary	SSEP PMU	Within one week of approval
3	Notification of GRC (Site Level)	SSEP PMU	Within three weeks of approval
4	Notification of PMU-GRC	SSEP PMU	Already done
5	Notices to PAPs regarding their claims	SSEP PMU	Within five weeks of approval
6	Notices to PAPs to receive Business/ livelihood allowance	SSEP PMU	Within seven weeks of approval
7	Assistance to PAPs to open Bank accounts for receipt of cross cheques as compensation	SSEP PMU	Within nine weeks of approval
8	Payment of compensation and allowance to the PAPs	SSEP PMU	Within twelve weeks of approval
9	Submit Bi-Weekly Report by Supervision Consultant	SSEP PMU	Within twelve weeks of approval
10	WB's Approval of Compliance Report	World Bank	Within fourteen weeks of approval
11	Disclosure of ARAP Implementation	SSEP PMU	Throughout as per the sub-activities under implementation of ARAP

ES-11 Monitoring & Reporting

The monitoring and reporting mechanism for the Abbreviated Resettlement Action Plan will require internal monitoring. The ARAP will be closely monitored by the PMU and assisted by the Supervision Consultant (SC).

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1. Introduction & Project Description

The Government of Sindh (GoS) has undertaken the Sindh Solar Energy Project (SSEP) in various locations of the Sindh Province and sought World Bank (WB) funding for this purpose. The SSEP aims to increase deployment of renewable energy (RE) in Sindh Province spanning at three market segments including: utility-scale, rooftop and off-grid solar respectively.

Although focused on the Sindh Province, the project is explicitly designed to influence national policy and regulatory oversight in relation to RE by introducing and showcasing well-run RE auctions, reducing the headline cost of solar deployment, creating sustainable business models for potential replication in other provinces, building institutional and private sector capacity, and identifying opportunities for future RE deployment that deal with issues of grid integration. In the context of potential new investment in fossil fuel-fired generation capacity, and skepticism over the long-term role and integration of RE, the project is designed to help steer the Sindh province in particular and Pakistan in general, towards a lower carbon path to development, as indicated in its Nationally Determined Contribution to the global climate change agreement reached at the UNFCCC Conference of Parties 21 in Paris in 2015.

This Abbreviated Resettlement Action Plan (ARAP) has been prepared in accordance with the national regulatory framework and inline with the World Bank's Involuntary Resettlement Operational Policy (OP 4.12), given that involuntary resettlement impacts have been identified at the two sub-project sites in Karachi under Component 1 including; 120 MW Solar Park at Deh Halkani & Deh Bund Murad, and 150 MW Solar Park at Deh Mitha Ghar respectively.. Since the number of Affected Persons (APs) is less than 200, so the "Abbreviated Resettlement Action Plan (ARAP)" is prepared. The plan outlines the resettlement planning and implementation measures required at the two sub-project sites given the impacts that have been identified.

1.1 Background – Pakistan's Electricity Generation Trends & Capacity

The use of energy has increased significantly due to various inventions and innovations of common use made in last century. Thus, almost all human activities have become more dependent on energy, where developing nations in particular, exhibit a greater fundamental demand for reliable and affordable energy. In these countries, energy demand has been increased due to expansion in industry, modernized agriculture, increased trade and improved transportation. Pakistan is dependent on energy imports because there is lack of investment in indigenous resources of hydro, natural gas and lignite.



The country's total installed electricity capacity, as of March 2024, stands at 42,131 Mega Watt (MW); where the percentage share of hydel, nuclear, renewable, and thermal, is 25.4 %, 8.4%, 6.8%, and 59.4 %, respectively¹. According to the Economic Survey of Pakistan for 2023-2024, the share of thermal power as a dominant source of electricity supply has declined over the past few years, showing an increased reliance on indigenous sources. This is evident from the share of hydel, nuclear, and renewable being 54.1% of the total 92,091 GWh of electricity generated in the country, indicating that the sources of electricity are shifting from thermal to cleaner sources².

Nevertheless, renewable energy generation in Pakistan still falls far short of realizing its potential, despite the country's considerable resources. Given the growing electricity demand,

¹ Ghumman, M. (2024, June 12). *Installed electricity capacity stands at 42,131MW*. Breccorder. <https://www.breccorder.com/news/40308041/installed-electricity-capacity-stands-at-42131mw>

² Pakistan Economic Survey 2023-2024



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depleting domestic gas reserves, and increasing dependency on fossil imports, renewable energy generation may aid in (i) displacing fuel imports, (ii) reducing electricity price volatility, and (iii) meeting the country's climate change mitigation targets through reductions in projected Greenhouse Gases (GHG) emissions. This is supported by the World Bank's Renewable Energy Resource Mapping initiative showing considerable solar and wind power potential across Pakistan.

1.2 Sindh Solar Energy Project

The Sindh Solar Energy Project aims to support the deployment of solar power in Sindh, spanning at three market segments: utility-scale, distributed generation, and at the household level, with the overall objective of the project being to increase solar power generation and access to electricity in the Sindh province. Public funding shall be used to leverage private sector investment and/ or expertise in the three segments, with an emphasis on long term sustainability, developing domestic solar PV experience, and the emergence of self-sustaining markets, where the project is designed to help steer Pakistan towards a lower carbon path to development. Further details on the three components under the project are provided below:

Component 1 – Utility Scale Solar: Component 1 will finance a series of solar parks to leverage private sector development of solar PV through the use of competitive bidding under a “solar park” model whereby the sites are identified by the Sindh Energy Department (SED) and the solar power projects are constructed and operated by private sector developers. The sites proposed for development under this component include:

1. A 50 MW installation at Deh Manjhand, Jamshoro
2. A 120 MW installation at Deh Halkani and Deh Bund Murad, District West, Karachi
3. A 150 MW installation at Deh Mitha Ghar, District Malir, Karachi

Component 2 – Distributed Solar: Component 2 will finance 20 MW of distributed solar PV on the rooftops and other available space on and around public sector buildings in Sindh. The buildings for installation will be identified by the Sindh Energy Department and would be developed by private sector solar developers.

Component 3 – Solar Home Systems: Component 3 encompasses provision of solar home systems to 200,000 households with no or low access to electricity through the use of partial grants.

Component 4 – Capacity Building & Technical Assistance: Component 4 consists of a range of capacity building and technical assistance activities to support the design and implementation of the project and will include activities like training for the Energy Department, participation in World Bank capacity building events and liaison with relevant experts, amongst many other activities.

1.2.1 120 MW Solar Park at Deh Halkani & Deh Bund Murad

The 120 MW site for the sub-project is located in Manghopir sub-division of District West, Karachi. The 612-acre site for the solar installation comprises mostly of a ridge which is divided into two segments i.e. northern and southern segments along the Karachi Northern Bypass (M-10) administrated by National Highway Authority (NHA). Furthermore, the southern side of both segments will comprise mostly of the ridge, whereas the Northern side of the site has relatively flatter land for the installation of panels, especially on the eastern end of the sub-project site. Immediately North of the site is the Hazrat abad residential development on the eastern side, along with agricultural land and practices on the western side



While the land for this site is entirely owned by the Govt. of Sindh, there are also currently some non-title holding persons who have built structures in the boundaries of the sub-project site, where a detailed census and asset inventory survey of these persons has been carried out. In total only 2 households were identified that provided data, along with numerous abandoned/ partially built structures who were not claimed by anyone. Co-ordinates for the sub-project site are provided below in **Table 1.1**, along with a map of the sub-project site in **Figure 1.1**, and the proposed layout of the solar park in **Figure 1.2**. The allotment order for this site is attached as **Appendix-I**.

Table 1.1 - Coordinates of Deh Halkani & Deh Bund Murad Site

S. No.	Latitude	Longitude
1	25° 1.131'N,	67° 0.737'E
2	25° 1.037'N	67° 0.595'E
3	25° 1.570'N	67° 0.618'E
4	25° 1.279'N	67° 0.422'E
5	25° 1.812'N	66° 59.509'E
6	25° 1.604'N	66° 59.331'E
7	25° 1.877'N	66° 59.456'E
8	25° 1.636'N	66° 59.177'E
9	25° 1.842'N	66° 57.400'E
10	25° 1.717'N	66° 57.202'E
11	25° 1.694'N	66° 57.216'E
12	25° 1.785'N	66° 57.577'E

1.2.2 150 MW Solar Park at Deh Mitha Ghar

The 150 MW site for the sub-project is located in Shah Mureed sub-division of District Malir, Karachi. The 600-acre site for the solar installation comprises mostly of flat land along with some agricultural fields that the site is used for. Alongside these fields, the site boasts vegetation in the form of shrubs and trees following spells of rain, however, is otherwise barren in periods without any rain. The site is accessible by the Hub Dam road, off of the Northern Bypass, where the road is currently a single track, unpaved road.

While the site is owned by the Government of Sindh, survey from the Board of Revenue has shown that there are 03 pockets of private land within the boundaries of the sub-project site totaling 18 acres. These portions of land will not be acquired under the sub-project, where the sub-project will be developed such that these portions of land do not come under the solar installations.

Furthermore, there are also non-titleholders at this sub-project site (numbers and details defined in the sections ahead) practicing agriculture and residing within the site boundaries in thatched structures. Co-ordinates for the sub-project site are provided below in **Table 1.2**, a map of the sub-project site in **Figure 1.3**, and the proposed layout of the solar park in **Figure 1.4**. The allotment order for this site is attached as **Appendix-II**.

Table 1.2 - Coordinates of Deh Mitha Ghar Site

S. No.	Latitude	Longitude
1	25° 8.295'N	67° 2.685'E
2	25° 8.323'N	67° 2.429'E
3	25° 8.598'N	67° 2.786'E
4	25° 8.605'N	67° 2.819'E
5	25° 9.992'N	67° 3.242'E
6	25° 10.060'N	67° 3.134'E
7	25° 10.061'N	67° 2.941'E
8	25° 9.958'N	67° 2.876'E

 SINDH SOLAR ENERGY PROJECT	Abbreviated Resettlement Plan (ARAP)			 ENERGY DEPARTMENT <small>UNLEASH THE POWER OF ENERGY</small>
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9	25° 9.947'N	67° 2.686'E
10	25° 10.046'N	67° 2.693'E
11	25° 9.978'N	67° 2.527'E



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UNLEASH THE POWER OF ENERGY



Legend

-  Project Boundary
-  M-10
-  Hub Dam Road

Location Map

ESMP

Installation & Commissioning of Sindh Solar Power Plant in Deh Halkani and Deh Band Murad, District West, Karachi



SINDH SOLAR ENERGY PROJECT

Prepared by Shahnawaz

Figure 1.1 - Location Map of 120 MW Solar Park





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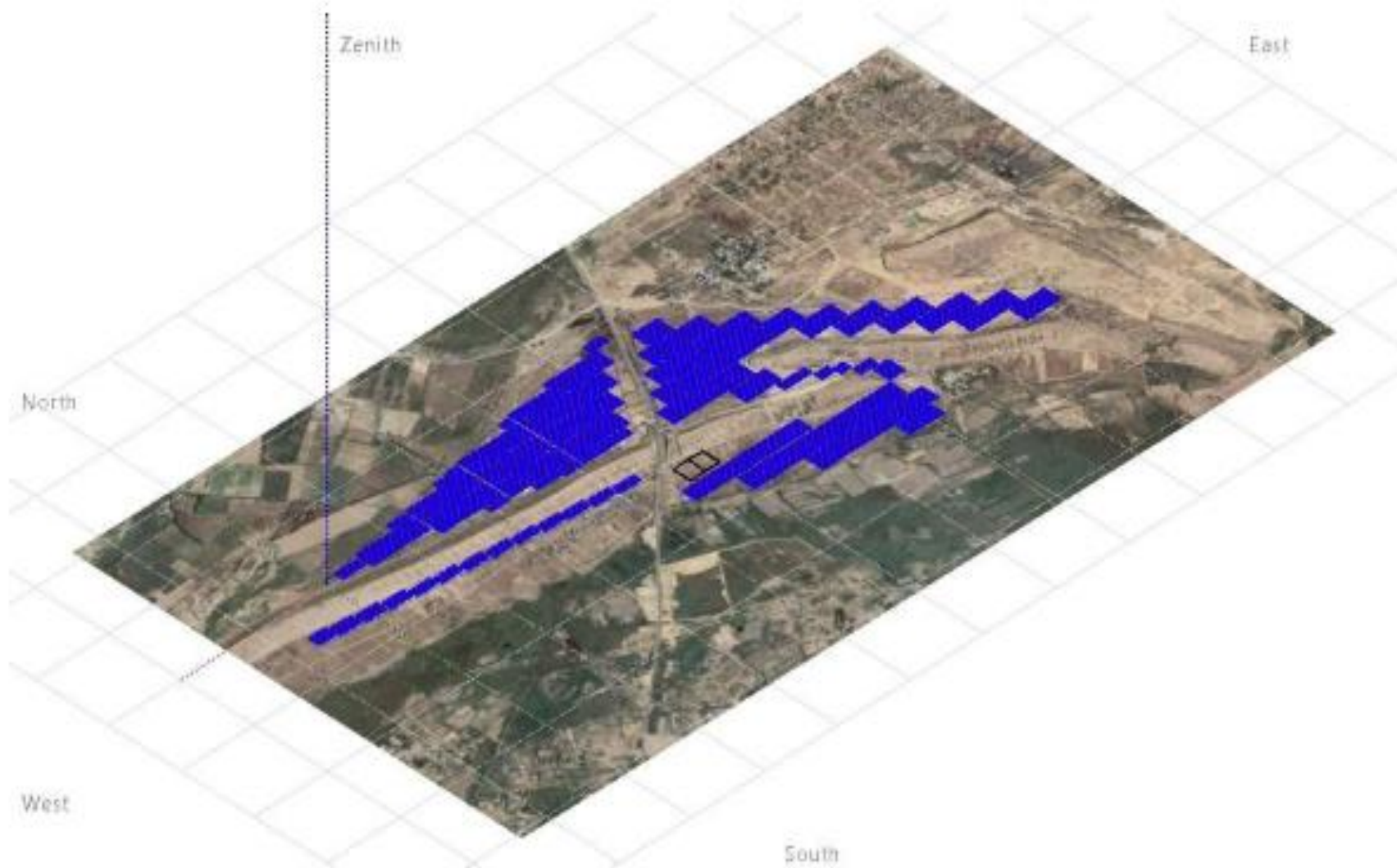


Figure 1.2 - Proposed Plant Layout for 120 MW Solar Park



SINDH SOLAR ENERGY PROJECT

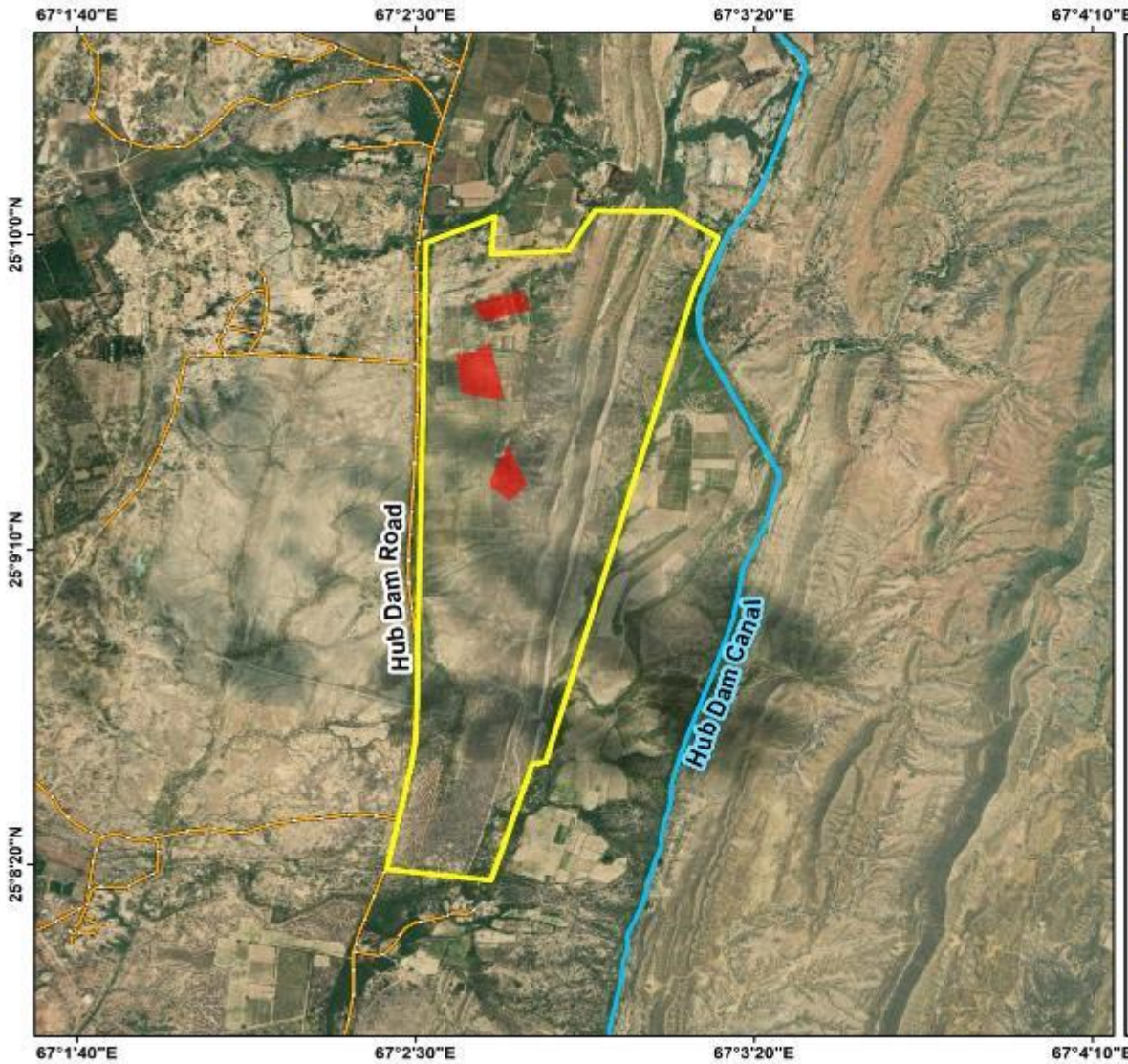
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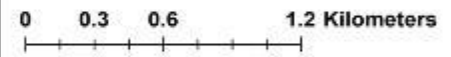
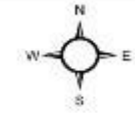


Legend

- Project Boundary
- Hub Dam Canal
- Roads
- Private land

Location Map

150 MW Solar Facility Installation at Deh Mitha Ghar, District Malir, Karachi



SINDH SOLAR ENERGY PROJECT

Prepared by **Shahnawaz**

Figure 1.3 - Location Map of 150 MW Solar Park





SINDH SOLAR ENERGY PROJECT

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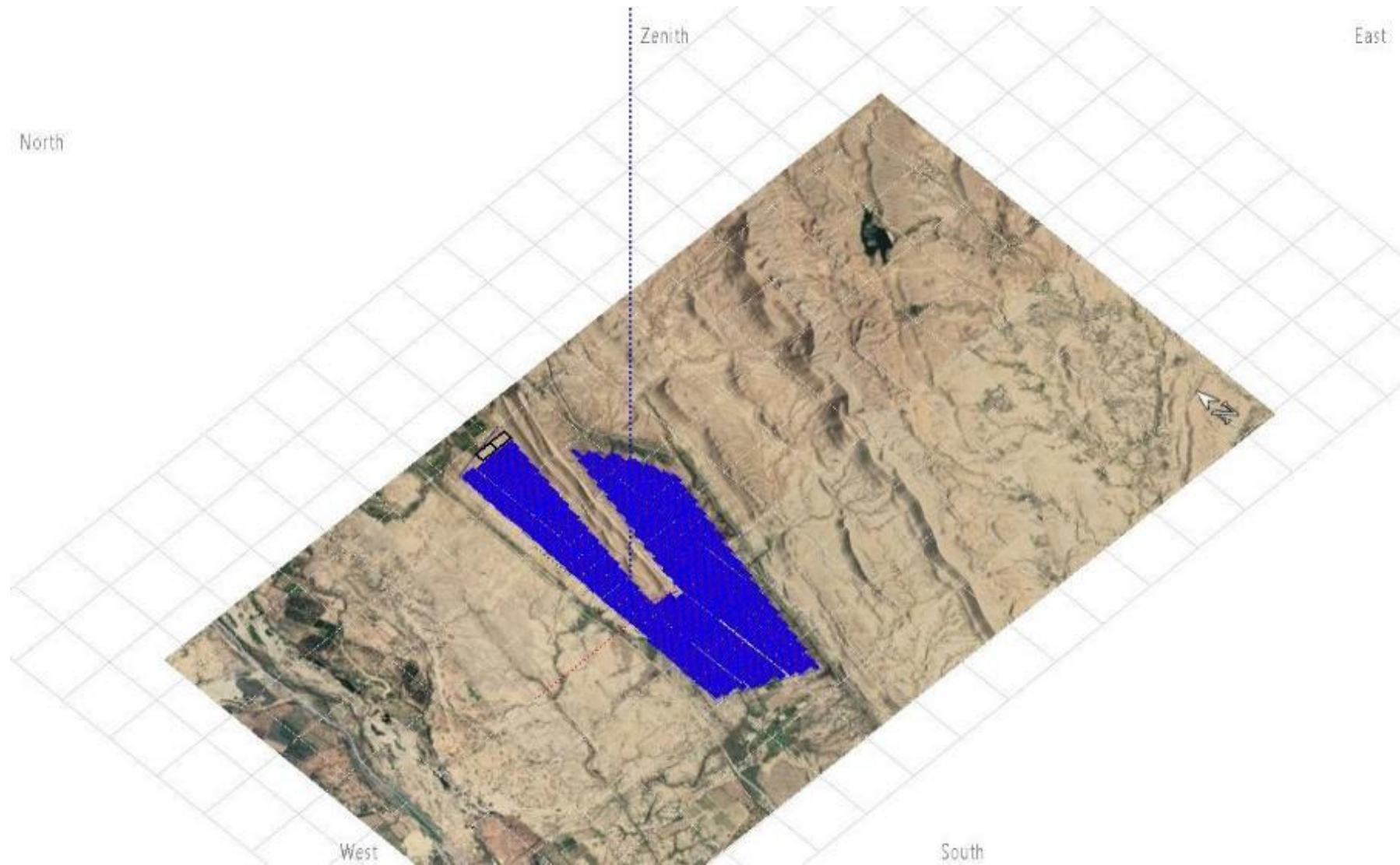


Figure 1.4 - Proposed Plant Layout for 150 MW Solar Park



1.3 Project Technical Details

The criterion for selection of PV panels and Inverters is based on the various simulations performed in the feasibility study. On the basis of better energy yield and performance ratio, Bifacial PV modules from Trina Solar and inverter from Sungrow were selected for the preliminary design of the Plant.

Central inverters are preferred compared to String inverters based on below mentioned advantages; High efficiency: Central inverters are very efficient, with conversion efficiency ranging from 95% to 98%. This means they can convert much of the direct current produced by the solar panels into alternating current electricity fed into the grid. Cost-effective: Central inverters are cost-effective, especially in large solar power plants. Their cost per watt is lower than micro-inverters or string inverters. Easy maintenance: Central inverters are easy to maintain and have fewer parts to replace. They also have a longer lifespan, so they must be replaced less often. The major technical characteristics of the PV Module are provided below in **Table 1.3**, and the major technical characteristics of the inverter are provided below in **Table 1.4**.

Table 1.3 - Major Technical Characteristics of PV Module

Parameters	Description
Module Model	TSM-650DE21
Manufacturer	Trina Solar
Nominal Power (W)	650
Efficiency (%)	20.96
Power Tolerance (%)	± 1.5
Cell Type	Si-Mono Bifacial
Open Circuit Voltage (V)	45.5
Short Circuit Current (A)	18.35
MPP Voltage (V)	37.5
MPP Current (A)	17.36
Power Coefficient of Temperature (%/C)	-0.34
Nominal Operating Cell Temperature (NOCT)	25
Height x Width x Thickness (mm)	2384 x 1303 x 35

Source: SSEP Feasibility Study Report (120 MW Solar PV Power Project) – Tractebel Engineering GmbH & Renewable Resources (Pvt) Limited.

Table 1.4 – Major Technical Characteristics of Inverter

Parameters	Description
Inverter Model	SG2500HV
Manufacturer	Sungrow
Nominal AC Capacity	2500 KW
Maximum DC Input Power	3500 KWp
MPP Voltage Range	800 V – 1300 V
Maximum DC Current	3508 A
Nominal AC Current	2624 A
Maximum Efficiency	0.990
European Efficiency	0.987
Operating Temperature Range	-30°C to ± 50°C

Source: SSEP Feasibility Study Report (120 MW Solar PV Power Project) – Tractebel Engineering GmbH & Renewable Resources (Pvt) Limited.

In line with these technical characteristics, the configuration between the PV modules and the inverter, as proposed in the feasibility study is given below in **Table 1.5**:

Table 1.5 - Plant Configuration (PV Module & Inverter)

Parameter	Value	
	Fixed Tilt	Single Axis Tracking (N-S)
System Type		
Module Type	Simono (Bifacial) 650 Wp	
Inverter Type	SG2500HV – 2500 kw @ 25°C	
Pitch	7.5m	7.5m
Tilt	22 degrees	Variable
Installed Capacity (DC)	200 MWp	120 MWp
Total Number of Modules	307,692	184,643
Modules per Inverter	4,274	4,196
Number of Modules in series	28	29
DC/AC ratio	1.11	1.09
Number of inverters	72	44
Nominal Power of One Inverter (kw)	2500	
Total AC Power (kW)	180,000	110,000



Source: SSEP Feasibility Study Report (120 MW Solar PV Power Project) – Tractebel Engineering GmbH & Renewable Resources (Pvt) Limited.

The key components of the solar plant will be PV panels, mounting structure, cabling, inverters, step up transformers and switchgear. PV panels convert the solar radiation into DC electrical energy which then will be converted into AC energy by inverters. The Project connection point is looping IN-OUT of 220 kV Single Circuit between 220 kV Baldia Substation and 220 kV Surjani Substation of KE network. The electrical network within the vicinity of the site of the plant comprises of LV (22/33 kV) and HV (220 kV) lines. The electricity generated by the Project will be directly fed to 220 kV Baldia Grid and 220 kV Surjani Grid station via loop in – out arrangement as pointed out in Grid Interconnection study or as advised by the KE (Power Purchaser), where a diagram for this is provided below:

Subsequently, a summary of the plant equipment and data is provided below in Table 1.6:

Table 1.6 - Plant Data

General		
1	Expected Commercial Operation Date (COD)	March 2025
2	Location/ Coordinates of Project	Provided above
3	Information about the nearest grid station	220 kv Surjani
4	Any electrical SLDs, if any, prepared for project	NA
Generators		
5	Number of inverter units	48
6	Number of Inverter groups	6
7	Power produced by each inverter unit (MW)	2
8	Rated apparent power of each inverter unit (MVA)	2.5
9	HV level	22
10	Generation Voltage	0.4
11	Nominal DC Power of the plant (MW)	120
12	Net AC Output of the Plant (MW)	96
GSU Transformers		
13	Number of GSU Units 220/ 22 kv	2
14	Transformer Rated Power (MVA)	120
15	Transformer Impedance (R, X) in % at % Rated MVA Base	12%

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16	Number of Step-Down Transformers, 22kv/0.4kv	6
17	Step Down Transformer Rated Power, MVA	20

Source: SSEP Feasibility Study Report (120 MW Solar PV Power Project) – Tractebel Engineering GmbH & Renewable Resources (Pvt) Limited.

1.4 Efforts To Minimize Resettlement Aspects

To select the most viable demarcation of boundaries of the site, keeping in view the environmental, economic, and social considerations, the analysis of different alternatives was carried out for the selection of the most feasible site. The following measures have been adopted to minimize the land acquisition and resettlement impacts:

- Given that both sites had been allocated a set amount of land, the boundaries were altered and refined to allow for minimal impacts to existing structures, agricultural lands/ fields, and associated livelihoods. Through this, a number of adjoining villages and private lands which were in use were excluded from negative impacts from the sub-project.
- A strategic decision was made to not acquire the 18 acres of private land under three 34, 35 and 36 survey numbers in Deh Mitha Ghar and to exclude this portion from the sub-project.
- Furthermore, following the effective resettlement of persons at the current site, boundary walls will be constructed around both sites to ensure that no further encroachments take place and the project can be developed in a safe and secure environment.

1.5 Abbreviated Resettlement Action Plan (ARAP)

This document covers the resettlement planning and implementation measures proposed for the two identified sub-projects under Component 1 of SSEP in line with WBs OP 4.12, where the ARAP aims to:

- Avoid or minimize resettlement impacts of the proposed sub-projects on local communities and those affected by the project interventions.
- Undertake meaningful consultations with Project Affected Persons (PAPs) and local communities, take their concerns into account and adopt all possible design and alternate options to appropriately and adequately address their concerns.
- Provide a time bound plan for implementation without delays.
- Ensure disbursement of compensation to all PAPs before their displacement and undertake monitoring of this process and validation of compensation disbursement through an independent external monitoring consultant.

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2. Identification of Social Impacts

2.1 Background

This resettlement and livelihood loss impact assessment is conducted based on the demarcated boundaries of the sub-project sites, and the design proposed. All affected structures and assets in the sub-project areas have been assessed and the owners/ occupiers present and willing of these affected assets enumerated and interviewed to finalize the inventory of losses, determine title/ ownership and assess the socio-economic status of the Project Affected Persons (PAPs) and Affected Households (AHs).

The following type of social and resettlement aspects are associated with the both sites under Component 1 of Sindh Solar Energy Project (SSEP), for which this impact assessment has been carried out:

- Identification and compensation for PAPs falling under the sub-project areas in line with their assets present in the sub-project areas

2.2 Assessment of Impacts

This section deals with the resettlement impact assessment conducted from June to July 2024 based on the demarcated project boundaries and the design of the project. All affected land and structures based on the resettlement impacts within the highlighted boundaries were enumerated and the inventory of losses (IOL) was finalized through the detailed social impact assessment. Additionally, the owners/ occupiers of such impacted land, structures, and business places were enumerated and interviewed to assess the socio-economic status of the PAPs and AHs. Discussions with the local community/ general public were carried out during field surveys and continued during this impact assessment, census and socio-economic survey for preparing this ARAP.

Based on a detailed census survey, it was concluded that the following number of households and structures would be affected through the sub-projects:

Deh Halkani & Deh Bund Murad

1. 4 households in Deh Halkani and Deh Bund Murad (where only 2 households agreed to speak to the survey team/ were present to speak), where all households are squatting in the area.
2. Overall, there were a total of 16 pacca³ structures and further sub-structures (such as; rooms, water tanks, washrooms, verandas and boundary walls in site boundaries) that were associated with these structures, where all structures encroached on the government land.
3. There is no loss of employment as these people as they are not involved in working on the land belonging to the sub-project area and instead work as laborers nearby.
4. There are two religious structures here (one a grave and one an under-construction mosque) that would be impacted. The grave is at the edge of western boundary of the sub-project site, where its destruction can be avoided by altering the boundaries of the site towards the end.

³ Pacca structures are: RCC/Girder roof, stone walls with cement mortar, cement plastering & flooring
Semi-Pacca structures are: RCC roof, stone walls with cement mortar, without plastering & cement flooring and
Kacha structures are: CIG Sheet roofing, stone & wood walls with cement mortar, without plastering & cement flooring

5. Furthermore, there were also quite a few abandoned/ under construction structures found at the site, all built illegally in the area⁴.

A summary of the affected assets entitled to compensation and quantum of impacts in each asset category is provided below for Deh Halkani & Deh Bund Murad in **Table 2.1**:

Table 2.1 - Summary of Impacts for Deh Halkani & Deh Bund Murad

Sr. No.	Category of Affected Assets	Unit	Impact Quantum		Remarks
			Impacted Assets	Number of AHs	
Residential Structures (Partially & Fully Constructed)					
1	Rooms, water tanks, washrooms, verandas and boundary walls in site boundaries	Number	14	04	Following payment of compensation and relocation of PAPs, these structures will have to be demolished.
Total			14 structures		
Religious Structures					
2	Under Construction Mosque	Number	01	Community	The under construction mosque will have to be demolished; however, the grave can be avoided from destruction.
	Grave		01		
Total			02 structures		
Overall			16 structures		

Further brief details of the structures and the areas where these were encountered is provided below:

Table 2.2 - List of Identified Assets at Deh Halkani & Bund Murad

ID. No.	Coordinates	Name	Ownership (Owner, Renter & Other)	Structure Category
1	25.0142, 67.0007	Abandoned Structure	-	Residential
2	25.02979, 67.00077	Declined to respond	-	Residential
3	25.028690,67.001250	Plot boundary wall & Water Tank	-	Residential
4	25.028590, 67.001481	Unknown Outaq	-	Residential
5	25.027913, 67.002308	Mr.Jamshaid	Owner	Residential
6	25.03061, 66.96272	Abdul Rasheed	Owner	Residential
7	25.029516, 66.963092	Mr.Amjad	Owner	Residential
8	25.027913, 67.002308	Partially Built Abandoned Structure - 1	-	Residential
9	25.027582, 67.002462	Partially Built Abandoned Structure - 2	-	Residential
10	25.028871, 66.969805	Partially Built Abandoned Structure - 3	-	Commercial
11	25.029531, 66.962881	Partially Built Abandoned Structure - 4	-	Residential
12	25.029462, 6.962692	Partially Built Abandoned Structure - 5	-	Residential
13	25.028874, 66.953634	Religious Structure (grave)	-	Religious
14	25.028619, 66.953857	Water Tank	-	Undefined
15	25.027861, 66.004970	Single Standing Boundary Wall	-	Undefined
16	25.027633, 67.004048	Masjid (under-construction)	-	Religious

A map of the project site along with all impacted households and structures is provided in **Figure 2.1**.

Deh Mitha Ghar

⁴ The survey team visited the project site numerous times along with members of the Board of Revenue and also consulted consenting households to provide further information on the abandoned/ under construction houses, but were not able to ascertain further information on the ownership of these structures.

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- 23 households in Deh Mitha Ghar (where 17 households agreed to speak to the survey team, and 06 households of 06 workers – refused to speak to the survey team despite intervention from Board of Revenue), where all households are squatting in the area.
- The number of identified residential structures (wooden/thatched) in Deh Mitha Ghar is 17, which belong to the 17 individual workers.
- 06 persons were also identified who claimed to be incharge of the agricultural land (not legal land owners) where the above agricultural laborers were working, out of which 05 owners were open to the survey, and one refused to co-operate despite interventions from the Board of Revenue.
- Overall, workers and crop owners identified will suffer from livelihood loss given that the agricultural land at the site would be no longer usable following the development of the sub-project.

A summary of the affected assets entitled to compensation and quantum of impacts in each asset category is provided below in **Table 2.3**.

Table 2.3 - Summary of Impacts for Deh Mitha Ghar

Sr. No.	Category of Affected Assets	Unit	Impact Quantum		Remarks
			Impacted Assets	Number of AHs	
Land based Assets in ROW					
1	Crops	Number	150 acres approximately	This will impact 23 AHs including; 06 crop owners and 17 agricultural workers	<ul style="list-style-type: none"> The cropped area is controlled by 06 AHs (albeit illegally and without any legal title) and is worked on by 17 separate AHs. Different Crops including; fodder crops, cotton, and seasonal vegetables Land will have to be cleared for the project following payment of compensation to persons, and their relocation. These persons will also be allowed to harvest and sell their crops prior to land clearance.
Total: 150 acres owned by 23 AHs					
Residential Structures					
2	Rooms, washrooms, verandas and boundary walls and Yards	Number	17	17	Following payment of compensation to AHs and their relocation, all structures will be demolished to make way for the project.
Total: 17 Structures owned by 17 AHs					

Further brief details on the identified assets is provided below:

Table 2.4 - List of Identified Assets at Deh Mitha Ghar

ID. No.	Coordinates	Name	Ownership (Owner, Rentee & Other)	Structure Category
301	25.140708, 67.044267	Harichand	Owner	House
302	25.14098, 67.044353	Shree Ram	Owner	House
303	25.140935, 67.04434	Shankar Lal	Owner	House
304	25.141006, 67.04436	Rano	Owner	House
305	25.141084, 67.044357	Sobha Ram	Owner	House
306	25.140866, 67.044317	Kalo	Owner	House
307	25.140834, 67.044329	Haresh Kumar	Owner	House
308	25.140756, 67.044295	Jeewan Das	Owner	House
309	25.140749, 67.04433	Muhammad Aslam	Owner	Agriculture
310	25.140744, 67.044333	Gulzar	Owner	Agriculture
311	25.140746, 67.0443056	Mumtaz Ali	Owner	Agriculture
312	25.14729, 67.04788	Shah Baig	Owner	House
313	25.147123, 67.047887	Wazeer	Owner	House

ID. No.	Coordinates	Name	Ownership (Owner, Rentee & Other)	Structure Category
314	25.145987, 67.048535	Nemon	Owner	Agriculture
315	25.16474, 67.044135	Gulzar Mari	Owner	House
316	25.163551, 67.043441	Abdul Sattar	Owner	Agriculture
317	25.157108, 67.045897	Saleem Brohi	Owner	Agriculture
318	25.157207, 67.046096	Declined to Answer	Owner	House
319	25.157207, 67.046096	Declined to Answer	Owner	House
320	25.157207, 67.046096	Declined to Answer	Owner	House
321	25.156961, 67.045265	Declined to Answer	Owner	House
322	25.156957, 67.045415	Declined to Answer	Owner	House
323	25.156993, 67.045616	Declined to Answer	Owner	House

A map of the project site along with all impacted households and structures is provided in **Figure 2.2**.

The detailed assets inventory for both sites (Deh Halkani & Bund Murad, and Deh Mitha Ghar) are attached to this report as **Appendix-III** and **Appendix-IV** respectively.

2.2.1 Impact on Land

Deh Halkani & Deh Bund Murad

No impacts on land as all land under this sub-project site is owned by GoS (612 acres).

Deh Mitha Ghar

Out of the total area of 600 acres for this sub-project site, there are 03 parcels of private land in Deh Mitha Ghar, equivalent to 18 acres, where this land will be excluded from the sub-project, i.e., no land acquisition will take place. However, the access to these land parcels will be ensured for the owners. Access will be provided by excluding these sites and building the boundary wall for the project site around them (whilst leaving an opening from one end to allow for unfettered access to these sites from the road and vice versa) so as to ensure these can be approached by the road as it is currently. All other land under the sub-project site is owned by the GoS, hence, no further land impacts (582 acres).

Furthermore, for the overall security of the site and to avoid re-encroachment of non-titleholders on the excluded private parcels of land, security watchtowers and checkpoints will be established under the project.

2.2.2 Crops

Deh Halkani & Deh Bund Murad

No crop impacts on Deh Halkani & Deh Bund Murad as there were no crops at this site during the time of the survey, nor has the site been used for any agricultural purpose.

Deh Mitha Ghar

Agricultural activities were observed during the social impact assessment, where according to the survey, over 150 acres of agricultural land (having crops including; fodder crops, cotton, and seasonal vegetables) was identified in Deh Mitha Ghar as being affected. The respective cropped area is overseen by 06 AHs (with no legal title or legal claims) and is worked on by 17 separate AHs.

2.2.3 Affected Residential Structures

The project will affect residential structures that fall within the demarcated site boundaries. As per the inventory of losses, over 33 different structures will be affected, corresponding to 15 AHs, where these will no longer be livable and their PAPs face displacement. All affected residential structures at Deh Halkani and Deh Bund Murad are pacca construction, whereas all residential structures at Deh Mitha Ghar are thatched and wooden. The affected area of the identified structures is measured and assessed in basic area units, i.e. sq feet and running feet for calculating compensation on replacement cost basis by applying prevailing construction unit rates. Following payments of compensation and relocation of persons, all structures listed below will have to be demolished prior to the development of the solar parks, where a summary of the impacted structures is provided below:

Deh Halkani & Deh Bund Murad

Table 2.5 - Affected Residential Structures of Deh Halkani & Deh Bund Murad

Description	AHs	Structure category	Structure type	Affected Area of Impacted Structure	Units
	(Nos.)				Sq. ft./ R. ft.
Residential Structures	04 Ahs having 13 affected structures including; 05 fully built residential structures, 08 partially built residential structures respectively	Room, washroom, kitchen, etc.	Pacca	38,543	Sq. ft.
			Semi Pacca		Sq. ft.
			Katcha	527.5	Sq. ft.
			Wooden/ Thatched	-	Sq. ft.

Deh Mitha Ghar

Table 2.6 - Affected Residential Structures of Deh Mitha Ghar

Description	AHs	Structure category	Structure type	Affected Area of Impacted Structure	Units
	(Nos.)				Sq. ft./ R. ft.
Residential Structures	17	Room, washroom, kitchen, etc.	Pacca	-	Sq. ft.
			Semi Pacca	-	Sq. ft.
			Katcha	-	Sq. ft.
			Wooden/ Thatched	11,542	Sq. ft.

2.2.4 Affected Religious/ Community Structures

Deh Halkani & Deh Bund Murad

During the social assessment of the project, it was observed that 02 religious structures (under construction mosque and a grave) may be affected due to construction of the project as these structures lie within the demarcated boundaries of the proposed project at Deh Halkani & Deh Bund Murad. The grave, lying towards the end of the project site, can be avoided, however, the under-construction mosque will be affected, where details of these structures is provided below in **Table 2.7**.

Table 2.7 - Impacts on Religious Structures

Description	Type of structures	Unit	Number of structures	Total Affected Area (sq feet)	Remarks
Mosque (25.027633, 67.004048)	Semi-Pacca	Sq. ft	1	15,120	Comprises of the mosque and its boundary wall
Grave Site (25.028874, 66.953634)	Pacca	Sq. ft	1	323	-

Given that the mosque is still under construction, it can be demolished after providing the disclosing the ARAP information to the relevant AHs and persons in the area. Following this, compensation/payment for reconstruction of the mosque will be paid to the relevant District Commissioner office to consult with the affected persons and rebuild in the area where they are relocated to.

Deh Mitha Ghar

No sites of religious importance were found at the Deh Mitha Ghar site.

2.2.5 Impact on Livelihoods/ Employment

Deh Halkani & Deh Bund Murad

No livelihood or employment impacts for AHs at this site as their livelihood was not tied to the site.

Deh Mitha Ghar

Due to the clearance of agricultural land at Deh Mitha Ghar following the implementation of the sub-project, a total of 23 households that rely on the land for their livelihoods will face livelihood losses, including the 06 crop owners and 17 agricultural workers identified during the survey. These people will be entitled to compensation for livelihood losses along with transitional losses.

2.2.6 Vulnerable AHs

Vulnerable households are defined as those who by virtue of gender, ethnicity, age, physical or mental disability, economic disadvantage, or social status may be more adversely affected by the project than others and may be limited in their ability to claim or take advantage of the rehabilitation assistances and related development benefits. As per the socio-economic survey and census of AHs, 11 vulnerable AHs were identified whose income was below the minimum wage rate fixed by the Government of Sindh for 2024-2025, which is 37,000 PKR per month (1 in Deh Halkani & Bund Murad, and 10 in Deh Mitha Ghar).

Deh Halkani & Deh Bund Murad

There was one household identified at this site that qualified as a vulnerable household.

Deh Mitha Ghar

There were 10 households identified at this site that qualified as vulnerable households.

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2.2.7 Cut-Off Date

The eligibility for compensation is the date when the resettlement impact assessment and census survey is initiated. Any person who will enter in the project land after the announced cutoff date or develop any assets in the area will not be eligible for compensation

Deh Halkani & Deh Bund Murad

For the Deh Halkani & Deh Bund Murad site, the start date for the survey, and effectively the cut-off date is 25 June 2024.

Deh Mitha Ghar

For the Deh Mitha Ghar site, the start date for the survey, and effectively the cut-off date is 27 June 2024.

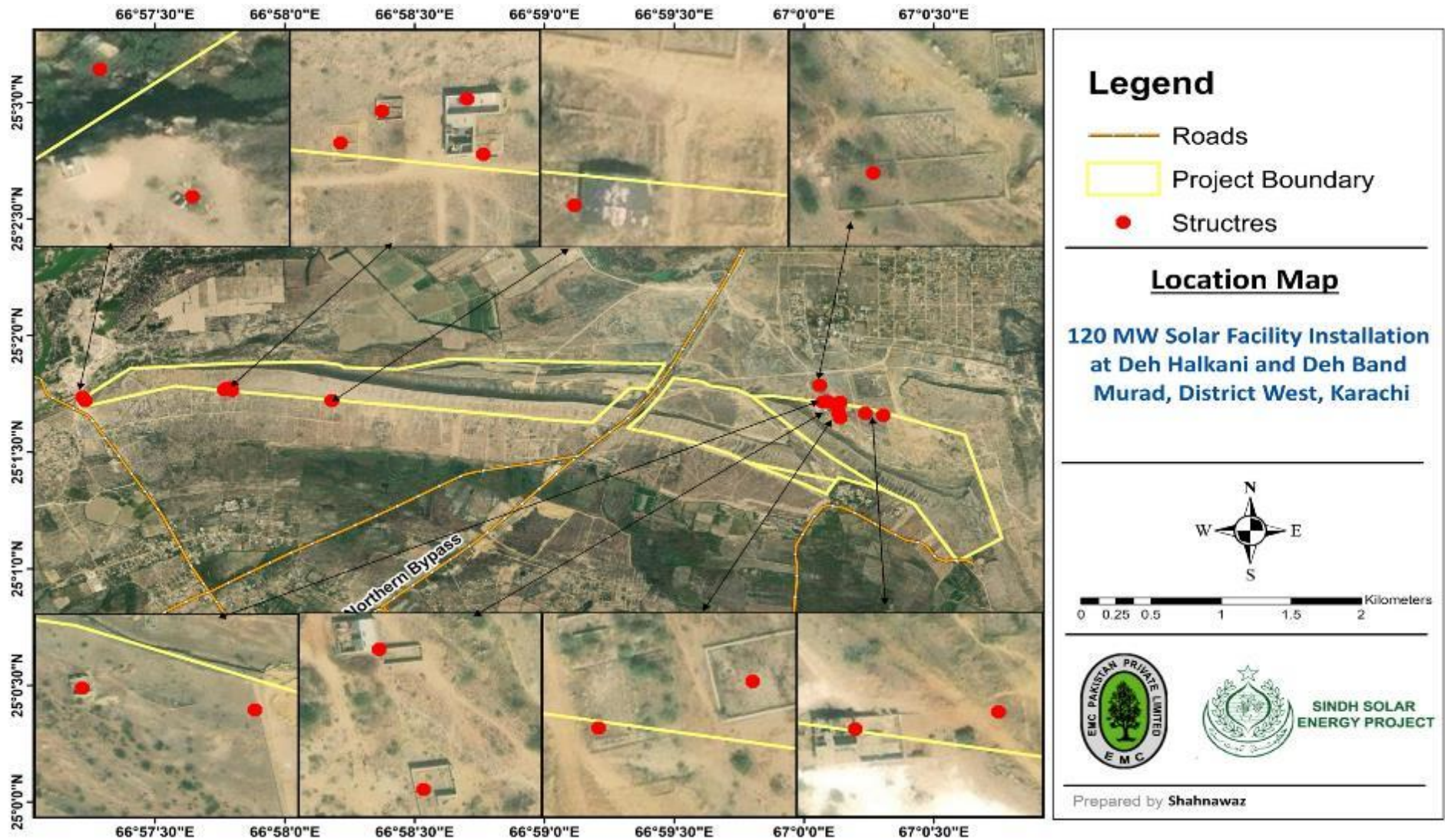


Figure 2.1 - Locations of Identified Assets at Deh Halkani & Deh Bund Murad

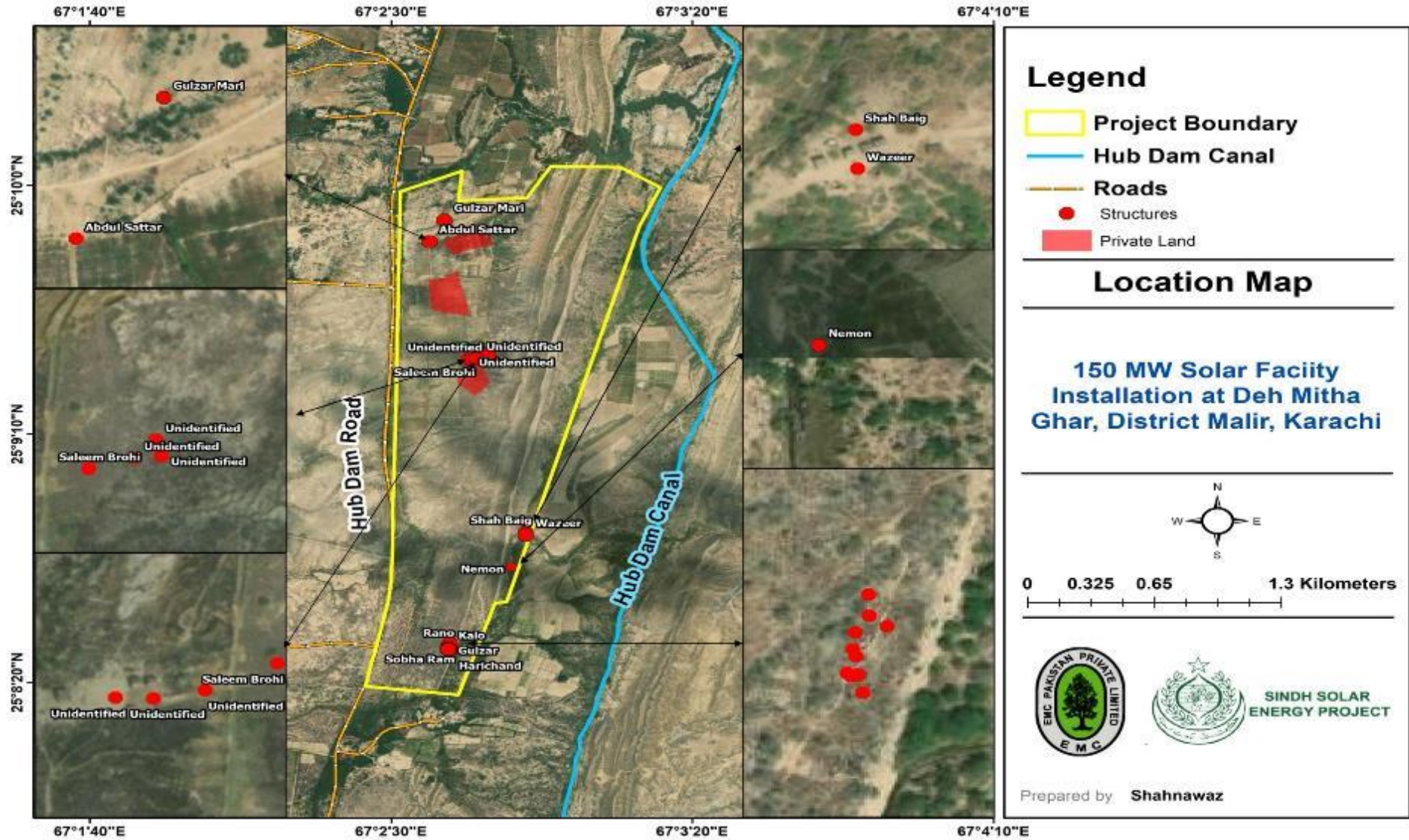


Figure 2.2 - Locations of Identified Assets at Deh Mitha Ghar

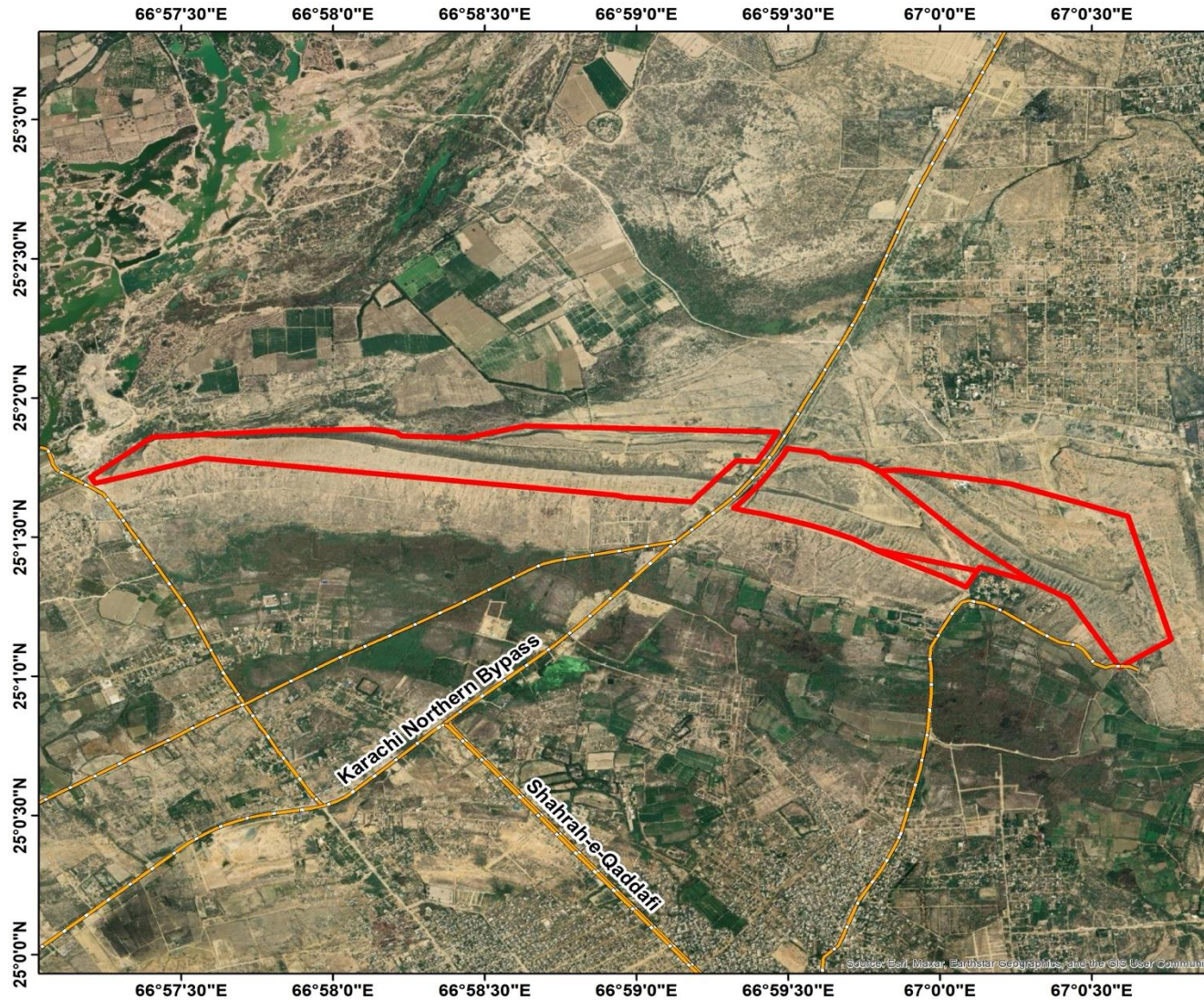
Abbreviated Resettlement Plan (ARAP)

Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)



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Identification of Social Impacts



Legend

-  Boundary Wall
-  Roads

Location Map

120 MW Solar Facility Installation at Deh Halkani and Deh Band Murad, District West, Karachi



SINDH SOLAR ENERGY PROJECT

Prepared by **Shahnawaz**

Figure 2.3 - Boundary Wall of Deh Halkani & Deh Bund Murad (along the project boundary lines)

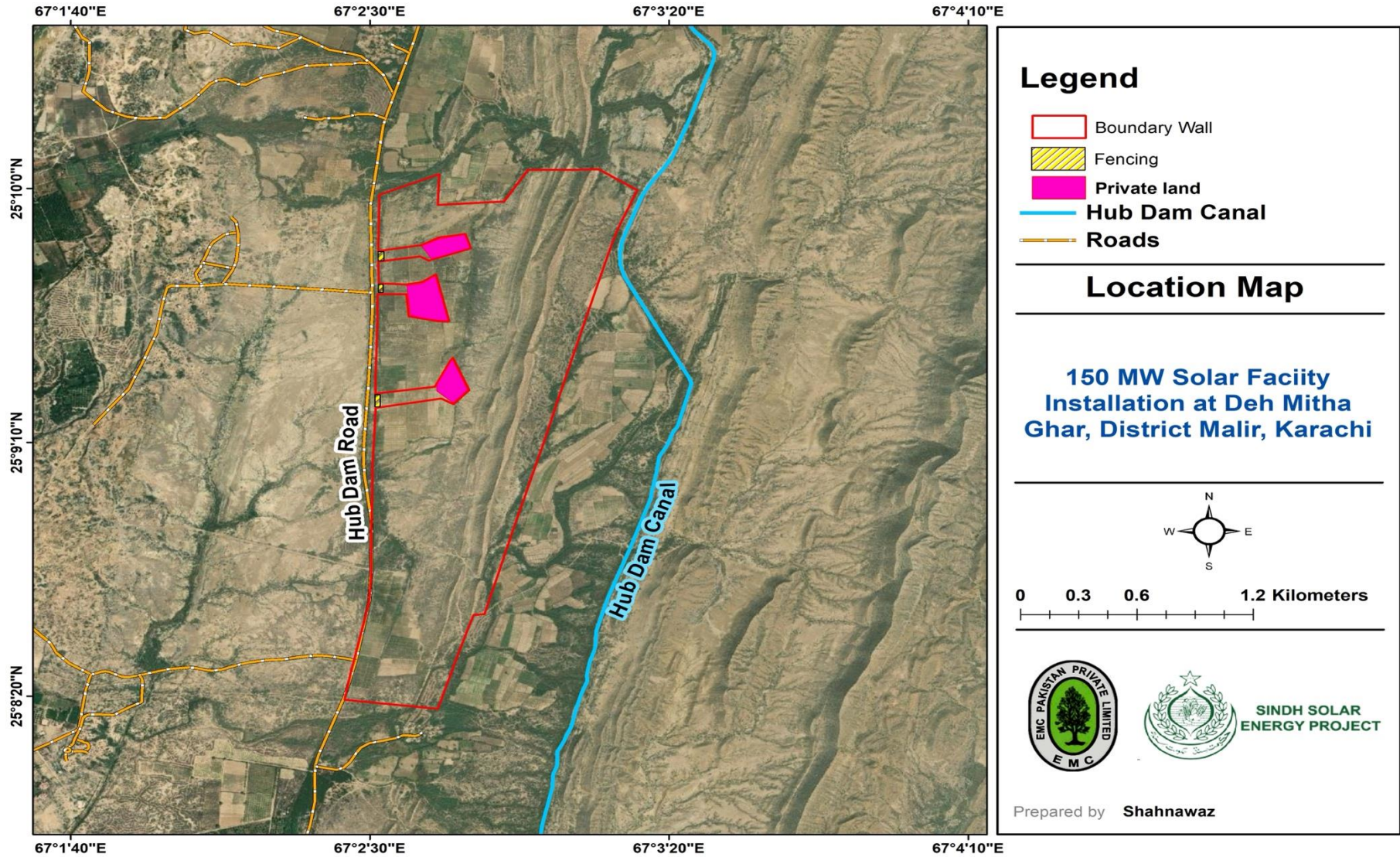


Figure 2.4 - Boundary Wall of Deh Mitha Ghar Site (excluding private land parcels)

3. Socio-Economic Profile

This section details the socio-economic assessment pertaining to the demographic and socio-economic conditions of the PAPs, where these details were obtained through social surveys using the following objectives:

- Observe and document the existing socio-economic conditions of the PAPs;
- Gain information about the demographic characteristics of the PAPs;
- Identify the economic resource dependency of the PAPs;
- Explore the situation of civic amenities, drinking water conditions, education and health facilities etc.
- Get feedback from the community about existing and potential social issues; and
- Evaluate the possibilities of addressing their concern through relevant authorities.

3.1 Methodology Adopted for Data Collection

Under the census survey carried out, socio-economic surveys were carried out for the entire Affected Households (AHs) (100%). During this survey, people were informed about the project objective, its location and basic design features. To get the maximum information about the AHs and proposed Project area, both primary and secondary sources were used for data collection. Before going in the field, the maps of the project area, design and relevant reports were reviewed. The survey focused on the following main features of the affected population:

- Demographic characteristics;
- Education and literacy;
- Source of livelihood
- Housing pattern
- Religion
- Access to social facilities

The following activities were carried out at site for impacts identification and to assess the socio-economic conditions of the affected population.

- Sample Socioeconomic survey of the PAPs;
- 100% Census of the PAPs;
- Focus Group discussions; and
- Community consultations.

3.2 Administrative Jurisdiction of the Project Area

The proposed sub-projects under Component 1 fall under the jurisdiction of Districts Malir and West. According to the Census of 2017, the population of these two districts is 5,831,411, where a brief of the districts is shown below in Table 3.1.

Table 3.1 - Area, Density, & Population of Districts

Name of District	Number of Sub-Divisions	Area (Sq. km)	Density Population per Sq. km	Population
District West	7	929	4205.67	3,907,065
District Malir	6	2,160	891	1,924,346

Source: Finalized Census Results of Karachi 2017 – Pakistan Bureau of Statistics Govt. of Pakistan

3.3 Socio-Economic Profile of Affected Households

Furthermore, detailed findings from the surveys are discussed below:

Deh Halkani & Deh Bund Murad

Of the 04 households identified at the site, 02 were responsive to the survey, where the socio-economic data gathered is presented in the sections below.

Deh Mitha Ghar

Of the 23 households identified at the site, socio-economic data was gathered from 15 households, where this is presented below:

3.3.1 Population & Family Size

Deh Halkani & Deh Bund Murad

The socioeconomic survey indicates that the population of the surveyed households was approximately evenly split between the number of men and women present, i.e., 50-50. **Table 3.2** below shows the population and family size of the AHs that co-operated for the survey.

Table 3.2 - Population & Family Size of Deh Halkani & Bund Murad

Deh	Population				Total Population	%
	Male	%	Female	%		
Halkani	5	45%	6	55%	11	50%
Bund Murad	6	55%	5	45%	11	50%
Total	11	50%	11	50%	22	100%

Source: Census Survey & Socioeconomic survey of AHs

Deh Mitha Ghar

The socioeconomic survey indicates that the population of the surveyed households more female dominated, albeit slightly, i.e., 48%-52% in favor of the women. **Table 3.3** below shows the population and family size of the AHs that co-operated for the survey.

Table 3.3 - Population & Family Size of Deh Mitha Ghar

Deh	Respondent HH Population				Total Population	%
	Male	%	Female	%		
Mitha Ghar	45	48%	48	52%	93	100%

Source: Census Survey & Socioeconomic survey of AHs

3.3.2 Family System

Deh Halkani & Bund Murad

The survey indicated that the family system at the Deh Halkani and Deh Bund Murad site consists of a joint family system mostly, which can be attributed to the overall inflationary scenario prevalent, along with the high cost of living and associated expenses. This detail is shown below in **Table 3.4**.

Table 3.4 - Family System at Deh Halkani & Deh Bund Murad

Sr. No.	Family Structure	Number of Respondent	Percentage
1	Joint	02	100%

Deh Mitha Ghar

The family structure at Deh Mitha Ghar, conversely was found to be more evenly split between joint family system and nuclear family system, representing an even distribution and a more accurate representation of the similar characteristics found across the district. The details are presented further below in Table 3.5.

Table 3.5 - Family System at Deh Mitha Ghar

Sr. No.	Family Structure	Number of Respondents	Percentage
1	Joint	7	47%
2	Nuclear	8	53%
Total		15	100%

3.3.3 Age, Education, & Occupation

Deh Halkani & Bund Murad

The survey results indicate that the highest number of persons were found to be in the 10–14-year-old category (27%), followed by the 20–24-year-old category and 50 & above category (both at 14%). Furthermore, of the households surveyed, most of the persons responded that they were literate with having obtained education up to the primary level, which can be explained by the lack of educational institutions in the area compared to the other parts of the city. Lastly, of the households surveyed, the working population was divided into two main categories: real estate agent and a commercial shop keeper. Further details on these aspects can be found in Tables 3.6, 3.7, and 3.8 below.

Table 3.6 - Age Wise Family Composition at Deh Halkani & Deh Bund Murad

Age in Group	Overall		Deh Halkani		Bund Murad	
	Count	%	Count	%	Count	%
01-04	2	9%	1	9%	1	9%
05-09	2	9%	1	9%	1	9%
10-14	6	27%	4	36%	2	18%
15 – 19	1	5%	1	9%	0	0%
20 – 24	3	14%	2	18%	1	9%
30 – 34	1	5%	0	0%	1	9%
35 – 39	2	9%	0	0%	2	18%
40 – 44	2	9%	1	9%	1	9%
50 & above	3	14%	1	9%	2	18%
Total HH Population	100%	22	11	100%	11	100%

Table 3.7 - Educational Status of AHs at Deh Halkani & Deh Bund Murad

Educational Status of AHs		Total Paps		Deh			
				Halkani		Bund Murad	
		Count	%	Count	%	Count	%
BASE: Total Household Family Members		22	100%	11	100%	11	100%
Literacy Status	Literate	13	59%	6	55%	7	64%
	Illiterate	9	41%	5	45%	4	36%
Education Passed	Never	9	41%	5	45%	4	36%
	Less than Primary	2	9%	2	18%	0	0%
	Primary	10	45%	3	27%	7	64%
	Middle	1	5%	1	9%	0	0%

Table 3.8 - Occupation of Respondents at Deh Halkani & Deh Bund Murad

Sr. No.	Profession	Number of Respondent	Percentage
1	Real Estate Agent	01	50%
2	Shopkeepers	01	50%
Total		02	100

Deh Mitha Ghar

The survey carried out in Deh Mitha Ghar showed that the greatest number of persons at the site corresponded to the 05–09-year age group, followed by the 01–04-year age group, and then the 10–14-year age group and so on, highlighting the relatively larger number of children than adults present at the site. In contrast to the Deh Halkani and Bund Murad site, most people at Mitha Ghar claimed they were illiterate (86%) which is reflective of the lack of educational institutions in the area. Lastly, in terms of occupations, the respondents mostly corresponded to labor work of some sort, be it skilled labor or agricultural labor. Further details on these aspects are provided in **Tables 3.9, 3.10, and 3.11** below.

Table 3.9 - Age Wise Family Composition at Deh Mitha Ghar

Age in Group	Total	
	Count	%
Less than 1 year	3	3%
01-04	15	16%
05-09	20	22%
10-14	11	12%
15 – 19	7	8%
20 – 24	6	6%
25 – 29	10	11%
30 – 34	5	5%
35 – 39	8	9%
40 – 44	6	6%
45- 49	1	1%
50 & above	1	1%
Total HH Population	100%	93

Table 3.10 - Educational Status of the AHs at Deh Mitha Ghar

Educational Status of the AHs	

		Total PAPs	
		Count	%
BASE: Total Household Family Members		93	100%
Literacy Status	Literate	13	14%
	Illiterate	80	86%
Education Passed	Never	80	86%
	Less than Primary	8	9%
	Primary	4	4%
	Matric	1	1%

Table 3.11 - Occupation of Respondents at Deh Mitha Ghar

Sr. No.	Profession	Number of Respondents	Percentage
1	Skilled Labour	7	47%
2	Agriculture Related	7	47%
3	Other	1	7%
Total		15	100%

3.3.4 Religion

Deh Halkani & Bund Murad

Respondents were inquired about their religion during the survey, where 100% of the population at Deh Halkani & Deh Bund Murad reported their religion as Islam. Further details are provided in **Table 3.12** below.

Table 3.12 - Religion of Respondents at Deh Halkani & Deh Bund Murad

Sr. No.	Religion	Numbers	Percentage
1	Islam	02	100%

Deh Mitha Ghar

Respondents were inquired about their religion during the survey, where 40% of the population at Deh Mitha Ghar reported their religion as Islam, while 60% of the population claimed to be Hindu. Further details are provided in **Table 3.13** below.

Table 3.13 - Religion of Respondents at Deh Mitha Ghar

Sr. No.	Religion	Number of Respondents	Percentage
1	Muslim	6	40%
2	Hindu	9	60%
Total		15	100%

3.3.5 Languages Spoken

Deh Halkani & Bund Murad

Most of the AHs have been settled in different rural, and sub-urban areas where they have different languages to communicate. The socioeconomic survey indicated that the population evenly spoke a mix of Sindhi and Hindko in the sub-project area. Further details are provided in **Table 3.14** below.

Table 3.14 - Languages Spoken at Deh Halkani and Deh Bund Murad

Sr. No.	Language	Number of Respondent	Percentage
1	Sindhi	11	50%
2	Hindko	11	50%
Total Household Family Members		22	100%

Deh Mitha Ghar

Most of the AHs have been settled in different rural, and sub-urban areas where they have different languages to communicate. The socioeconomic survey indicated that a majority of the population spoke Sindhi (82%) and a minority spoke Balochi (18%) in the sub-project area. Further details are provided in **Table 3.15** below.

Table 3.15 - Languages Spoken at Deh Mitha Ghar

Sr. No.	Language	Number of Respondents	Percentage
1	Sindhi	76	82%
2	Balochi	17	18%
Total Household Family Members		93	100%

3.3.6 Marital Status of the AHs

Deh Halkani & Bund Murad

Of the AHs surveyed, it was observed that there was almost an even split between the number of married and unmarried persons. This goes in line with there being more children identified at the project site than adults. Further details are provided below in **Table 3.16**.

Table 3.16 - Marital Status of the AHs at Deh Halkani & Deh Bund Murad

Marital Status of the AHs		Total Paps		Deh			
				Deh Halkani		Deh Bund Murad	
		Count	%	Count	%	Count	%
BASE: Total Household Family Members		22	100%	11	100%	11	100%
Marital Status	Un-married	12	55%	7	64%	5	45%
	Married	10	45%	4	36%	6	55%

Deh Mitha Ghar

Of the AHs surveyed, it was observed that most of the persons were un-married. This goes in line with there being more children identified at the project site than adults. Further details are provided below in **Table 3.17**.

Table 3.17 - Marital Status of the AHs at Deh Mitha Ghar

Marital Status of the AHs		Total Paps	
		Count	%
BASE: Total Household Family Members		93	100%
Marital Status	Un-married	60	65%
	Married	33	35%

3.3.7 Monthly Household Income and Expenditure

Deh Halkani & Bund Murad

The monthly household income was found to be between 30,000 – 50,000 PKR, where the overall expenditures were found to be between 50,000 – 70,000 PKR, highlighting the discrepancy between the amount earned and the expenditures incurred by the people living in the area. This, overall, highlighted how the people live from paycheck to paycheck and are unable to have any savings, and have to be very meticulous in their planning for spending. Further details are provided in **Tables 3.18 and 3.19**.

Table 3.18 - Average Monthly Household Income at Deh Halkani & Deh Bund Murad

Sr. No.	Average Monthly Income (Rs.)	Number	Percentage
1	Rs.30,000	01	50%
2	Rs.50,000	01	50%
Total		02	100%

Table 3.19 - Average Monthly Household Expenditure at Deh Halkani & Deh Bund Murad

Sr. No.	Average Monthly Income (Rs.)	Number	Percentage
1	Rs.50,000	01	50%
2	Rs.70,000	01	50%
Total		02	100%

Deh Mitha Ghar

The average monthly income for the population at Mitha Ghar ranged from between 15,000 to 40,000 PKR where the expenditures were also found to be between 15,000 and 40,000 PKR. This, similar to the Deh Halkani site depicted how people live paycheck to paycheck and are unable to have any savings and would need to be very careful in their planning for spending. Further details are provided in **Tables 3.20 and 3.21**.

Table 3.20 - Average Monthly Household Income at Deh Mitha Ghar

Sr. No.	Average Monthly Income (Rs.)	Number of Respondents	Percentage
1	Upto 15,000	1	7%
2	15,001 - 20,000	4	27%
3	20,001 - 25,000	3	20%
4	25,001 - 30,000	4	27%
5	30,001 - 40,000	3	20%
Total Households		15	100%

Table 3.21 - Average Household Monthly Expenditure at Deh Mitha Ghar

Sr. No.	Average Monthly Expenditure (Rs.)	Number of Respondents	Percentage
1	15,001 - 20,000	3	20%
2	20,001 - 25,000	4	27%
3	25,001 - 30,000	4	27%
4	30,001 - 40,000	3	20%
5	Above 40,000	1	7%
Total Households		15	100%

3.3.8 Ownership Status of the Houses

Deh Halkani & Bund Murad

The respondents at Deh Halkani and Deh Bund Murad (who are residing there illegally), reported that they owned their houses, despite living on state owned land. Further details are provided in **Table 3.22**.

Table 3.22 - Ownership Status of Illegally Built Houses at Deh Halkani & Deh Bund Murad

Sr. No.	Ownership Status	Number of Respondent	Percentage
1	Owner	02	100%

Deh Mitha Ghar

The respondents at Deh Mitha Ghar (who are residing there illegally) all reported that they owned the structures they were living in. Further details are provided below in **Table 3.23**.

Table 3.23 - Ownership Status of Illegally Built Houses at Deh Mitha Ghar

Sr. No.	Ownership Status	Number of Respondent	Percentage
1	Owner	15	100%
Total Households		15	100%

3.3.9 Housing Construction Patterns

Deh Halkani & Bund Murad

Pacca housing construction patterns were observed at the sub-project site, with houses and structures being constructed using cement blocks and workmanship from laborers. Further details are provided below in **Table 3.24**.

Table 3.24 - Housing Construction Patterns at Deh Halkani & Deh Bund Murad

Sr. No.	Type of House	Number of Respondent	Percentage
1	Pacca	02	100%

Deh Mitha Ghar

A mixed housing pattern of the AHs was observed because they were living in the scattered areas of the site. Survey data indicate that the majority of the respondents were living in the semi-pacca⁵ houses that are constructed with superior materials and workmanship while remaining were living in kacha and wooden thatched houses. **Table 3.25** shows the construction pattern of houses of AHs.

Table 3.25 - Housing Construction Patterns at Deh Mitha Ghar

Sr. No.	Type of House	Number of Respondent	Percentage
1	Semi-Pacca	3	20%
2	Kacha	2	13%

⁵Pacca structures are: RCC roof, stone walls with cement mortar, cement plastering & flooring

Semi-Pacca structures are: RCC roof, stone walls with cement mortar, without plastering & cement flooring and

Kacha structures are: CIG Sheet roofing, stone & wood walls with cement mortar, without plastering & cement flooring

3	Wooden Thatched	10	67%
Total Households		15	100%

3.3.10 Civic Amenities

Deh Halkani & Bund Murad

Social infrastructure and amenities are crucial to creating sustainable communities. This assessment sets household amenities like availability of electricity and modern appliances, nature of access to water, fuel for cooking, and type of sanitation facilities available as primary indicators for assessing standard of living.

The sub-project siting is in an area which is underdeveloped. Consequently, when the respondents were asked about amenities, they indicated only access to a mosque, and partial access to water, with the area entirely lacking in provision of any other amenities. Further details are provided in **Table 3.26**.

Table 3.26 - Civic Amenities at Deh Halkani & Deh Bund Murad

Sr. No.	Social Amenities	Available (%)	Not Available (%)
1	Electricity	0	100%
2	Sui Gas	0	100%
3	Water Supply	0	100%
3	Cellphone/ Phone facility	50%	50%
4	Sewerage	0	100%
5	Dispensary/BHU	0	100%
6	School/Educational Institution	0	100%
7	Hospital	0	100%
8	Metaled Road	0	100%
9.	Public Transport	0	100%
10.	Solid waste management	0	100%
11.	Masjid	100%	-

Deh Mitha Ghar

Social infrastructure and amenities are crucial to creating sustainable communities. This assessment sets household amenities like availability of electricity and modern appliances, nature of access to water, fuel for cooking, and type of sanitation facilities available as primary indicators for assessing standard of living.

The sub-project siting is in an area which is underdeveloped. Consequently, when the respondents were asked about amenities, only a few households exhibited that they were able to access water, mobile, schools, proper roads, and a mosque. Further details are provided in **Table 3.27**.

Table 3.27 - Civic Amenities at Deh Mitha Ghar

Sr. No.	Social Amenities	No. of Households	Available (%)	No. of Households	Not Available (%)
1	Electricity	-	-	15	100%

Sr. No.	Social Amenities	No. of Households	Available (%)	No. of Households	Not Available (%)
2	Sui Gas	-	-	15	100%
3	Water Supply	5	33%	10	67%
3	Cellphone/ Phone facility	5	33%	10	50%
4	Sewerage	-	0	15	100%
5	Dispensary/BHU	-	0	15	100%
6	School/ Educational Institutions	2	13%	13	87%
7	Hospital	-	-	15	100%
8	Metaled Road	5	33%	10	67%
9.	Public Transport	-	-	15	100%
10.	Solid waste management	-	-	15	100%
11.	Masjid	6	40%	9	60%

3.3.11 Source of Drinking Water

Deh Halkani & Bund Murad

The source of drinking water at the site was reported to be through tankers for the Deh Halkani and Bund Murad site.

Table 3.28 - Sources of Drinking Water at Deh Halkani & Deh Bund Murad

Sr. No.	Source of Water	Number of Respondent	Percentage
1	Tanker	02	100%

Deh Mitha Ghar

The source of drinking water at the site was reported to majorly be the Hub Dam Canal (73%), followed by small boreholes setup by the people (27%) outside the project area where these wells and pumps can still be used after project implementation as they will not be affected.

Table 3.29 - Sources of Drinking Water at Deh Mitha Ghar

Sr. No.	Source of Water	Number of Respondent	Percentage
1	Borehole (Hand Pumps / Electric Motor)	4	27%
2	Hub Dam Canal	11	73%
Total Households		15	100%

3.3.12 Mode of Transport

Deh Halkani & Bund Murad

Access to safe drinking water supply is not only a basic need and a precondition for healthy life but is also a basic human right. The quality of water is directly linked to the quality of health. The people at Deh Halkani and Bund Murad reported that there was no public transport available, where they had to rely on private modes of transport.

Table 3.30 - Modes of Transport at Deh Halkani & Deh Bund Murad

Sr. No.	Mode of Transport	Number of Respondents	Percentage
1	Private	02	100%

Deh Mitha Ghar

Access to safe drinking water supply is not only a basic need and a precondition for healthy life but is also a basic human right. The quality of water is directly linked to the quality of health. The people at Deh Mitha Ghar reported that there was no public transport available, where they had to rely on private modes of transport.

Table 3.31 - Modes of Transport at Deh Mitha Ghar

Sr. No.	Mode of Transport	Number of Respondents	Percentage
1	Private	15	100%

3.3.13 Awareness Regarding Proposed Project

Deh Halkani & Bund Murad

Active community participation in project planning and implementation may; improve project design through the use of local knowledge, increase project acceptability, produce a more equitable distribution of benefits, promote local resource mobilization and ensure project sustainability. The survey findings revealed that none of the respondents had any prior knowledge about the project.

Table 3.32 - Awareness of the Project at Deh Halkani & Deh Bund Murad

Sr. No.	Awareness of the Project	Number	Percentage
1	No	2	100%
Total Households		2	100%

Deh Mitha Ghar

Active community participation in project planning and implementation may; improve project design through the use of local knowledge, increase project acceptability, produce a more equitable distribution of benefits, promote local resource mobilization and help ensure project sustainability. The survey findings revealed that none of the respondents had any prior knowledge about the project.

Table 3.33 - Awareness of the Project at Deh Mitha Ghar

Sr. No.	Awareness of the Project	Number of Respondents	Percentage
1	No	15	100%
Total Households		15	100%

3.4 Socio-Economic Profile of Women from Affected Households

Keeping in view the important role of the female in the household as well as in society, overall separate consultations were carried out with females and their perspectives on the project recorded alongside their perspective on the area. Twelve women were consulted on these aspects and their views are provided below (1 woman at the Deh Halkani & Deh Bund Murad site, and 11 women at the Deh Mitha Ghar site):

3.4.1 Involvement in Agricultural Work

Given the prevalence of agricultural practices at the Deh Mitha Ghar site, and near the Deh Halkani and Deh Bund Murad site, and the prevalence of agricultural work as a major source of income in the area, part of the survey aimed to understand women's involvement in this practice.

Findings from the survey reported that women at the Deh Halkani and Deh Bund Murad site are not involved in agricultural practices, whereas all women at the Mitha Ghar site are involved in agricultural practices including the preparing land, sowing, harvesting, on-farm water management, and other activities. This showed the women at the Mitha Ghar site are more actively involved in the agricultural work in the area, contributing to the income generation activities at the site. Further details are provided below in **Table 3.34**.

Table 3.34 - Involvement of Women in Agriculture Work

Women in Agriculture Work		Total		Location			
				Deh Halkani		Deh Mitha Ghar	
		Count	%	Count	%	Count	%
BASE: All Respondents		12	100%	1	100%	11	100%
Women roles and responsibility related to Livestock Management	Preparing land	11	92%	0	0%	11	100%
	Sowing	11	92%	0	0%	11	100%
	Harvesting	11	92%	0	0%	11	100%
	Picking	11	92%	0	0%	11	100%
	On-farm water Management	10	83%	0	0%	10	91%
	Others	1	8%	0	0%	1	9%
	None	1	8%	1	100%	0	0%

3.4.2 Role in Decision Making Activities

Understanding the role of women in their households in the sub-project areas, was another critical aspect that the survey aimed to shine further light upon. In this regard, the main decisions in the area for the households were understood, following which the role women play in them also further investigated.

Here, the survey was able to shine further light on the role women play in the education of their children (where to send, whom to send), where to go for healthcare related issues, the number of children to have, and on the purchase and sale of important assets. The responses from women from both sites are given below in **Table 3.35**.

Table 3.35 - Women's Role in Decision Making Activities

Women's Role in Decision Making		Total		Location			
				Deh Halkani		Deh Mitha Ghar	
		Count	%	Count	%	Count	%
BASE: All Respondents		12	100%	1	100%	11	100%
Children Education	No school in the area	9	75%	0	0%	9	82%
	Male	1	8%	1	100%	0	0%

Women's Role in Decision Making		Total		Location			
				Deh Halkani		Deh Mitha Ghar	
		Count	%	Count	%	Count	%
	Both	2	17%	0	0%	2	18%
a) Where to send	No school in the area	9	75%	0	0%	9	82%
	Male	1	8%	1	100%	0	0%
	Both	2	17%	0	0%	2	18%
b) whom to send	No school in the area	9	75%	0	0%	9	82%
	Male	1	8%	1	100%	0	0%
	Both	2	17%	0	0%	2	18%
Health facility (from where to avail)	Male	11	92%	1	100%	10	91%
	Both	1	8%	0	0%	1	9%
Number of children to have	Male	11	92%	1	100%	10	91%
	Both	1	8%	0	0%	1	9%
What HH assets to buy and sell	Male	12	100%	1	100%	11	100%

3.4.3 Access to Education & Skill Development

Women's ability and access to education and further skill development in the area was also explored as part of the survey as that constitutes an important indicator for women's development in the area.

Overall, the women at the Deh Halkani and Deh Bund Murad site reported that familial restrictions did not allow them to partake in such opportunities. Conversely, at the Deh Mitha Ghar site, majority of the women reported that due to the lack of educational institutions and development centers in the area, the issue was not one that was discussed extensively. All in all, both sites reported that there were no such centers or institutions for women's development. Further details are provided below in **Table 3.36**.

Table 3.36 - Women's Access to Education & Skill Development

Women's Access to Education & Skill Development		Total		Location			
				Deh Halkani		Deh Mitha Ghar	
		Count	%	Count	%	Count	%
BASE: All Respondents		12	100%	1	100%	11	100%
Are there any constraints for girls education	Yes: No school in the area	10	83%	0	0%	10	91%
	Yes: Family not allowed to study	2	17%	1	100%	1	9%
Gender preference for sending children to school	No preference	12	100%	1	100%	11	100%
	No school/educational centre in the area	12	100%	1	100%	11	100%
Are there any vocational centres/school for girls/women	No	12	100%	1	100%	11	100%

3.4.4 Access to Health Facilities

Alongside access to educational and developmental opportunities, women's access to health facilities in the area was also assessed as that also makes up an important indicator for development in an area.

Overall, all women from both sites reported that there were no health facilities nearby for them to avail, along with highlighting the main issues and constraints to the provision of healthcare services in the project area. Further details are provided below in **Table 3.37**.

Table 3.37 - Women's Access to Health Facilities

Women's Access to Health Facilities		Total		Location			
				Deh Halkani		Deh Mitha Ghar	
		Count	%	Count	%	Count	%
BASE: All Respondents		12	100%	1	100%	11	100%
Health facilities are available in the area	No	12	100%	1	100%	11	100%
Main Constraints to Access Health Facilities	In case of emergency visiting Civil hospital Malir	9	75%	0	0%	9	82%
	No proper health facility available here	6	50%	1	100%	5	45%
	Women are consulting with traditional midwife	1	8%	1	100%	0	0%

3.4.5 Access & Control over Resources

An overall indicator of women's progress and development in an area is their owning of assets of different kinds (land, assets, etc.). This question was answered as part of the survey where the number of women owning assets, their type, and hurdles in this process are described below in **Table 3.38**.

Table 3.38 - Women's Access & Control Over Resources

Access & Control over Resources		Total		Location			
				Deh Halkani		Deh Mitha Ghar	
		Count	%	Count	%	Count	%
BASE: All Respondents		12	100%	1	100%	11	100%
Common trends of women ownership of land and assets	No such trend	6	50%	1	100%	5	45%
	Few women own their livestock assets	4	33%	0	0%	4	36%
	Women don't usually own land/assets	2	17%	0	0%	2	18%
What kind of issues, women face in access/control over assets/property	Cultural barrier/Conservative culture	6	50%	1	100%	5	45%
	The Women have no rights over assets of properties	3	25%	0	0%	3	27%
	Financial constraints	2	17%	0	0%	2	18%
	Male dominated society	2	17%	0	0%	2	18%
	No response	1	8%	0	0%	1	9%

	Issue of domestic abuse	1	8%	0	0%	1	9%
	No issue	1	8%	0	0%	1	9%

3.4.6 Access to Income Earning Opportunities

Women's access to income earning opportunities, alongside the main constraints faced, wage satisfaction, and earnings are highlighted below in **Table 3.39**.

Table 3.39 - Women's Access to Income Generating Opportunities

Access to Income Earning Opportunities		Total		Location			
				Deh Halkani		Deh Mitha Ghar	
		Count	%	Count	%	Count	%
BASE: All Respondents		12	100%	1	100%	11	100%
Are you involved in income generating activities	Yes	11	92%	0	0%	11	100%
	No	1	8%	1	100%	0	0%
Income Generation Activities	Livestock	9	82%	0	0%	9	82%
	Agriculture work	6	55%	0	0%	6	55%
	Stitching / Embroidery	1	9%	0	0%	1	9%
	Job	1	9%	0	0%	1	9%
Are women allowed to work outside home	Yes	11	92%	0	0%	11	100%
	No	1	8%	1	100%	0	0%
BASE: Those women involved in income generating activities		11	100%	0	0%	11	100%
Main constraints for accessing economic opportunities	Only harvesting/Livestock work with husband	9	82%	0	0%	9	82%
	Cultural barrier Husband restriction	2	18%	0	0%	2	18%
	After the permission of Husband	1	9%	0	0%	1	9%
Do you satisfied with private wage / salary	Yes	4	36%	0	0%	4	36%
	No	7	64%	0	0%	7	64%
Area in which female spend their earning	Kitchen	10	91%	0	0%	10	91%
	Marriage of her children	5	45%	0	0%	5	45%
	House construction	4	36%	0	0%	4	36%
	Livestock	3	27%	0	0%	3	27%
	Cloths for family/children	3	27%	0	0%	3	27%

3.4.7 Harassment/ Violence Faced

Instances of harassment and violence faced by women, along with the type of violence and type of issue is highlighted below in **Table 3.40**.

Table 3.40 - Issues Faced by Women

Harassment/ Violence Issues Faced by Women		Total		Location			
				Deh Halkani		Deh Mitha Ghar	
		Count	%	Count	%	Count	%
BASE: All Respondents		12	100%	1	100%	11	100%
Ever faced harassment/violence during traveling in public transport	No	12	100%	1	100%	11	100%
Have you ever faced crime and security issue during traveling on the road	Yes	1	8%	0	0%	1	9%
	No	11	92%	1	100%	10	91%
Have you ever faced violence from male members of the Households	Yes	8	67%	1	100%	7	64%
	No	4	33%	0	0%	4	36%
BASE: Those womens involved in income generating activities		8	100%	1	100%	7	100%
Type of violence women faced	Physical	4	50%	1	100%	3	43%
	Mental	1	12%	0	0%	1	14%
	Both (Physically & Mentally)	3	38%	0	0%	3	43%
Type of Issue	Domestic	2	25%	0	0%	2	29%
	Economic	1	12%	1	100%	0	0%
	Both : Domestic & Economic issues"	5	62%	0	0%	5	71%

3.4.8 Awareness on Proposed Project

Women's awareness on the proposed project was also assessed as a baseline for the project, where all women elucidated that they were unaware of the project.

Table 3.41 - Women's Awareness on Proposed Project

Women's Awareness on Proposed Project		Total		Location			
				Deh Halkani		Deh Mitha Ghar	
		Count	%	Count	%	Count	%
BASE: All Respondents		12	100%	1	100%	11	100%
Project Awareness	No	12	100%	1	100%	11	100%



3.4.9 Women Perceived Benefits from Project

Following an explanation of the project and the activities involved, the women at the project sites were requested to highlight the items they would like to see from the project as perceived benefits, where the items highlighted are presented below in **Table 3.42**, with most items pertaining to skill development institutes or social development facilities.

Table 3.42 - Women's Perceived Benefits from Project

Women Perceived Benefits from Project		Total		Location			
				Deh Halkani		Deh Mitha Ghar	
		Count	%	Count	%	Count	%
BASE:All Respondents		12	100%	1	100%	11	100%
Suggestions for Protective Measures	Vocational training center	3	25%	1	100%	2	18%
	School	3	25%	0	0%	3	27%
	Don't disturb the livelihood of women	3	25%	0	0%	3	27%
	None	2	17%	0	0%	2	18%
	Cloth stitching training institute	2	17%	1	100%	1	9%
	Mandir	2	17%	0	0%	2	18%
	Masjid	1	8%	0	0%	1	9%
	Provide Health Facility	1	8%	0	0%	1	9%
	To accommodate the affectees	1	8%	0	0%	1	9%
How project intervention will benefit women	Cloth stitching training institute	3	25%	1	100%	2	18%
	Provide work /jobs to women in the project	3	25%	0	0%	3	27%
	No response	2	17%	0	0%	2	18%
	School	2	17%	1	100%	1	9%
	No need	2	17%	0	0%	2	18%
	if provide electricity	1	8%	0	0%	1	9%
	Project will not beneficial if we displaced to somewhere else	1	8%	0	0%	1	9%
	Provide electricity	1	8%	0	0%	1	9%
Key recommendation for maximizing project benefits for womens	Provide Electricity	7	58%	0	0%	7	64%
	Provide jobs	3	25%	0	0%	3	27%
	Women could be used electrical home appliances	2	17%	1	100%	1	9%
	No need	2	17%	0	0%	2	18%
	Cloth stitching training institute	1	8%	1	100%	0	0%
	Provide hospital	1	8%	0	0%	1	9%
	The project should not disturb the livelihood of women	1	8%	0	0%	1	9%
Project Negative impacts on women	Loss of livelihood	9	75%	0	0%	9	82%
	No negative impact	2	17%	1	100%	1	9%
	Loss of Homes	1	8%	0	0%	1	9%
	Loss of Agriculture crops	1	8%	0	0%	1	9%
	Don't Know	1	8%	0	0%	1	9%

Women Perceived Benefits from Project		Total		Location			
				Deh Halkani		Deh Mitha Ghar	
		Count	%	Count	%	Count	%
Pressing needs of women of the Project Area	School	10	83%	0	0%	10	91%
	Hospital	9	75%	0	0%	9	82%
	Mundir	3	25%	0	0%	3	27%
	Masjid	3	25%	0	0%	3	27%
	Electricity	3	25%	0	0%	3	27%
	Centre should become near from home	2	17%	1	100%	1	9%
	jobs	1	8%	0	0%	1	9%
	No need	1	8%	0	0%	1	9%

	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
	Doc. No.: SSEP/ARAP/ 01	Rev.: 00	Consultations	

4. Public Consultation & Information Disclosure

4.1 Overview

Public consultation and information disclosure is an essential component of the Environmental & Social assessment process, recognized by development agencies and national governments alike. Similarly, to incorporate the views, concerns, and suggestions of the project stakeholders, and to provide them with sufficient opportunity to become part and parcel of the development process, the importance of stakeholder engagement throughout the project lifecycle cannot be dismissed.

Stakeholder consultation also presents an opportunity for mutual information sharing and dialogue between the project proponent and stakeholders. An effective public consultation provides concrete suggestions that can help aid in improving project design, resolve conflicts at an early stage, identify management solutions to mitigate potentially adverse consequences and enhance perceived positive impacts.

4.2 Consultation Objectives



Effective stakeholder engagement enhances project beneficiaries' role from "participants" to "enabling agents" that proactively provide insights to project planning and implementation. The stakeholder consultation process for this sub-project has been designed to enhance the role of stakeholders and thereby contribute towards project success and sustainability. The specific objectives of the stakeholder engagement exercise carried out for the 120MW Solar Project are highlighted below:

- Inform all pertinent stakeholders about the SSEP, its context and objectives, salient design features, and potential social and environmental consequences.
- Facilitate and encourage interaction with project's beneficiaries, including primary stakeholders and secondary stakeholders to encourage project acceptance, sustainability and ownership
- Adopt an inclusive, participatory and transparent approach towards stakeholder engagement that provides opportunities for engagement with relevant stakeholders of all backgrounds, regardless of gender, race, ethnicity, income-class and ability
- Inform all stakeholders regarding the project, context and objectives, salient design features and potential social and environmental consequences
- Benefit from the local knowledge for enhancing strategic interventions for public space design and infrastructure improvement
- Identify specific community concerns and suggestions about proposed designs and develop solutions to ensure satisfactory results.

4.3 Stakeholders Identification & Analysis

Stakeholders are considered to be individuals or organizations which have an interest in the proposed project or understanding that would provide insight into concerns or affect the decision making related to the proposed project. On the basis of interest and role criteria, two types of stakeholders for the proposed project have been identified;

- a) **Primary stakeholders** are the entities directly affected by the project and the general public including men, women, and children residing in the project area. These are the people who are directly exposed to the project's impacts though they may not be at the receiving end of any direct benefit from the project. Alongside these entities, the project

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proponent also is categorized as a primary stakeholder (SSEP in this case) due to their direct linkage with the project.

- b) **Secondary stakeholders** are the people, department, institutions, and/or organizations that may not be directly affected by the project however they may influence the project, its execution and implementation. They include concerned departments that may have a role during various phases of the project, regulatory agencies such as Sindh EPA, Sindh Forest Department, Sindh Wildlife Department, other relevant departments such as Local Government Department, Non-Governmental Organizations (NGOs), the broader interested communities including academia & journalists, and general public.

4.3.1 Primary Stakeholders



Primary stakeholders, as defined earlier, includes individuals, groups, institutions, and other parties that may be directly or indirectly be affected by the project, positively or negatively. These include local communities, community members, and other parties that may be subject to direct impacts from the project. At this time, the primary stakeholders identified under this project include:

- All those situated within the AOI of the sub-project site – this includes the residential and commercial makeup in the surroundings of the site, which includes:
 - Residents of Hazratnabad
 - Pockets of selected minor commercial entities (including roadside eateries, small shops)
 - Social service providers such as schools and health facilities
- Government departments directly involved in the project – including departments like the Sindh Energy Department, Board of Revenue.

4.3.2 Secondary Stakeholders

As defined earlier, secondary stakeholders are groups or parties with interests in the project as it indirectly affects their work or has some bearing on it. While these groups may not be directly affected by the project, they may have a role in the preparation or implementation of it, or have a broader concern including for, but not limited to, information dissemination, awareness raising, community mobilization, and feedback. Parties identified under this include

- Sindh Environmental Protection Agency (SEPA)
- Sindh Wildlife Department (SWD)
- Sindh Solid Waste Management Board (SSWMB)
- National Forum for Environment & Health (NFEH)
- International Union for Conservation of Nature (IUCN)
- Urban Resource Centre (URC)
- Asia Petroleum Limited (APL)
- Sindh Forest Department (SFD)
- Institute of Environmental Studies, University of Karachi
- Department of Environmental Engineering, NED University
- Karachi Water & Sewerage Corporation
- National Transmission & Dispatch Company (NTDC)
- Karachi Development Authority (KDA)
- Sindh Katchi Abadis Authority (SKAA)

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4.4 Consultation & Participation Process

The project utilizes various methods of engagement as part of its contiguous interaction with the project stakeholders. For the engagement process to be effective and meaningful, a range of various techniques were applied that were specifically tailored to the identified stakeholder groups. For ascertaining the perceptions of different stakeholders about the project, consultations/ meetings were carried out at the following two levels:

4.4.1 Consultations with Primary Stakeholders

In order to align with international standards and good practices, local level engagement was provided to all stakeholders. The main purpose of this consultation exercise was to disseminate project information to relevant stakeholders and solicit their feedback at an early stage of the project, regarding potential issues and concerns based on the current project concept and design features. Identification of the stakeholders served as one of the main steps for designing an effective consultation process, where for this purpose, multiple site visits were carried out by the E&S team to identify the relevant stakeholders for consultation.

During the site visits and meetings, stakeholders were briefed about the background and scope of the sub-project at the beginning of the meeting sessions. Concerns and suggestions of the respondents were noted down by the team and pictorial evidence of the meetings were taken with the consent of the stakeholders. Any queries raised by the interviewees were responded to by the consultation team.

4.4.2 Consultations with Secondary Stakeholders

Secondary stakeholders that were identified in the form of departmental stakeholders (including governmental and non-governmental organizations) were approached for their feedback and suggestions on the project following a detailed description of the project provided to them to allow for an informed discussion to take place.

4.5 Consultation Feedback & Analysis

4.5.1 Primary Stakeholders

The comments, concerns, and suggestions received from stakeholders during the survey have been collated in this section, where these comments were helpful in the screening of potential environmental and social aspects of the project. Consultations were conducted during the site surveys and at different locations with the AOI to record views of the stakeholders related to the project.

A summary of the consultations carried out, along with the feedback obtained is highlighted below:





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Table 4.1 - Primary Stakeholder Feedback & Analysis



S#	Types of Consultation/ Meeting	Dates	Attendees	Discussion Summary
1	Key Informant Interview with Energy Department, Government of Sindh	12-6-2024	Mr. Mehfooz Ahmed Qazi Sheikh - Director Energy Department, Government of Sindh	<ul style="list-style-type: none"> • The SSEP is foreseen as a major project in harnessing indigenous energy sources and reducing the reliance on imported fossil fuels for power generation, where the project is also expected to aid in building resilience to climate change. The lessons learned from different successful solar projects such as the Sukkur Solar Project, Bahawalpur Solar Project, and Quaid-e-Azam Solar park have been taken into account in the planning of this project. • Even during the development of the projects, efforts have been made to reduce impacts to the extent possible, with examples including the alteration of boundaries for the current sub-project to minimize impacts related to resettlement and livelihood restoration. • Furthermore, all preparation for the sub-project's implementation has already taken place, including the allotment of land by the Government to the project (30-year lease agreement), the agreements with the different parties, etc. • All affectees should be compensated fairly on current market value, in compliance with Sindh Board of Revenue Policies and according to the guidelines provided by World Bank. Compensation for the loss of agricultural land and crops should also be included in the instruments prepared.
2	Key Informant Interview with KE	26-6-2024	Ms. Beena Riaz - DGM Environment	<ul style="list-style-type: none"> • KE, in this project, will not only aid SSEP in the development of the parks and their operations, but also provide them with a loop in loop out transmission line system to be able to effectively wheel the electricity generated into the existing network • Stress was placed on ensuring that the project be developed and implemented in line with international best



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S#	Types of Consultation/ Meeting	Dates	Attendees	Discussion Summary
				<p>practices to ensure that any untoward impacts are catered for</p> <ul style="list-style-type: none"> • Overall, there is a positive outlook on the project with there being expectations in it aiding the overall carbon footprint reduction, increased prosperity, and reduced energy shortfalls. • The KE team highlighted the following items to be specially considered during the assessment and then subsequently during the implementation of the project: <ul style="list-style-type: none"> ○ Occupational health and safety of workers ○ Resolution of community grievances from nearby communities ○ Flood risk to the site and the subsequent mitigation measures
3	Focus Group Discussion with Villagers at Hazratabad (Raza Muhammad Goth & Yaqoob Goth)	25-6-2024	<p>Mr. Aman Ullah Mr. Abdul Aziz Mr. Molvi Abbas Mr. Ubaid Ullah Mr. Haji Qadir Hashmi Mr. Murad Mr. Younus Josa Mr. Ali Asmat Kadelo Mr. Abdul Raheem Inam Mr. Qari Akbar Mr. Fazal-e-Malik</p>	<ul style="list-style-type: none"> • The people identified different parcels of land within the area demarcated for the project had been purchased by them from a third party (not Board of Revenue) where millions of rupees had been paid. The land was then proposed for development of a goth (Yaqoob Goth). They were, however, unable to produce any documents to substantiate their claims stating that no such documents were shared with them. • We're not aware of the project, but would support it if it were to compensate them for the money they have spent in the purchasing of land and its development (levelling, etc.) • Highlighted the lack of utilities and development in and around the area (including Hazratabad) including electricity, water, and gas, where there was hope that the development of the project would also bring with it further development in the area that would address these issues.



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S#	Types of Consultation/ Meeting	Dates	Attendees	Discussion Summary
4	Focus Group Discussion with Villagers at Deh Bund Murad	25-6-2024	Mr. Abdul Raheed Mr. Haider Usman Mr. Jamshed	<ul style="list-style-type: none"> Requested that the electricity from the project be supplied to them and the area so that they may be able to develop the area further and improve the quality of life. Furthermore, requests were also made for utilities, vocational training centers, and health care facilities. Requested that jobs be provided to locals
5	Focus Group Discussion with agricultural land workers at Deh Mitha Ghar	26-6-2024	Mr. Shiri Ram Mr. Shankar Lal Mr. Rano Mr. Sobha Ram Mr. Kalo Mr. Haresh Kumar Mr. Jeevan Das	<ul style="list-style-type: none"> The dominant crop currently being grown is cotton along with fodder crop, where the agricultural land is owned by certain individuals with the workers getting certain shares of the profits from the sales of the crops (on average 20% of the sales). These workers had also built small structures at the site and reside there. In terms of utilities and amenities in the area, the people highlighted how there is a lack of schools, water, electricity, gas, and hospitals. In case of emergencies, people have to go to Civil Hospital Malir. While the people were not aware of the project, they did show their acceptance for it and requested to be part of the development process through employment.
6	Focus Group Discussion with women of Zehri Goth	25-6-2024	3 ladies (did not disclose names)	<ul style="list-style-type: none"> The women highlighted that they come from very poor conditions and survive on agricultural work, with average incomes of around 15-20,000 rupees per month In terms of utilities and amenities in the area, the people highlighted how there is a lack of schools, water, electricity, gas, and hospitals. In case of emergencies, people have to go to Civil Hospital Malir. While the people were not aware of the project, they did show their acceptance for it and requested to be part of the development process through employment.



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S#	Types of Consultation/ Meeting	Dates	Attendees	Discussion Summary
7	Focus Group Discussion with women of Gul Muhammad Lotari Goth	25-6-2024	5 ladies (did not disclose names)	<ul style="list-style-type: none"> The women highlighted that they come from very poor conditions and survive on agricultural work, with average incomes of around 15-20,000 rupees per month In terms of utilities and amenities in the area, the people highlighted how there is a lack of schools, water, electricity, gas, and hospitals. In case of emergencies, people have to go to Civil Hospital Malir. While the people were not aware of the project, they did show their acceptance for it and requested to be part of the development process through employment.

4.5.2 Secondary Stakeholders

Secondary stakeholders were visited, and their feedback obtained on the project, where the comments, concerns, and suggestions received are collated in the table below:

Table 4.2 - Secondary Stakeholder Feedback and Analysis

S#	Types of Consultation/ Meeting	Dates	Attendees	Discussion Summary
8	Key Informant Interview with Wildlife Department, Government of Sindh	11-6-2024	Mr. Javed Ahmed Mahar - Chief Conservator, Sindh Wildlife Department	<ul style="list-style-type: none"> Given the overall mandate of the Sindh Wildlife department, which includes organic resources, animals, birds, fish, reptiles, vegetation, soil and water, it was stated that the SWD is a pertinent stakeholder for the project. The purpose of Sindh Wildlife Department is to preserve wildlife in the region but due to economic crisis government is not putting its total efforts towards the conservation of wildlife species. The distance of the site to the closest wildlife designated areas should be studied and accordingly, appropriate mitigation measures should be identified

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S#	Types of Consultation/ Meeting	Dates	Attendees	Discussion Summary
				<ul style="list-style-type: none"> The effective cleaning and maintenance of the solar panels was highlighted as being pivotal to the success of the project. The project should also employ experts who have executed similar projects across the world to improve the chances of this project being a success.
9	Key Informant Interview with Sindh Solid Waste Management Board	11-6-2024	Mr. Ghulam Nabi Sheikh – Assistant Director (HQ) SSWMB	<ul style="list-style-type: none"> The respondent said that if the project site is falling nearby the Land Fill Site of Jam Chakro it may affect the operations of LFS, but in reality, the project site is more than 2 kilometers distance from LFS on the other side of the road and the project has no direct impact on landfill. SSWMB is responsible to take care of the solid waste generated in Karachi as well as they are invested in waste to energy plant which is under-development besides Jam Chakro LFS. Given the interventions planned at Jam Chakro and the energy requirement, the department requested for electricity generated from the site to be provided to the site for sustainable development. The respondent said that the project is sustainable, and he is totally satisfied with the whereabouts of the proposed project activities as it is a World Bank funded project where the assessment should ensure to cover all potential impacts and required mitigation measures. Solar projects have been very successful in rural areas of Sindh which may be due to the fact that they usually cater to the needs of a small household or a village. Given the scale of this project, however, its effectiveness should be closely studied and ensured. The project should ensure that only the best materials in terms of panels and inverters are used.



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S#	Types of Consultation/ Meeting	Dates	Attendees	Discussion Summary
10	Key Informant Interview with the National Forum for Environment and Health (NFEH)	13-6-2024	Mr. Naeem Qureshi – Director, NFEH	<ul style="list-style-type: none"> The respondent started with stating that his organization provide awareness regarding environmental issues by conducting seminars, conferences, media interviews, corporate meetings, advocacy campaigns, technical sessions, verbal dialogues and community engagements. He suggested the above-mentioned platforms can also be utilized to provide awareness regarding proposed SSEP project for its ultimate success. He said that NFEH is emphasizing on the usage of clean green energy in-order to reduce carbon footprint. This project is not only environmentally friendly but also has a potential to lower down the prices of electricity bills, hence, should be supported by all parties across the board. The respondent highlighted that the project should be implemented in a way that it does not damage the ecology of the project area. The respondent suggested all possible outcomes of the project should be analyzed including zero defect feasibility outcome. The respondent suggested to involve local community in the project to ensure that it is a success The project must be fenced in a boundary wall for security, where CSR activities should be planned and implemented (where the department highlighted, they would be willing to work with SSEP on this).
11	Key Informant Interview with International Union for Conservation of Nature	13-6-2024	Dr. Babar Hussain - Natural Resource Management Coordinator, IUCN	<ul style="list-style-type: none"> The respondent said that IUCN is United Nation's affiliated organization not an NGO and it has done diversified projects in Pakistan including projects in which education facilities and employment opportunities are provided to the local community.



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S#	Types of Consultation/ Meeting	Dates	Attendees	Discussion Summary
				<ul style="list-style-type: none"> The respondent said that most IUCN projects involve community engagement, where they believe that the success of the project depends on the involvement of the local community. There is a high need of solar projects in the country because the cost of electricity is high as well as its availability is low. The respondent suggested to include any CSR activity in the project for the local communities.
12	Key Informant Interview with Urban Resource Centre (URC)	14-6-2024	Mr. Zahid Farooq - Joint Director, URC	<ul style="list-style-type: none"> The respondent said that URC is an NGO working in Karachi to highlight the problems of the city through Forums, Research & Documentation. He highlighted that if the affectees of the project raised a concern regarding unlawful compensation then URC will investigate the matter and help them to receive rightful compensation. The respondent expressed his views that displacing a person or a family means to disturb its educational life, political life, business/work life, social life, religion and mental health. He suggested to incorporate do not cut trees policy, provide cheap electricity to locals and to the citizens of Karachi under the project. He further raised a concern regarding solar panel theft and highlighted an incident that happened in a govt. school. The respondent said that in projects like these sometimes the actual capacity of electricity production is not utilized, if that is the case with this project then the project will become more costly in a way that foreign funding is granted for producing x amount of units but if those units are not generated, the proponent still have to pay for the x amount of units according to the agreement.



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S#	Types of Consultation/ Meeting	Dates	Attendees	Discussion Summary
13	Key Informant Interview with Sindh Environmental Protection Agency (SEPA)	14-6-2024	Mr. Imran Sabir - Director Natural Resources, SEPA	<ul style="list-style-type: none"> • Mr. Imran Sabir explained that according to Sindh Environmental Protection Act 2014 there are certain environmental guidelines that are applied to a specific developmental project the responsibility of SEPA is to make sure those environmental guidelines are followed accordingly. • In the proposed project the respondent suggested to take possible measures not to disturb existing natural habitat of the area. • He pointed out that not only tree cutting to be avoided in the project but also proposition of tree plantation should be a part included in project activities. • The project is beneficial as it will provide clean renewable energy and decrease the cost of import bills on Crude Oil, Gas and LNG. • The respondent said that most of the solar projects in Pakistan are successful, to get the most out from SSEP efficient design must be implemented, new technology in solar panels have increased its efficiency up to 70%. • He reported that timely maintenance of panels is very important, one of the negative impacts of the project could be sunlight reflection from the panels that can interfere with the vision of birds and could also increase the temperature of the area, other than that more than 1200 Acres of land is utilized in the project which is a significant amount. • The respondent highlighted that delays in the project will automatically increase the cost of the project, hence, delays should be avoided.



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S#	Types of Consultation/ Meeting	Dates	Attendees	Discussion Summary
14	Key Informant Interview with Asia Petroleum Limited	21-6-2024	Mr. Nadeem Ahmed Qureshi – General Manager Operations	<ul style="list-style-type: none"> The respondent pointed it out that the project site falling in Deh Halkani and Deh Bund Murad on Northern Bypass where heavy vehicles flow is frequent, during the construction phase movement of construction vehicles will jam (M-10). Also, movement of workers during the construction and for maintenance work from one side of the highway to the other may also cause accidents therefore pedestrian bridge needs to be constructed. The respondent highlighted that there are challenges of recycling large number of solar panels, the biggest challenge is that PV panels do not generate waste that is similar to packaging waste or consumables with a short lifetime. The project will bring job opportunities for locals and people living in distant areas, the project itself require both skilled and non-skilled labor in the construction process and after construction.
15	Key Informant Interview with Sindh Forest Department, Malir Office	25-6-2024	Mr. Mohammad Khan Jamali – Range Forest Officer, Sindh Forest Department	<ul style="list-style-type: none"> The project is not directly related to the forest because there are no forests in the project area, but the environmental and social impacts of the projects and their mitigation measure may be of concern. It is the responsibility of Sindh Forest department to protect and preserve forests and mangroves, it should be made sure that no cutting of trees carried out in this project. If cutting of trees is necessary, then there must be a provision of tree plantation. Tree plantation should be a must part of every project as we are facing climate change and deforestation in the country. The respondent inquired about the Corporate Social Responsibility (CSR) from Sindh Energy Department



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S#	Types of Consultation/ Meeting	Dates	Attendees	Discussion Summary
				<p>towards the local residents. He said if not too many services only electricity service should be provided to the local residents.</p> <ul style="list-style-type: none"> The respondent mentioned that Project site in Deh Halkani and Deh Bund Murad is situated on a rocky landscape where there are hazards of soil erosion and land sliding due to heavy rainfall, in both cases there is a great danger for solar panels to get damaged. The respondent inquired about the cost and arrangements of water resources for the cleaning of solar panels, he said that the actual cost should not exceed the available budget of maintenance.
16	Key Informant Interview with Institute of Environmental Studies - University of Karachi	25-6-2024	Dr. Umme Hani – Director, Institute of Environmental Studies - University of Karachi	<ul style="list-style-type: none"> The respondent said that there is no direct impact of SSEP on Environmental Studies Department, but our graduates do get jobs in organizations categorized as energy sector. There are no specific guidelines of Institute of Environmental Studies (UoK) to be implemented in the proposed project, but international environmental standards and Sindh Environmental Protection Agency's (SEPA) rules and regulations are demonstrated to the students. The project is beneficial for the locals community as well as for the residents of Karachi in a way that it will contribute to fulfill the deficit of electricity supply and provide job opportunities. The project has positive impacts in a way that it will provide low-cost green sustainable energy. The negative impacts of the project include the potential disturbance of flora and fauna.



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S#	Types of Consultation/ Meeting	Dates	Attendees	Discussion Summary
				<ul style="list-style-type: none"> Traffic management for the site located on Northern Bypass (M-10) has to be laid out properly for the construction and operation phases of the project. It is the responsibility of the proponent to conduct CSR activities in the project area that can be providing a healthcare facility for the locals, establishing a school for local children or plantation of trees/building a family park.
17	Key Informant Interview with Department of Environmental Engineering, NED University Karachi	26-6-2024	Dr. Mehmood Ali – Associate Professor, Department of Environmental Engineering - NED University	<ul style="list-style-type: none"> The respondent said that there are communication gaps between industries and academia, there should be more training program that are required to be taken place regarding research and development. Academia is full of new ideas to explore but they don't have the funding of industries to conduct research on these ideas that is one of the reason the country is suffering from excessive imports and haven't participated in new technological inventions in the world. The respondent considered that the project is sustainable but its cost is high, a significant portion of land is needed to be used as solar parks. With these projects the prices of solar panels will reduce and new technological advancements will increase the efficiency of solar panels. The respondent requested to utilize NED University students in the Environmental Impact Assessment (EIA) studies of developmental projects and on similar project like these so that they can gain some field and practical experience.
18	Key Informant Interview with Karachi Water & Sewerage Corporation (KWSC)	26-6-2024	Mr. Sikandar Ali Zardari – Chief Engineer	<ul style="list-style-type: none"> The respondent highlighted the importance of energy, where pumping of water and disposal of sewerage by KWSC also requires sufficient supply of electricity. The respondent said Karachi Water and Sewerage Services Improvement Project (KWSSIP) I, II and III are



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				<p>in the pipeline these are World Bank funded mega water projects to fulfill daily water needs of Karachi city, they require huge amount of power supply.</p> <ul style="list-style-type: none"> • With the current interventions in climate change investment in alternate or renewable energy has become very crucial, it is not possible to shutdown electricity generation from fossil fuel yet but if we start investing in green energy now, there will be a time come in future that fossil fuel energy is no longer needed. • If the project is conducted with due diligence, it will not only benefit the citizens of Karachi but also be sustainable. • The project is a must go, there is no need to delay the project but it should be completed with transparency. Foreign investments and companies must be encouraged and provided with space to invest in Pakistan.



4.6 Proposed Consultations Program

Stakeholder engagement and consultation is a continuous process, adopted to obtain real time information on the project, its impacts and means/ methods to improve implementation. The ongoing consultation process may be scheduled on a need basis with all stakeholders including but not limited to the concerned government departments, local administration, community representatives, and affected persons from the proposed project areas.

Consultations will then continue through the construction and operation stages of the project, where consultations with communities will take place quarterly, or more, depending on the number of concerns raised under each consultation. The type of stakeholder engagement activities to continue through the project include (but are not necessarily limited to):

- Community liaison during the implementation of the ARAP of the proposed sub-project
- Reporting on progress and implementation of the measures mentioned in the ARAP and their effectiveness
- Updating communities and other stakeholders about sub-project activities and recording of comments
- Implementation, and effectiveness of the grievance redress mechanism

Efforts will be made to maximize consultations during project implementation, where these will be carried out with the objectives to develop and maintain communication linkages between the PMU and the stakeholders, provide key project information to the stakeholders, and to solicit their views on the project and its potential perceived impacts, whilst ensuring that views and concerns of the stakeholders are incorporated during implementation with the objectives of reducing or offsetting negative impacts and enhancing the benefits. A preliminary framework for future consultations is also given below in line with best practices:



Table 4.3 - Proposed Consultations Framework

Description	Target Stakeholders	Timing	Responsibility
<ul style="list-style-type: none"> • Public awareness campaigns / information sharing sessions to share the ARAP with communities and other stakeholders • Location: various places in project area 	Communities within the project area, general public, and line departments/ agencies	At the start of activities	PMU/ Supervision Consultant (SC)
<ul style="list-style-type: none"> • Establishment of GRM and Grievance Redress Committees (GRCs) • Location: various places in project area 	Communities at/around the project area	Before commencement of project activities	PMU/ SC
<ul style="list-style-type: none"> • Consultations with the communities during ARAP implementation • Location: various places in project area 	Communities at/ around the project area	During project implementation	PMU/ SC
<ul style="list-style-type: none"> • Grievance Redressal • Location: various places in project area 	PMU staff; consultants; relevant line	During project implementation	PMU/ SC

	departments and communities		
<ul style="list-style-type: none"> Informal consultations & discussions Location: various places in project area 	Communities at/ around the project area	During project implementation	PMU/SC
<ul style="list-style-type: none"> Consultations with communities during internal monitoring Location: various places in project area 	Communities at/ around the project area	Construction stage	PMU/SC
<ul style="list-style-type: none"> Consultations with communities during Independent Monitoring Location: various places in project area 	Communities at/ around the project area	Construction stage	PMU/SC
<ul style="list-style-type: none"> Consultation workshops to review ARAP implementation, any outstanding issues and grievances, views, and concerns of communities; and actions needed to address them Location: site offices in project area 	Communities at/ around the project area, relevant line departments, relevant NGOs	Quarterly during implementation	PMU/SC

4.7 Information Disclosure Plan

The ARAP and the translation of its Executive Summary in the local languages (Urdu, Sindh, and Balochi) will be disclosed on the SSEP website along with the World Bank website. Physical copies will also be available at the SSEP PMU, any site offices established, the District and Assistant Commissioner offices, and any other relevant location as needed. Prior to project implementation. The AHs will be visited again and briefed thoroughly on the resettlement process, compensations entitled, the GRM, assistance available to them, and next actions by the SSEP PMU to ensure all AHs are well informed.

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5. Grievance Redress Mechanism

5.1 Introduction

The Grievance Redress Mechanism (GRM) is an institutional arrangement to provide stakeholders with an avenue to address grievances through a timely, transparent, and predictable process. A grievance is any formal communication expressing dissatisfaction about an action or lack of action, regarding the standard of service, works, or policy of the project management and its implementation mechanism. The GRM will be gender responsive, culturally appropriate, and readily accessible to stakeholders at no cost and without retribution.

5.2 Complaint Registration Channels

The Sindh Solar Energy Project (SSEP) will utilize several complaint registration channels including;

1. A dedicated telephone number available in the officer hours provided for stakeholders to register complaints.
2. The SSEP's website having the complaint form available in English, Urdu & Sindhi (<https://ssep.gos.pk/wp-content/uploads/2023/05/Complaint-Form-fillable.pdf>) and social media pages provide direct telephone numbers, email addresses for relevant officials, and a platform to file complaints or provide suggestions.

5.3 Six Stage GRM for SSEP

5.3.1 Stage – 1 Grievance Arousal;

- **Component 1 (Utility Scale Solar):** Submit complaints to the Secretary of the site-specific Grievance Redress Committee (GRC).
- **Component 2 (Distributed Solar):** Submit complaints to the management of the building. If unresolved, escalate to the Project Management Unit (PMU).
- **Component 3 (Solar Home System - SHS):** Approach the supplier/vendor. If unresolved, call the helpline (provided on the website/public notice). If still unresolved, contact the Social Safeguard Specialist in the PMU to register the complaint.

5.3.2 Stage – 2 Intake



If unresolved in the first stage, stakeholders may contact the PMU directly by:

- Registering complaints via the Complaint Register Book at the PMU office or respective sub-project site office.
- Using the online form available at the SSEP website (<https://ssep.gos.pk/>).
- Calling the Helpline set up by the Solar Service Provider (SSP).
- All complaints will be logged and tracked to ensure accountability and transparency throughout the resolution process.

5.3.3 Stage – 3 Acknowledgement (05 Days)

The Social Safeguard Specialist will send an acknowledgement of receipt within 05 business days to the complainant and all concerned parties. This acknowledgment will include a summary of the complaint, the steps that will be taken to resolve it, and contact information for follow-up. Complaints submitted to the helpline of the Solar Service Provider (SSP) will be



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resolved by provider with monthly reporting submitted to the PMU. This acknowledgment will include a summary of the complaint and the steps that will be taken to resolve it.

5.3.4 Stage – 4 Rapid Review (07 Days)

The Social Safeguard Specialist will conduct a Rapid Review and contact relevant stakeholders to facilitate resolution. If resolved, it will be noted as "Complaint Resolved" in the Complaint Register Book and Online Complaints Log. If unresolved or complex, it will be elevated to the next stage. The Rapid Review will take 07 business days. During this review, the Social Safeguard Specialist will ensure that all relevant information is collected and assessed impartially.

5.3.5 Stage – 5 Grievance Redress Committee (14 Days)

The Social Safeguard Specialist will convene a Grievance Redress Committee (GRC) at the PMU level to resolve the complaint. The GRC will include:

- **Chairperson:** Project Director, SSEP
- **Secretary:** Environmental & Social Development Officer, SSEP
- **Members:** Representative of the local Administration, Community Representative/LIC Chairman, Assistant Commissioner of the area, and Representative of the firm or Private Company (Concerned)

The Grievance Redress Committee (GRC) will discuss the complaint, determine action items, assign responsibilities, and set a timeline for resolution. Minutes of the Grievance Redress Committee (GRC) decision will be shared with the complainant and relevant stakeholders. The Grievance Redress Committee (GRC) will reconvene at the end of the 14-day period to assess progress. If unresolved, the complainant may request further handling by the Grievance Redress Committee (GRC) or elevation to the Project Steering Committee (PSC). The Grievance Redress Committee (GRC) will ensure all actions taken are well-documented and transparent.

5.3.6 Stage – 6 Project Steering Committee

The Project Director convenes a meeting of the Project Steering Committee (PSC), chaired by the Secretary of Sindh Energy Department (SED) and including a Consumer Advocate, to provide high-level oversight and guidance. The Project Steering Committee (PSC) issues directives for the timely and final resolution of the complaint and monitors implementation via the Project Management & Implementation Unit (PMIU). If unresolved after 03 Project Steering Committee (PSC) meetings, the process is documented, and the complainant is informed. The committee also reviews the effectiveness of the Grievance Redress Mechanism (GRM) process and suggests improvements.



5.4 Legal Remedy

The complainant can approach courts and discontinue efforts for resolution via the GRM at any stage in this process. This provision ensures that stakeholders have access to formal legal avenues if they are not satisfied with the GRM outcomes.

5.5 Creating Awareness About GRM

All information about grievance procedures, forms, and responses is available in Urdu, English, and Sindhi. Awareness-raising is conducted in Sindhi and Urdu, with pictorial printed



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material used for illiterate communities. Regular community meetings and information sessions are held to ensure all stakeholders are aware of the GRM.

5.6 Transparency & Record-keeping



The Social Safeguard Specialist in the PMU maintains detailed records of all complaints and coordinates with the concerned Managers and Monitoring and Evaluation Specialist. Complaints details are uploaded quarterly on the SSEP website (<https://ssep.gos.pk/>), and complainants are kept informed of all steps and decisions. Regular audits will be conducted to ensure compliance and transparency.

5.7 Exclusions

The following types of complaints are not considered:

- Anonymous complaints.
- GRM addresses only grievances directly related to the project's operations and impacts.
- Frivolous cases with inadequate supporting details.
- Cases involving decisions/policy matters where the complainant is not affected.
- Cases with quasi-judicial procedures or those sub judice.
- Grievances already disposed of by the GRM unless new evidence is submitted.
- Complaints about corruption, which should be dealt with separately.
- These exclusions ensure that the GRM remains focused on actionable and relevant grievances.



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6. Legal & Policy Framework

This section describes national and local laws and regulations that apply to the project and identifies gaps between local laws and World Bank policy requirements.

6.1 Land Acquisition Act (1894)

The Land Acquisition Act 1894 (LAA 1894) with its successive amendments is the main law regulating land acquisition for public purpose at federal and provincial levels through the right of exercise of eminent domain. The LAA has been variously interpreted by provincial governments, and some provinces have augmented the LAA by issuing provincial legislations.

Based on the LAA, only legal owners and tenants registered with the Land Revenue Department or with formal lease agreements are eligible for compensation/ livelihood support. For those without title rights, there are no laws in Pakistan either at federal level or in the province of Sindh.

6.2 Land Acquisition (Sindh Amendment) Act 2009

In Sindh, the LAA 1894 was amended in 2010 and a notice was issued on 9th July 2010 after the amendment was approved and passed by the Provincial assembly. The LAA 1894 as a result of this amendment was called the "Land Acquisition (Sindh Amendment) Act, 2009. There were 4 major changes adopted which are listed as follows:

- The Land Acquisition Act 1894 was renamed "Land Acquisition (Sindh Amendment) Act, 2009;
- Section 16 of the LAA was amended by adding the following statement "Provided that the amount of compensation is to be paid to the owner of land or deposited in civil court in his name by the acquisition authority before taking over possession of land";
- Market value of the land will be assessed on the date of the issuance of Section 6 instead of at the time of notification of Section 4. This is an important amendment as the compensation amounts assessed through this amendment will be much closer and realistic to the prevailing market rates at the time of declaration of award; and
- Section 28-A of the LAA 1894 dealing with the additional compensation was omitted through the amendments to the LAA 1894. The Section allowed the provision of an additional amount of 15% per annum on the compensation fixed from the time of issuance of Section 4 till the announcement of award.



6.3 Karachi Development Authority Order, 1957

The KDA Authority may enter into an agreement (Article 92: Power to purchase or lease by agreement) with any person for the acquisition from him by purchase, lease or exchange of any land which the Authority is authorized to acquire, or any interest in such land." The DA Order further provides for negotiations prior to acquisition of land as articulated in Articles 92 and 93 above.

6.4 Sindh Katchi Abadis (SKA), Act 1987

Under the Sindh Katchi Abadi Act (SKAA) 1987, settlements can be declared as official katchi abadis and allows the right of urban squatters to rehabilitations. The SKAA envisages the regularization and provision of infrastructure to all squatter settlements on government land



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which were established before 23 March 1985. The SKAA was tasked to coordinate the process of awarding leases to the residents and to provide infrastructure and other basic services. It is a provincial wide agency that operates in other towns and cities as well as Karachi. The Act stipulates the transfer of government owned land to the urban squatters or allocates funds for cash assistance. The Act need to be updated and should include all de-facto land titleholders and ownership of the all existing settlements.

6.5 World Bank’s OP 4.12 – Involuntary Resettlement

World Bank’s OP 4.12 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons. Project-related land acquisition or restrictions on land use may cause physical displacement (relocation, loss of residential land or loss of shelter), economic displacement (loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood), or both. The term “involuntary resettlement” refers to these impacts. Resettlement is considered involuntary when PAPs or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement. For these reasons, involuntary resettlement will be avoided. Where involuntary resettlement is unavoidable, it will be minimized and appropriate measures to mitigate adverse impacts on displaced persons (and on host communities receiving displaced persons) will be carefully planned and implemented.

OP 4.12 contains criteria on voluntary transactions, land donations, forced eviction and eminent domain; as well as a definition of replacement cost, including where inflation exists. It includes provisions to protect and support women, including documentation, training, access to credit and jobs.

This OP 4.12 applies to permanent or temporary physical and economic displacement resulting from the following types of land acquisition or restrictions on land use undertaken or imposed in connection with project implementation: (a) Land rights or land use rights acquired or restricted through expropriation or other compulsory procedures in accordance with national law; (b) Land rights or land use rights acquired or restricted through negotiated settlements with property owners or those with legal rights to the land, if failure to reach settlement would have resulted in expropriation or other compulsory procedures; (c) Restrictions on land use and access to natural resources that cause a community or groups within a community to lose access to resource usage where they have traditional or customary tenure, or recognizable usage rights. This may include situations where legally designated protected areas, forests, biodiversity areas or buffer zones are established in connection with the project; (d) Relocation of people without formal, traditional, or recognizable usage rights, who are occupying or utilizing land prior to a project specific cut-off date; (e) Displacement of people as a result of project impacts that render their land unusable or inaccessible; (f) Restriction on access to land or use of other resources including communal property and natural resources such as marine and aquatic resources, timber and non-timber forest products, fresh water, medicinal plants, hunting and gathering grounds and grazing and cropping areas; (g) Land rights or claims to land or resources relinquished by individuals or communities without full payment of compensation; and (h) Land acquisition or land use restrictions occurring prior to the project, but which were undertaken or initiated in anticipation of, or in preparation for, the project.

6.6 Reconciliation with WB’s OP 4.12



The main provisions affording reconciliation of the differences between LAA and World Bank’s OP 4.12 is depicted in the **Table 6.1**:



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Table 6.1 WB OP 4.12 Involuntary Resettlement and Pakistan Land Acquisition Act, 1894

Sr. No. WB	Involuntary Resettlement Policy Principles	Pakistan Land Acquisition Act	Approaches to Address the GAPS
1	Screen the project early on to identify past, present, and future Involuntary resettlement impacts and risks. Determine the scope of resettlement planning through a survey and/or Census of displaced persons, including a gender analysis, specifically related to resettlement impacts and risks.	No equivalent Requirements	Screened and categorized. Scope defined, social assessment and gender analysis undertaken.
2	Carry out meaningful consultations with affected persons, host communities, and concerned nongovernment organizations. Inform all displaced persons of their entitlements and resettlement options. Ensure their participation in planning, implementation, and monitoring & evaluation of resettlement programs. Pay particular attention to the needs of vulnerable groups, especially those below the poverty line, the landless, the elderly, women and children, and Indigenous Peoples, and those without legal title to land, and ensure their participation in consultations. Establish a grievance redress mechanism to receive and facilitate resolution of the affected persons' concerns.	No specific requirement. The decisions regarding land acquisition and the rate/ amount of compensation to be paid are published in the official Gazette which is notified in accessible places so that the people affected are informed Established under LAA through the formal land acquisition process at a point in time or through appeals to the court. Land Acquisition Collector (LAC) is the pre-land award authority to make decision on objections.	Complaints and grievances are resolved informally through project grievance redress mechanisms Consultations conducted, vulnerable groups identified and supported as relevant
3	Improve, or at least restore, the livelihoods of all affected persons. through (i) land based resettlement strategies when affected livelihoods are land based where possible or cash compensation at replacement value for land when the loss of land does not undermine livelihoods, (ii) prompt replacement of assets with access to assets of equal or higher value, (iii) prompt compensation at full replacement cost for assets that cannot be restored, and (iv) additional revenues and services through benefit sharing schemes where possible.	No equivalent Requirements	Livelihoods restoration is required and allowances are provided.
4	Improve the standards of living of the affected poor and other vulnerable groups, including women, to at least national minimum standards.	No additional support to vulnerable Households	Vulnerable households identified and support provided
5	Develop procedures in a transparent, consistent, and equitable manner if land acquisition is through negotiated settlement to ensure that those people who enter into negotiated settlements will maintain the same or better income and livelihood status.	Equivalent, Negotiation responds to displaced Persons requested price but no clear procedure.	Procedures put in place.
6	Ensure that displaced persons without titles to land or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of non-land assets.	Land compensation only for titled landowners or holders of customary rights.	Non-title holders are provided with resettlement and rehabilitation support. Provide with compensation for non-land assets.

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7	Prepare a resettlement plan elaborating on displaced persons' entitlements, the income and livelihood restoration strategy, institutional arrangements, monitoring and reporting framework, budget, and time bound implementation schedule.	No resettlement Plans is Prepared	Plans prepared and Disclosed
8	Conceive and execute involuntary resettlement as part of a development project or program. Include the full costs of resettlement in the presentation of project's costs and benefits. For a project with significant involuntary resettlement impacts, consider implementing the involuntary resettlement component of the project as a standalone operation.	No equivalent requirement	Addressed as relevant.
9	Pay compensation and provide other resettlement entitlements before physical or economic displacement.	No equivalent Requirement	Compensation Payment paid before construction occurs.
10	Monitor and assess resettlement outcomes, their impacts on the standards of living of affected persons, and whether the objectives of the resettlement plan have been achieved by taking into account the baseline conditions and the results of resettlement monitoring. Disclose monitoring reports.	Monitoring reports not Required	Monitoring reports prepared and disclosed

6.7 Specific Provisions for Disadvantaged or Vulnerable Individuals/Groups

One of the key OP 4.12 requirements on involuntary resettlement is to improve the standards of living of the affected poor and other vulnerable groups who may experience adverse impacts disadvantageously from the project intervention because of their disadvantaged/vulnerable status. Typically, those below poverty line, the landless or those without a title to land, the elderly, female headed households, women, transgender and children, comprise the disadvantaged or vulnerable groups within project's affected population.



To identify vulnerable persons/households, the following vulnerability indicators have been established for the SSEP and the household's exhibit one or a combination of the conditions below will be termed as vulnerable:

- The poor with their income level equal to or below minimum wage officially announced by the Government of Sindh;
- The land less or those without legal or legalizable title with their livelihood dependent to acquired land; and
- The disabled, elderly and female headed households including women, transgender, children, and religious minorities.

6.8 Provisions for Women PAPs

Acquisition of household assets can impact women disproportionately due to their fragile socio-economic status and it could be difficult for them to re-establish their socio-economic activities because of restricted mobility or illiteracy. Although the female household heads or the female having title of the acquired assets are eligible and entitled for compensation and



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benefits for their lost assets similar as to their male counterparts, but they may need special attention because of lack of resources, educational qualifications, skills, and work experience. To safeguards women needs and interests, following measures will be considered during impact assessment, census of affected persons, designing rehabilitation/resettlement provisions and preparation of the ARAP for the project under SSEP.



- Gender segregated socio-economic baseline and impact inventory linked to the entitled PAPs will be developed and women shall be compensated for assets in their name, meanwhile identified female headed households (if vulnerable) will be entitled for additional compensation as provided in the project's ARAP;
- During census and socio-economic assessment, meaningful consultations will be conducted with affected women through focus group discussions and individual meetings to identify the concerns and mitigation required in resettlement planning and accordingly the project ARAP will detail the scope of resettlement impact on women and wherever required separate gender action plan will be developed;
- In case of compensation for household assets, efforts will be ensured to pay compensation in the joint accounts (if possible) and in case of provision of replacement asset, i.e., land or structure (residential/Commercial) at resettlement/relocation site, it will be ensured that the provided asset is transferred in the joint ownership of the male and female counterparts of the affected households; and

6.9 Change of Project Scope or identification of Unanticipated Impacts

In case of change in scope of the project, or unanticipated impacts identified during the project implementation, which are not covered under the eligibility and entitlement provisions of the ARAP prepared for this specific project, additional eligibility and entitlement provisions will be determined in accordance with the resettlement requirements of the World Bank's OP 4.12 and the applicable legal framework of Pakistan. Accordingly, the ARAP will be updated, and following endorsement by SSEP and the World Bank, will be re-disclosed.

The present ARAP has been prepared in compliance with OP 4.12. The PAPs of the proposed project will face loss of structures, temporary loss of livelihood, and they will be compensated following the principles and requirement of this Standard.



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7. Compensation, Income Restoration, & Relocation

7.1 Project Resettlement Principles

This section defines the entitlements and eligibility of the affected persons and describes all resettlement assistance measures in terms of an entitlement matrix; identifies and documents all PAPs who will be eligible for transitional livelihood support; specifies all assistance to vulnerable groups and other special groups; and outlines opportunities for PAPs to derive appropriate development benefits from the project.

7.2 Compensation Eligibility

PAPs are identified as persons whose land, structures/ assets and/or livelihood are directly affected by the project. The eligible PAPs for compensation or at least rehabilitation provisions under the proposed project include:

- All landowner PAPs losing land or non-land assets i.e. crops and trees whether covered by legal title or traditional land rights.
- Non-titled occupants of land, such as squatters or encroachers.
- PAPs losing the use of structures and utilities, including titled and non-titled owners, registered, unregistered, tenants and leaseholders plus encroachers and squatters. Business owners PAPs, whether registered under national law or informal.
- Cultivators of crops or trees, irrespective of legal status of property relation to land.
- In the event of relocation, PAPs will receive transitional support to re-establish shelter and livelihoods.
- PAPs losing business, income/ livelihoods and employment of workers or a person or business suffering temporary effects, such as disturbance to business operations temporarily during construction, or permanently; and
- Vulnerable affected persons identified through the social impact assessment.

7.3 Compensation & Entitlement Policy



Compensation and entitlements have been determined on the basis of the provisions of the Resettlement Policy Framework (RPF), defined in the Environmental and Social Management Framework (ESMF) of the Sindh Solar Energy Project. **Table 7.1** provides an Entitlement Matrix for different types of losses assessed during the social impact assessment and census survey. It also covers the provisions for any unanticipated impacts arising during subproject implementation. Compensation and other assistances will be paid to PAPs prior to the start of the construction activities at the site and restricted to their business during the construction activities and any impacts that may happen after. In case the payment is delayed for more than a year from the date of valuation, the values will be indexed annually before the payment to PAPs.

7.4 Compensation for Losses

7.4.1 Agricultural Land (Permanent Losses)

- Legal/Legalizable landowners (including who may have customary rights) will be compensated in cash at replacement cost plus a 15% compulsory acquisition surcharge (CAS) free of taxes and transfer costs;



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- Leaseholders of public land will receive rehabilitation in cash equivalent to the market value of the lost harvest share once (if temporary impact) or twice (if permanent impact).
- Agricultural workers will receive cash indemnity corresponding to their salary (including portions in kind) for the remaining part of the agricultural year, along with provision of livelihood support.
- Squatters will be provided with one rehabilitation allowance equal to the market value of 1 gross harvest (in addition to crop compensation) for land use loss.

Given that there are 17 AHs at Deh Mitha Ghar that are working as agricultural workers, they will be provided with an indemnity equal to one month's salary, given that the Kharif season is finishing in one month. The amount for this salary, given that varied answers were received from the workers, will be tantamount to the currently proposed Minimum Wage by the Government of Sindh (PKR 37,000 per month). Furthermore, the workers will also be entitled to livelihood support which is described further in the transitional support sub-section ahead.

The 06 AHs identified as crop owners will be entitled to a rehabilitation allowance equal to the market value of 1 gross harvest (in addition to crop compensation) for land use loss. The market value for crops being harvested at the time of the survey are as follows:

1. PKR 270,000 per acre of cotton (where it is 9,000 PKR per maunds of cotton, and roughly 30 maunds per acre)
2. PKR 600,000 per acre of onion (where it is 4,000 PKR per maund of onion, and roughly 150 maund per acre)

7.4.2 Residential/ Commercial Land

For squatters on residential land, a self-service relocation allowance will be paid equivalent to one month of the official minimum wage⁶, where the official minimum wage will be in line with the Government of Sindh. The project will impact a total of 33 (potentially 32 if the grave site is excluded) structures. Community structures including mosques will be fully replaced or rehabilitated to ensure their level of provision, at a minimum, to the pre-project situation.

7.4.3 Structures (Residential/ Commercial/ Other)

Structures will be compensated in the form of cash compensation at replacement rates for affected structures and other fixed assets free of salvageable materials, depreciation, and transaction costs.

Renters or leaseholders of a house or structure are entitled to cash compensation equivalent to three months' rent or a value proportionate to the duration of the remaining lease period.



The project will impact a total of 31 residential and commercial lands on which structures have been built which will need to be compensated.

7.4.4 Livelihood/Business & Employment Losses

Businesses will be compensated for with cash compensation equal to one year of income for permanent business losses. Workers and employees will be compensated with cash for lost wages during the period of business interruption, with atleast 03 months of the basic minimum wage for Sindh.

⁶ Rs.37000/- per month for unskilled worker for the Financial Year 2024-2025



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In this regard, for Deh Halkani & Deh Bund Murad, there are no livelihood losses, given that people are not working on the land. At Deh Mitha Ghar, however, there will be 17 households that will face livelihood losses related to the loss of agricultural land (17 workers). In this regard, the workers will receive three months of compensation equal to the minimum wage rate fixed by the Government of Sindh in the financial budget for the year 2024-2025 and as agreed during consultation meetings with PAPs.

7.4.5 Crop Compensation

Crop compensation in cash at full market rate for one harvest (either winter or summer) by default for impacts caused by the project activities, where all crop losses will be compensated at market rates based on actual losses.

In this regard, the crop owners identified will be compensated for the crops grown over the 150-acre area to the.

7.4.6 Transport Allowance

Relocation assistance is to be paid for PAPs who are forced to move from their property. The level of assistance is to be adequate to cover transport costs and also special livelihood expenses for at least one month or based on the severity of the impact, where this has been calculated at a one-time payment of PKR 15,000.

7.4.7 Transition Allowance

Transitional allowances will be paid to AHs that have to leave the area (which in this case would be all of the AHs) following compensation, where the amount for this will be taken as the Government mandated minimum wage (PKR 37,000).

7.4.8 Vulnerability Allowance

A lump sum one time livelihood assistance will be paid on account of livelihood restoration support, where this has been calculated at three months of the government mandated minimum wage, i.e., PKR 111,000 for vulnerable households.

The aim of this payment is to assist severely displaced persons to overcome the short-term adverse impacts of land and asset loss and help them to readjust to their changed circumstances while they are making replacement earning arrangements. There will be a need to closely monitor such severely displaced persons. The one-time payment should, at the absolute minimum be adequate to provide them with equivalent level of livelihood than they had previously

7.4.9 Severity Allowance

Severity allowances are paid to those PAPs who lose more than 20% of their agricultural land (where this allowance is only restricted to those with legal title and claim to the land). Given that the people at site do not have any legal claim to the land, they will not be liable to this allowance.



7.5 Entitlement Matrix

Based on the above discuss eligibility criteria and compensation entitlements and keeping in view the nature of losses and implementation issues of the proposed project, an Entitlement Matrix (EM) has been prepared and provided below in **Table 7.1**.

Table 7.1 - Entitlement Matrix

Type of Loss	Specification	Affected Persons	Compensation Entitlements
Temporary Impacts on Arable Land (essentially for the construction phase of sub-projects, typically 3-4 months)	Access is not restricted, and existing or current land use will remain unchanged	Farmers/ Titleholders	<ul style="list-style-type: none"> No compensation for land provided that the land is rehabilitated/ restored to its former quality following completion of works; Compensation, in cash, for all damaged crops and trees Compensation, in cash, for income loss if any for the duration of the temporary impacts.
		Leaseholders (registered or not)	<ul style="list-style-type: none"> No compensation for land provided that the land is rehabilitated/ restored to its former quality following completion of works; Compensation, in cash, for all damaged crops and trees Compensation, in cash, for income loss if any for the duration of the temporary impacts
		Sharecroppers (registered or not)	<ul style="list-style-type: none"> Compensation, in cash, for all damaged crops and trees Compensation, in cash, for income loss if any for the duration of the temporary impacts
		Agricultural Workers	<ul style="list-style-type: none"> Cash indemnity corresponding to their salary (including portion in kind) for the period of temporary disturbance due to project activities
		Squatters	<ul style="list-style-type: none"> Compensation, in cash, for all damaged crops and trees, where these are owned by the squatters Compensation, in cash, for income loss if any for the duration of temporary impacts
Permanent impacts on arable land where access is restricted and/or land use will be affected	All adverse impacts on land use independent of severity of impact	Farmers/ Titleholders/ Landowners with customary rights	<ul style="list-style-type: none"> Land for land compensation with plots of equal value and productivity to the plots lost; ensuring economic viability of the new land and also ensuring that the PAPs livelihood is not negatively affected or; Cash compensation plus 15% CAS for affected land at replacement cost based on market value free of taxes, registration, and transfer costs
		Leaseholders (registered or not)	<ul style="list-style-type: none"> Renewal of lease contract in other plots of equal value/ productivity of plots lost, or; Cash equivalent to market value of gross yield of affected land for the

			remaining lease years (up to a maximum of 03 years)
		Sharecroppers (registered or not)	<ul style="list-style-type: none"> • Cash equivalent to market value of the lost harvest share once (temporary impact) or twice (permanent impact) • Provision of livelihood support (i.e. inclusion in the Livelihood Restoration Plan)
		Agricultural workers losing their contract	<ul style="list-style-type: none"> • Cash indemnity corresponding to their salary (including portions in kind) for the remaining part of the agricultural year. • Provision of livelihood restoration support (i.e., inclusion in Livelihood Restoration Plan)
	Additional provisions for severe impacts (land loss more than 20% of land holding)	Squatters	<ul style="list-style-type: none"> • One rehabilitation allowance equal to market value of 1 gross harvest (in addition to crop compensation) for land use loss
		Farmers/ Titleholders, and Leaseholders	<ul style="list-style-type: none"> • One severe impact allowance equal to market value of gross harvest of the affected land for 1 year (inclusive of winter and summer crop and additional to standard crop compensations)
Residential or Commercial Land		Titleholders/ people with customary rights	<ul style="list-style-type: none"> • Land for land compensation through provision of a plot comparable in value/ location to plot lost; or • Cash compensation plus 15% CAS for affected land at full replacement cost, free of taxes, registration, and transfer costs
Houses/ Structures	Full loss of structures; partial loss of structures; moving minor structure, kiosks and temporary structure	Owners	<ul style="list-style-type: none"> • Cash compensation at replacement rates for affected structures and other fixed assets free of salvageable materials, depreciation and transaction costs • In case of partial permanent impacts, full cash assistance to restore remaining structure, in addition to compensation at replacement cost for the affected part of the structure
		Tenants	<ul style="list-style-type: none"> • Affected tenants will receive cash compensation of a value proportionate to the duration of the remaining lease period, or three months, whichever is higher
Crops	Crops affected	All PAPs owning crops (including squatters)	<ul style="list-style-type: none"> • Cash compensation in cash at full market rate for one harvest (either winter or summer) by default for impacts caused by the project activities • All other crop losses will be compensated at market rates based on actual losses
Trees	Trees affected	All PAPs owning trees (including squatters)	<ul style="list-style-type: none"> • For timber/ wood trees, the compensation will be at market value of tree's wood content • Fruit trees; cash compensation based on lost production for the entire period

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			needed to re-establish a tree of equal productivity
Business/ Employment	Temporary or permanent loss of business or employment	All PAPs (including squatters, agriculture workers)	<ul style="list-style-type: none"> ● Business owner: <ul style="list-style-type: none"> ○ Cash compensation equal to one year income, if the loss is permanent ○ In case of temporary loss, cash compensation equal to the period of the interruption of business up to a maximum of six months or covering the period of income loss based on construction activity ● Workers/ Employees: Indemnity for lost wages for the period of business interruption up to a maximum of three months (to be calculated on the basis of Cost of Basic Needs (CBN) which is currently PKR 3,030 per person per month)
Relocation	Transport and transitional livelihood costs	All PAPs affected by relocation	<ul style="list-style-type: none"> ● Provision of sufficient allowance to cover transport expenses and livelihood expenses for one month (to be calculated on the basis of CBN per person)
Community Assets	Mosques, foot bridges, roads, schools, health center, etc.	Affected Community	<ul style="list-style-type: none"> ● Rehabilitation/ substitution of affected structures/ utilities (i.e. mosques, footbridges, roads, schools, health centers)
Vulnerable PAPs Livelihoods	Households below poverty line; female headed households; disabled persons	All vulnerable PAPs	<ul style="list-style-type: none"> ● Lump sum one time livelihood assistance allowance (to be calculated on the basis of CBN per person) on account of livelihood restoration support ● Temporary or permanent employment during construction or operation, where ever feasible ● Provision of one time PKR 15,000 moving assistance to cover transport expenses, where applicable
Unidentified Losses	Unanticipated Impacts	All PAPs	<ul style="list-style-type: none"> ● Deal appropriately during project implementation according to the WB OPs

Compensation will be paid to affectees via cross cheque in the name of the affected PAP, where the PMU will ensure and certify to the World Bank that all payments have been made to the affectees prior to contractor mobilization and initiation of civil works.

7.6 Basis for Resettlement Costs

For compensating the affected structures of different types and dimensions, the updated construction rates have been collected from the markets in the Project area. The rates applicable for new construction of similar types of structures have been used to calculate compensation on replacement cost basis for all affected structures. The depreciation for age will not be deducted and the salvage will be allowed to the PAPs as per entitlement provisions explained in the Entitlement Matrix. The Detail of unit rates has been provided in **Table 4.2** below.





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Table 7.2: Unit Rates of Assets⁷

Sr. No.	Description	Unit	Rate (PKR)
1	Land	Acre	1,500,000
1.1	Structures		
1.1.1	Pacca Construction	Ft ²	3,600
1.1.2	Semi Pacca	Ft ²	2,800
1.1.3	Katcha	Ft ²	1,800
1.1.4	Hut/ Straw/ Thatched	Ft ²	250
1.2	Boundary Wall		
1.2.1	Boundary Wall Pacca	Rft	300
1.2.2	Boundary Wall Semi Pacca	Rft	240
1.2.3	Boundary Wall Katcha	Rft	160
Based on current Market Rates ascertained from real estate agents nearby the project sites			

⁷ Based on current Market Rates ascertained from real estate agents nearby the project sites



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8. Resettlement Budget

This Section provides the total resettlement budget for the proposed project, estimated based upon the entitlement matrix and resettlement impacts discussed in the earlier sections of this ARAP.

8.1 Compensation for Crops

The existing conditions at the sub-project sites has been assessed in terms of crops, where according to the findings 150 acres of standing crops of different types will be under impact. Due to the loss of crops, the income of farmers will be affected. The amount of crop compensation was calculated at PKR 97,520,000.

8.2 Compensation for Residential Structures

Total compensation cost against affected residential structures of the 17 Residential Structures at Deh Mitha Ghar is 6,061,503 PKR and for the 12 Residential Structures at Deh Halkani & Deh Bund Murad at 15,883,740 PKR (where this includes transportation, relocation, vulnerability, and livelihood restoration costs, where further breakdown is provided in the appendices). Alongside this, affectees will be allowed to salvage construction materials and items from their structures in a dignified manner with no costs or charges being levied on them.

8.3 Compensation for Commercial Structures

Total estimated replacement cost of affected commercial (permanent/temporary) structures and assets is PKR. 3,486,000.

8.4 Compensation for Religious / Community Structures

The project impacts are envisioned on the one mosque and its sub-structures. The compensation for the affected structures will be PKR. 10,555,200.

Given that the mosque is still under construction, it can be demolished after providing the disclosing the ARAP information to the relevant AHs and persons in the area. Following this, compensation/ payment for reconstruction of the mosque will be paid to the relevant District Commissioner office to consult with the affected persons and rebuild in the area where they are relocated to.

8.5 Relocation Allowance



The residential displaced persons have to face interruption in their routine life and a period is required to re-establish or relocate their lost residential structure will be entitled for relocation support. The total relocation allowance for Deh Halkani & Deh Bund Murad is calculated at 148,000 PKR and 629,000 PKR for Deh Mitha Ghar.

8.6 Severity Allowance

Not applicable as there are no legal land owners who are being impacted under the project.

8.7 Employment Loss Allowance



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The employment loss allowance describes the income restoration and rehabilitation assistance to be paid to a total of 17 AHs. Each AH will be entitled for a one-time compensation of PKR 111,000 as 3 months of the official minimum wage mandated by the GoS (37,000 per month). The total amount for the employment loss has been calculated at 1,887,000 PKR.

8.8 Vulnerability Allowance

A total of 11 AHs have been identified as being vulnerable, based upon their income being below the poverty line. As described in EM, an additional one-time assistance of PKR 111,000 will be provided to each vulnerable AH, in addition to the livelihood/income disturbance allowance. The total amount of vulnerability assistance to be paid to AHs has been estimated to be PKR 111,000 for Deh Halkani & Deh Bund Murad, and PKR 1,110,000 for Deh Mitha Ghar.

8.9 ARAP Monitoring & Evaluation Cost

Monitoring and evaluation of this ARAP implementation process will be required through organizing internal monitoring arrangements. For this purpose, 5% equivalents from the compensation calculated for each site are allocated, i.e. 1,496,247 PKR for Deh Halkani & Deh Bund Murad and 5,179,075 PKR for Deh Mitha Ghar

8.10 ARAP Administration & Support Cost

The ARAP implementation and administrative activities will be a part of the existing departmental expenditure.

8.11 Contingencies

A 10% contingency has been added to adjust any cost escalation during ARAP and project implementation. An amount of PKR has been estimated for this purpose and added to the overall resettlement budget for the proposed project, where this comes down to PKR 10,358,150 PKR for Deh Mitha Ghar, and 2,992,394 PKR for Deh Halkani and Deh Bund Murad.

8.12 Total ARAP Budget



Based upon the estimates under various heads discussed in subsections above, the total resettlement cost of the proposed project has been estimated to be **34,413,681 PKR** for Deh Halkani & Deh Bund Murad, and **119,118,728 PKR** for Deh Mitha Ghar. In total, the resettlement cost for the two sites comes down to **153,532,409 PKR**. The resettlement cost is the IDA funding.

The detailed workings and calculations for compensation calculated for both sites (Deh Halkani & Deh Bund Murad, and Deh Mitha Ghar) are attached to this report as Appendix-V and Appendix-VI respectively.

8.13 RESETTLEMENT FUNDING/FINANCING PLAN

The SED and PD of SSEP will be responsible for ensuring the prompt provision and efficient flow of the funds for ARAP implementation. The PD will ensure that compensation is adequately funded and carried out in accordance with applicable rules and the present ARAP agreed by the AHs.



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9. Institutional Arrangements

This Chapter describes the institutional arrangements and roles and responsibilities of various entities involved in implementing this ARAP.

9.1 Institutional Roles and Responsibilities

The following entities are involved in the implementation of this ARAP:

- Sindh Energy Department (SED)
- SSEP PMU
- E&S Cell (ESC), SSEP PMU
- Supervision Consultant
- Contractor(s)
- Independent Monitoring Agency (IMA)
- Grievance Redress Committees (GRCs)

The roles and responsibilities of the above entities are described below.

9.2 Sindh Energy Department

The Sindh Energy Department through the SSEP is the Implementing Agency (IA) and has the overall responsibility for the implementation of this ARAP through the SSEP PMU as well as environmental and social management of the project. The department solves matters relating to development, generation, supply, and distribution of power, where it also determines rates of supply to consumers in bulk and otherwise and may prescribe tariffs within the province of Sindh. The Energy Department is also responsible for prospective planning, policy formulation, processing of power projects, and enactment of legislation with regard to power generation and distribution.

9.3 Project Management Unit (PMU)



Headed by a Project Director the SSEP PMU will be responsible for general execution of the project and streamline the E&S related tasks of different subprojects. The PMU will ensure compliance with the national as well as WB E&S requirements including preparation and implementation of this ARAP.

The PD SSEP carrying full administrative and financial authority will be the lead person for implementing the actions and corrective measures identified in this document and those that do not fall within the ambit of the LAA 1894..

The role of the PMU will include but will not be limited to the following activities:

- Coordinate with the provincial government, Planning & Development Department, Board of Revenue and other line departments as relevant;
- Maintain an oversight on the supervisory consultants during impact assessment, census and socio-economic surveys and consultations with PAPs during for ARAP preparation. This is to ensure consistency of approach and avoid variation in information obtained and given and to address issues immediately as they arise on site;



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- Coordinate with supervisory consultants, relevant line departments and units in SED to streamline resettlement planning activities;
- PMU ensure timely disclosure of approved ARAP on SED, and SSEP website, and translate the Summary of ARAP in local language for disclosure to PAPs;
- Review of ARAP implementation progress and ensure timely preparation of quality monitoring reports. The monitoring reports will be internally reviewed to ensure that quality final reports Ensure timely disclosure of approved ARAP and monitoring reports on the SED, and SSEP’s website; and
- Ensure timely disclosure of project related information to the PAPs, which may include information on project design and required land.



9.4 E&S Cell, SSEP PMU (EC)

A dedicated ESC has been established in the PMU of SSEP which will deal with the planning and implementation of all E&S related measures. The ESC will ensure timely preparation and quality of E&S documents prepared by the consultants and will endorse all E&S related documents to WB for review, clearance and disclosure. The team will be responsible for grievance redress and organizing training programs on social management aspects and the successful implementation of this ARAP.

The role and responsibilities of the ESC will be as follows.

- Carry out E&S screening of subprojects;
- Maintain records of all E&S proposals and screening decisions;
- Ensure that the supervisory consultant carries out their work consistently particularly for E&S mainstreaming in terms of process and outputs;
- Provide general oversight of the project activities to ensure compliance with this ARAP (and other E&S instruments);
- Function as grievance redress office on E&S matters/concerns raised by the PAPs during ARAP preparation and implementation or the complaints forwarded by the project GRC or by the PAPs unsatisfied with decision of the project GRC. The complaints will be registered and acknowledged to PAPs and addressed after investigating the facts and hearing the complainants;
- Facilitate information dissemination and consultation with PAPs including men, women and vulnerable groups in subproject areas on all matters affecting PAPs to ensure compliance with the requirements of this ARAP and WB’s OP 4.12;
- Ensure mobilization and facilitation of the PAPs in processing their compensation claims and receive compensation and coordinate with and support the local government department and PD throughout compensation disbursement process in office and field during preparation of claims and issuance of compensation vouchers against livelihood disturbance and compensation cheque for entitled rehabilitation allowances and income restoration measures under this ARAP provisions;
- Prepare sector-specific checklists, guidelines, reporting formats, and reports;
- Monitoring and evaluation of the implementation of the E&S plans or studies;
- Develop, organize, and deliver E&S training programs and workshops to agencies/entities implementing the Project, local governments or affected stakeholders;
- Prepare a bi-annual Implementation Report on the progress and status of the implementation of the E&S instruments;
- Conduct or supervise E&S compliance reviews of each subproject.
- Prepare E&S progress and performance reports with support from SC;
- Recruit E&S training personnel or agencies; and



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- Keep this ARAP (and other E&S instruments) updated, based on the project's operational experience.

9.5 Supervision Consultant

The PMU will engage a Supervision Consultant for supervising the construction contractors and supervision of the construction activities of the sub-projects. Their responsibilities will also include reviewing, planning and implementation of E&S documents including this ARAP. The Supervisory consultant will also be responsible for ensuring implementation of all aspects of this ARAP including consultations, preparation of compensation vouchers, payment of compensations, and maintaining complete record of the entire ARAP implementation process. The SC will assist the PMU in implementation of this ARAP and will carry out internal monitoring of its implementation. The social team of the SC will perform the following activities:

- Coordination with the PAPs for submission of compensation claims;
- Preparation and processing of compensation claims as per ARAP provisions;
- Stakeholder consultations and information dissemination on project implementation and compensation delivery;
- Monitoring of day-to-day ARAP implementation, identifications of implementation lags and issues, suggest corrective measure to update implementation plan for overcoming the lagging components in ARAP implementation; and
- Preparation of ARAP implementation progress (monthly) reports for review of PMU as well as periodic internal monitoring reports to be shared with WB for review and concurrence.

9.6 Contractor



The contractor(s) employed to undertake construction works for each package will also have a role to play in the implementation of the subprojects with regard to E&S aspects. The contractor's role will include the following:

- Develop a work plan based on the E&S requirements;
- Submit the E&S plan of work and schedule to the SSEP PMU;
- Conduct trainings and create awareness for all personnel and community on relevant E&S measures including resettlement issues; and
- Submit implementation reports on E&S aspects to the PMUs.

9.7 Grievance Redress Committees

The GRCs have already been described in Section 5 of this ARAP.



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10. Implementation Schedule

10.1 General

Implementation of this ARAP consists of compensation to be paid to the PAPs for loss of structures, livelihood/business disturbance, transitional allowance, and restoration of livelihood. The implementation of the ARAP will be adjusted and scheduled according to the overall project implementation. All activities related to the restriction on access to businesses are planned to ensure that compensation is paid prior to restriction on access to business, displacement, and commencement of civil works. Public consultation, internal monitoring, and grievance redress will be undertaken throughout the project duration. However, the schedule is subject to modification depending on the progress of the project activities. The erection of the boundary wall around the sub-project sites will only take place after all compensation have been paid for the project and rehabilitation measures are in place.

10.2 ARAP Implementation Schedule

An implementation schedule including various sub-tasks and timelines matching with the civil work schedule is proposed and presented in **Table 10.1**. However, the sequence may change, or delays may occur due to circumstances beyond the control of the Project and accordingly, the time can be adjusted for the implementation of the plan.

Table 10.1: Implementation Schedule

Sr. No.	Action	Responsibility	Proposed Date of Task Completion
1	Approval of ARAP Document	PMU and World Bank	End of August 2024
2	Urdu Translation of ARAP Summary	SSEP PMU	Within one week of approval
3	Notification of GRC (Site Level)	SSEP PMU	Within three weeks of approval
4	Notification of PMU-GRC	SSEP PMU	Already done
5	Notices to PAPs regarding their claims	SSEP PMU	Within five weeks of approval
6	Notices to PAPs to receive Business/ livelihood allowance	SSEP PMU	Within seven weeks of approval
7	Assistance to PAPs to open Bank accounts for receipt of cross cheques as compensation	SSEP PMU	Within nine weeks of approval
8	Payment of compensation and allowance to the PAPs	SSEP PMU	Within twelve weeks of approval
9	Submit Bi-Weekly Report by Supervision Consultant	SSEP PMU	Within twelve weeks of approval
10	WB's Approval of Compliance Report	WB	Within fourteen weeks of approval
11	Disclosure of ARAP Implementation	SSEP PMU	Throughout as per the sub-activities under implementation of ARAP



The remedial actions for the proposed project with proposed timeframe are depicted below in **Table 10.2**.



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Table 10.2: Social Safeguards Remedial Action Plan – SSEP Component 1 (Karachi Sites)

KEY ISSUES	ACTIONS AGREED	TIMELINE	RESPONSIBILITY
Valuation of Land Prices	<ol style="list-style-type: none"> Undertake an assessment, facilitated by an independently established valuation committee, to ascertain losses, entitlements, and the fair valuation of compensation for each individual PAP. Provide agreed additional Compensation amount to the PAPs. Ensure the timely and fair disbursement of the agreed-upon compensation package to all PAPs in line with the valuation committee's assessments. 	Preliminary phase of the implementation Stage of Component 1, subject to the approval of the subproject under SSEP	SSEP PMU, SC
Demolition of private Structures	<ol style="list-style-type: none"> Confirm and validate PAPs impacted by the project, ensuring accuracy in identifying those affected persons. Assess the losses and compensation amount Ensure the timely and fair disbursement for compensation to PAPs for any structures to be demolished in line with the valuation committee's assessments. Notify contractors to ensure that works are not conducted in areas with potential LAR impacts. 	Preliminary phase of the implementation Stage of Component 1, subject to the approval of the subproject under SSEP	SSEP PMU, SC
Regular Consultations with PAPs	<ol style="list-style-type: none"> Conduct ongoing and inclusive dialogues with all PAPs to incorporate their perspectives, concerns, and preferences into the land acquisition and compensation process. Document and share regularly with World Bank. 	Bi-Weekly consultations with PAPs throughout the project cycle.	PMU SSEP, SC
Effective GRM in Place	<ol style="list-style-type: none"> Disseminate and make aware PAPs regarding Project GRM. Notify GRCs and convene meetings regularly. Record, review and redress grievances timely. 	With immediate effect following the approval of ARAP from World Bank	PMU SSEP, SC
Monitoring, Auditing, and Reporting	<ol style="list-style-type: none"> Implement a robust system for ongoing monitoring, auditing, and transparent reporting of the compensation process for compliance with established standards. Mobilize Supervision Consultant's Resettlement Specialist. Submit first monthly ARAP compliance monitoring report to World Bank for review. 	Monthly	PMU SSEP, SC

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11. Monitoring & Reporting

11.1 Need for monitoring and reporting

Monitoring is a periodic assessment of planned activities providing midway inputs. Monitoring and reporting are critical activities in involuntary resettlement, helping in assessment of implementation progress, rescheduling key actions to meet the objective timelines, early identification of issues, resolve problems faced by the PAPs and develop solutions immediately to meet resettlement objectives. The monitoring mechanism for this project will have both internal monitoring (IM) and external monitoring (EM). Internally, the ARAP implementation for the project will be closely monitored by the SED through the PMU of SSEP, while for external monitoring the services of an independent external monitoring agency will be hired.

11.2 Internal monitoring

One of the main roles of the PMU will be to see to the proper and timely implementation of all activities described in this ARAP. Monitoring will be a regular activity to ensure timely implementation of ARAP activities. The PMU's Social Safeguards Specialist (SSS) with the assistance and support of SC of SSEP will collect information from the project site about implementation status of key activities, process and integrate the data in the form of biweekly report to assess the progress and results of ARAP implementation, and in case of delays or any implementation problem, adjust its work program accordingly.

Internal Monitoring (IM) indicators will relate to process outputs and results. The IM reports will be shared with WB on monthly basis and will be consolidated in the quarterly supervision consultants' progress reports for WB. Specific IM benchmarks will be based on the approved CAP and cover the following:



- a. Information campaign and consultation with PAPs;
- b. Status of payments of business/ livelihood allowance for loss of income;
- c. Ensure the gender mitigation measures are adhered to during the internal monitoring and reporting process; and
- d. Status of GRM and complaint resolution details.

The above gender disaggregated information will be collected by the SSS of both the PMU and SC. The day-to-day resettlement activities of the project will be monitored through the following means:

- a. Review of census information for all PAPs;
- b. Consultation and interviews with PAPs;
- c. Key informant interviews; and
- d. Community public meetings.

11.3 Monitoring by Supervision Consultant (SC)

As described earlier, the PMU will engage qualified and experienced Supervision Consultant to verify the PMU's monitoring information. The SC will monitor ARAP implementation and provide monthly monitoring reports. One of the main objectives of engaging the SC is to monitor ARAP implementation, identify issues and recommend corrective measures. The SC will review the internal monitoring reports, collect information from the field and determine whether resettlement objectives and goals have been achieved, more importantly whether

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livelihoods and living standards of PAPs have been restored/ enhanced and suggest suitable recommendations for improvement, through the appointment of their own social and resettlement specialists. The SC will identify the gaps in ARAP implementation and advise the PMU on E&S compliance issues. The key tasks during the SC's monitoring will include:

- a. Review and verify internal monitoring reports prepared by the PMU;
- b. Review of the socio-economic baseline, census and inventory of losses of PAPs;
- c. Impact assessment through social surveys of the affected persons;
- d. Consultations with PAPs, officials, community leaders for preparing review report;
- e. Verification of compliance of ARAP implementation; and
- f. Review of adherence to the gender mitigation measures during monitoring period.


The following will be considered as the basis for indicators in monitoring and evaluation of the project:

- a. Socio-economic conditions of the PAPs in the post-resettlement period;
- b. Communications and reactions from PAPs on entitlements and livelihood allowance;
- c. Quality and frequency of consultation and disclosure;
- d. Changes in income levels;
- e. Rehabilitation of vulnerable groups; and
- f. Grievance procedures, including recording, reporting, processing and redress of grievances.

The monitoring and reporting will continue until all ARAP activities have been completed.



11.4 Reporting requirements

The SSEP PMU will forward to World Bank a consolidated monthly ARAP monitoring report tracking whether compensation has been paid as per the implementation schedule prior to the relocation of PAPs and assets. Additionally, PMU will monitor project on an ongoing basis until a project completion report is issued and all ARAP actions have been implemented. All the resettlement monitoring reports will be disclosed to PAPs as per procedure followed for disclosure of resettlement plans by the PMU and will be available at SED, and SSEP websites, in Urdu and English languages.

 SINDH SOLAR ENERGY PROJECT	Abbreviated Resettlement Plan (ARAP)			 ENERGY DEPARTMENT <small>UNLEASH THE POWER OF ENERGY</small>
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
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APPENDICES



 SINDH SOLAR ENERGY PROJECT	Abbreviated Resettlement Plan (ARAP)			 ENERGY DEPARTMENT <small>UNLEASH THE POWER OF ENERGY</small>
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
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APPENDIX – I

ALLOTMENT ORDER FOR DEH HALKANI & DEH BUND MURAD





No.01-110-2022/SO-II/ **335**
GOVERNMENT OF SINDH
LAND UTILIZATION DEPARTMENT
Karachi, Dated: **25-01-2023**

To

The Deputy Commissioner (West),
KARACHI.

SUBJECT: ALLOTMENT OF LAND ADMEASURING 612-00 ACRES ON 30 YEARS LEASE IN FAVOUR OF M/S SINDH SOLAR ENERGY PROJECT-I FOR ESTABLISHMENT OF 175 MW SOLAR PROJECT IN DISTRICT WEST KARACHI.

In exercise of the powers conferred under Section 10 (1) of the Colonization of Government Lands Act 1912, read with Condition No.3 of the Statement of Conditions notified under notification vide No.01-32-2015/SO-VI/354, dated 11-06-2015, and constituted under condition No.7 of the Statement of Conditions on the recommendation of Scrutiny Committee in its meeting held on 08-09-2022, and with the approval of the Government (Provincial Cabinet) in its meeting held on 16-11-2022 (copy enclosed). The Land Utilization Department has been pleased to direct the Deputy Commissioner (West), Karachi, to lease out an area of **612-00** acres N.C. No.240 situated in Deh Halkani, within radius of 20 to 25 KM N.C. No.56 of Deh Bund Murad within radius of 10 to 15 KM & N.C. No.56 of Deh Hub within radius of 10 to 15 KM, Taluka Manghopir, District (West) Karachi, on 30 years lease in favour of **M/S Sindh Solar Energy Project-I** for establishment of 175 MW Solar Project. The sponsor shall pay the lease amount in three (03) installments payable at the start of each ten (10) years subject to the following rates and conditions:-

Cost of 1 acre for (1 st 10 years)	9090.90 x 10 = Rs.90909.09/-
Cost of 1 acre for (2 nd 10 years)	90909.09 x 2 = Rs.181818.182/-
Cost of 1 acre for (3 rd 10 years)	181818.182 x 2 = Rs.363,636/-

2. **The terms and conditions of the lease are as under:-**

- i. The lessee has to pay the lease company within six (6) months from the date of issue of allotment order, (as provided under Sub-Section 5 (a) of Section 10 of the Colonization of Government Lands Act,1912) failure to pay the lease money the allotment order automatically cancelled / withdrawn.
- ii. The lessee failed to use the land for the purpose for which it was granted or allotted within five (5) years from the date of grant, allotment, conversion or lease has expired the grant, allotment, conversion or lease of the land shall automatically stand cancelled and the amount deposited shall stand forfeited etc as provided under Sub-Section 5 (b) of Section (10 of the Colonization of Government Lands Act,1912).
- iii. The land shall only be used for the purpose for which applied and approved.

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- iv. The Lessee has paid the lease money, the prescribed Lease Deed for the allotted Area shall be executed, stamped and registered by the lessee at his own cost.
- v. If it is found that the lease order has been obtained through misrepresentation of facts or by producing bogus and fraudulent the land shall be liable for resumption.
- vi. Inter-alia all restrictions and conditions laid-down in the Statement of Conditions notified vide No.01-32-2015/SO-VI/354 dated 11-06-2015, shall be compiled strictly Terms & Conditions in this lease order are binding on both the parties.
- vii. The leased out land shall not be transferred or sold in any case. Provided that the Lessee shall be free to create a mortgage in favour of the financial institutions that will fund the project and Lessor shall sign the customary direct agreements(S) in relation there to if required by such financial institutions*.

Detail of Schedule

Price for 1 Acre for (99 years)	1 x 4840 x 1239.66942 = Rs.60,00,000/-
Price for 1 acre for 1 year	60,00,000/99 = Rs.60606.06/-
Cost of land [1 acre / year (15% as per RoE)	60606.06 x 15% = Rs.9090.90/-
Cost of 1 acre for (1 st 10 years)	9090.90 x 10 = Rs.90909.09/-
Cost of 1 acre for (2 nd 10 years)	90909.09 x 2 = Rs.181818.182/-
Cost of 1 acre for (3 rd 10 years)	181818.182 x 2 = Rs.363,636/-

*1 Acre = 4840 square yards
*RoE = Return on Equity

3. You are, therefore, requested to recover the amount as approved by the competent authority and all other legal formalities be completed after proper verification of any litigation etc, provided that there is no any legal hitch, stay/ restraining orders of any competent court and free from all encumbrances, under intimation to this Department. Also furnish attested copies of paid Challan duly verified by the Treasury Office, lease agreement deed, copy of Form-II / VF-VII, sketch of land for record of this Department.





SECRETARY TO GOVERNMENT OF SINDH
LAND UTILIZATION DEPARTMENT

A copy is forwarded to:-

1. The Senior Member, Board of Revenue, Sindh, Karachi.
2. The Principle Secretary, to Chief Minister Sindh Karachi.
3. The (Staff) Officer to Chief Secretary Sindh Government of Sindh Karachi.
4. The Secretary, Energy Department Government of Sindh.
5. The Commissioner, Karachi, Division Karachi.
6. The Project Director, Sindh Solar Energy Project, Government of Sindh, Karachi.

SECTION OFFICER
Land Utilization Department
Government of Sindh

11:06

 SINDH SOLAR ENERGY PROJECT	Abbreviated Resettlement Plan (ARAP)			 ENERGY DEPARTMENT <small>UNLEASH THE POWER OF ENERGY</small>
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
	Doc. No.: SSEP/ARAP/ 01	Rev.: 00	Appendices	

APPENDIX – II

ALLOTMENT ORDER FOR DEH MITHA GHAR





No.01-111-2022/SO-II/336
GOVERNMENT OF SINDH
LAND UTILIZATION DEPARTMENT
Karachi, Dated: 25/01-2023

To

The Deputy Commissioner (Malir),
KARACHI.



SUBJECT: ALLOTMENT OF LAND ADMEASURING 600-00 ACRES ON 30 YEARS LEASE IN FAVOUR OF M/S SINDH SOLAR ENERGY PROJECT-II FOR ESTABLISHMENT OF 175 MW SOLAR PROJECT IN DISTRICT MALIR KARACHI.

In exercise of the powers conferred under Section 10 (1) of the Colonization of Government Lands Act 1912, read with Condition No.3 of the Statement of Conditions notified under notification vide No.01-32-2015/SO-VI/354, dated 11-06-2015, and constituted under condition No.7 of the Statement of Conditions on the recommendation of Scrutiny Committee in its meeting held on 08-09-2022, and with the approval of the Government (Provincial Cabinet) in its meeting held on 16-11-2022 (**copy enclosed**). The Land Utilization Department has been pleased to direct the Deputy Commissioner (Malir), Karachi, to lease out an area of **600-00** acres N.C. No.41 situated in Deh Mitha Ghar, Taluka Shah Mureed, District (Malir) Karachi, on 30 years lease in favour of **M/S Sindh Solar Energy Project-II** for establishment of 175 MW Solar Project. The sponsor shall pay the lease amount in three (03) installments payable at the start of each ten (10) years subject to the following rates and conditions:-

Cost of 1 acre for (1 st 10 years)	3030.30 x 10 = Rs.30303.03/-
Cost of 1 acre for (2 nd 10 years)	30303.03 x 2 = Rs.60606.06/-
Cost of 1 acre for (3 rd 10 years)	60606.06 x 2 = Rs.121212.12/-

2. **The terms and conditions of the lease are as under:-**

- i. The lessee has to pay the lease company within six (6) months from the date of issue of allotment order, (as provided under Sub-Section 5 (a) of Section 10 of the Colonization of Government Lands Act,1912) failure to pay the lease money the allotment order automatically cancelled / withdrawn.
- ii. The lessee failed to use the land for the purpose for which it was granted or allotted within five (5) years from the date of grant, allotment, conversion or lease has expired the grant, allotment, conversion or lease of the land shall automatically stand cancelled and the amount deposited shall stand forfeited etc as provided under Sub-Section 5 (b) of Section (10) of the Colonization of Government Lands Act,1912).
- iii. The land shall only be used for the purpose for which applied and approved.

Contd....P/2

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- iv. The Lessee has paid the lease money, the prescribed Lease Deed for the allotted Area shall be executed, stamped and registered by the lessee at his own cost.
- v. If it is found that the lease order has been obtained through misrepresentation of facts or by producing bogus and fraudulent the land shall be liable for resumption.
- vi. Inter-alia all restrictions and conditions laid-down in the Statement of Conditions notified vide No.01-32-2015/SO-VI/354 dated 11-05-2015, shall be compiled strictly Terms & Conditions in this lease order are binding on both the parties.
- vii. The leased out land shall not be transferred or sold in any case. Provided that the Lessee shall be free to create a mortgage in favour of the financial institutions that will fund the project and Lessor shall sign the customary direct agreements(S) in relation there to if required by such financial institutions*.

Detail of Schedule

Price for 1 Acre for (99 years)	1 x 4840 x 413.22314 = Rs.20,00,000/-
Price for 1 acre for 1 year	20,00,000/99 = Rs.20202.02/-
Cost of land (1 acre / year (15% as per RoE)	20202.02 x 15% = Rs.3030.30/-
Cost of 1 acre for (1 st 10 years)	3030.30 x 10 = Rs.30303.03/-
Cost of 1 acre for (2 nd 10 years)	30303.03 x 2 = Rs.60606.06/-
Cost of 1 acre for (3 rd 10 years)	60606.06 x 2 = Rs.121212.12/-

*1 Acre = 4840 square yards

*RoE = Return on Equity

3. You are, therefore, requested to recover the amount as approved by the competent authority and all other legal formalities be completed after proper verification of any litigation etc, provided that there is no any legal hitch, stay/ restraining orders of any competent court and free from all encumbrances, under intimation to this Department. Also furnish attested copies of paid Challan duly verified by the Treasury Office, lease agreement deed, copy of Form-II / VF-VII, sketch of land for record of this Department.




SECRETARY TO GOVERNMENT OF SINDH
LAND UTILIZATION DEPARTMENT

A copy is forwarded to:-

1. The Senior Member, Board of Revenue, Sindh, Karachi.
2. The Principle Secretary, to Chief Minister Sindh Karachi.
3. The (Staff) Officer to Chief Secretary Sindh Government of Sindh Karachi.
4. The Secretary, Energy Department Government of Sindh.
5. The Commissioner, Karachi, Division Karachi.
6. The Project Director, Sindh Solar Energy Project, Government of Sindh, Karachi.

SECTION OFFICER
Land Utilization Department
Government of Sindh



11:03

 SINDH SOLAR ENERGY PROJECT	Abbreviated Resettlement Plan (ARAP)			 ENERGY DEPARTMENT <small>UNLEASH THE POWER OF ENERGY</small>
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
	Doc. No.: SSEP/ARAP/ 01	Rev.: 00	Appendices	

APPENDIX – III

ASSETS INVENTORY FOR DEH HALKANI & DEH BUND MURAD



	Abbreviated Resettlement Action Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
	Doc. No.: SSEP/ARAP/ 01	Rev.: 00	Appendices	

ASSETS INVENTORY FOR DEH DEH HALKANI / BUND MURAD, TEHSIL MANGHOPIR, DISTRICT WEST, KARACHI

ID. No.	Side of the Road	GIS Coord..	Contact No.	Name of DP	Father/Husband Name	Monthly Income	Ownership (Owner, Rentee & Other)	Structure Category	Affected Structure	Structr. Type	Size and Impact				Remarks
											Length	Width+ Height	Area (sq.ft & Rft)/ UNit	Impact (%)	
14 Structures in Deh Halkani, Tahsil Manghopir, District West, Karachi															
1	LEFT	25.0142, 67.0007	-	Abandoned Structure	-	-	-	Residential	Rooms	Pacca	15	12	180	100%	Semi pacca abandoned structure Surveyor observed that residential structure consist on two rooms and two bath room without roof.
								Residential	Rooms	Pacca	15	12	180	100%	
								Residential	Bath rooms	Pacca	4	5	20	100%	
								Residential	Bath rooms	Pacca	4	5	20	100%	
2	LEFT	25.02979, 67.00077	-	Declined to responed	-	-	-	Residential	Room	Pacca	15	12	180	100%	Respondent reluctant and declined to respond. Surveor observed that residential structure consists on two rooms, kitchen, bath room, veranda remaining open space covered with boundary wall.
								Residential	Room	Pacca	15	12	180	100%	
								Residential	Veranda	Pacca	15	12	180	100%	
								Residential	Kitchen	Pacca	5	5	25	100%	
								Residential	Bath rooms	Pacca	5	5	25	100%	
								Residential	Water Tank	Pacca	7	8	56	100%	
3	LEFT	25.028690, 67.001250	-	Plot boundary wall & Water Tank	-	-	-	Residential	Boundary Wall (open space)	Pacca	36	30	1080	100%	Residential plot structure covered with Boundry wall and 1 Water Tank without Roof (not completely build)
								Residential	Water Tank	Pacca	7	8	56	100%	




	Abbreviated Resettlement Action Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
	Doc. No.: SSEP/ARAP/ 01	Rev.: 00	Appendices	

ASSETS INVENTORY FOR DEH DEH HALKANI / BUND MURAD, TEHSIL MANGHOPIR, DISTRICT WEST, KARACHI

ID. No.	Side of the Road	GIS Coord..	Contact No.	Name of DP	Father/Husband Name	Monthly Income	Ownership (Owner, Rentee & Other)	Structure Category	Affected Structure	Structr. Type	Size and Impact				Remarks
											Length	Width+ Height	Area (sq.ft & Rft)/ UNIT	Impact (%)	
4	LEFT	25.028590, 67.001481	-	Unknown Outaq	-	-	-	Residential	Veranda / Outaq	Kacha	15.5	13	201.5	100%	It seems like Outaq/Veranda
5	LEFT	25.027913, 67.002308	-	Mr. Jamshaid	Muhammad Ali	50,000	Owner	Residential	Room	Pacca	15	12	180	100%	Respondent reluctant to give the survey detail (uncompleted - interview) semi pacca house, family reside in the house
									Room	Pacca	15	12	180	100%	
									Veranda	Pacca	12	30	360	100%	
									Kitchen	Pacca	6	5	30	100%	
									Bath rooms	Pacca	5	5	25	100%	
Boundary Wall (open space)	Pacca	827	-	827	100%										
6	RIGHT	25.03061, 66.96272	0312-1299931	Abdul Rasheed		30,000	Owner	Residential	Room	Pacca	16	12	192	100%	House of Abdul Rasheed is fully cemented and painted house consist on two rooms, kitchen, bath room, veranda remaining open space covered with boundary wall.
									Room	Pacca	16	12	192	100%	
									Veranda	Kacha	16	11	176	100%	
									Kitchen	Pacca	16	5	80	100%	
									Bath rooms	Pacca	16	5	80	100%	
Boundary Wall (open space)	pacca	16	23	368	100%										
7	RIGHT	25.029516, 66.963092	0343-2613677	Mr.Amjad	-	-	Owner	Residential	Room	Pacca	16	12	192	100%	Respondent are not available this information was given by neighbours. Surveor observed
									Room	Pacca	16	12	192	100%	
									Room	Pacca	18	14	252	100%	





	Abbreviated Resettlement Action Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
	Doc. No.: SSEP/ARAP/ 01	Rev.: 00	Appendices	

ASSETS INVENTORY FOR DEH DEH HALKANI / BUND MURAD, TEHSIL MANGHOPIR, DISTRICT WEST, KARACHI

ID. No.	Side of the Road	GIS Coord..	Contact No.	Name of DP	Father/Husband Name	Monthly Income	Ownership (Owner, Rentee & Other)	Structure Category	Affected Structure	Structr. Type	Size and Impact				Remarks
											Length	Width+ Height	Area (sq.ft & Rft)/ UNIT	Impact (%)	
									Veranda	Kacha	15	10	150	100%	that residential structure consists on three rooms, kitchen, bath room, veranda remaining open space covered with boundary wall.
									Kitchen	Pacca	16	5	80	100%	
									Bath rooms	Pacca	16	5	80	100%	
									Boundary Wall (open space)	Pacca	47	30	1410	100%	
8	LEFT	25.027913, 67.002308	-	Partially Built Abandoned Structure - 1	-	-	-	Residential	Boundary Wall	Pacca	30	36	1080	100%	Partially Built Abandoned Structure. Surveyor observed that residential structure consists on boundary wall.
9	LEFT	25.027582, 67.002462	-	Partially Built Abandoned Structure - 2	-	-	-	Residential	Boundary Wall	Pacca	30	36	1080	100%	Partially Built Abandoned Structure. Surveyor observed that residential structure consist on boundary wall.
10	RIGHT	25.028871, 66.969805	-	Partially Built Abandoned Structure - 3	-	-	-	Commercial	Room	Pacca	15	15	225	100%	Partially Built Abandoned Structure. Surveyor observed that residential structure consist on one room, water tank remaining open space covered with boundary wall.
									Water Tank	Pacca	10	11	110	100%	
									Boundary Wall	Pacca	76	100	7600	37%	
11	RIGHT	25.029531, 66.962881	-	Partially Built Abandoned Structure - 4	-	-	-	Residential	Boundary Wall	Pacca	25	30	750	100%	Partially Built Abandoned Structure. Surveyor observed that residential structure consist on boundary wall.





	Abbreviated Resettlement Action Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
	Doc. No.: SSEP/ARAP/ 01	Rev.: 00	Appendices	

ASSETS INVENTORY FOR DEH DEH HALKANI / BUND MURAD, TEHSIL MANGHOPIR, DISTRICT WEST, KARACHI

ID. No.	Side of the Road	GIS Coord..	Contact No.	Name of DP	Father/Husband Name	Monthly Income	Ownership (Owner, Rentee & Other)	Structure Category	Affected Structure	Structr. Type	Size and Impact				Remarks
											Length	Width+ Height	Area (sq.ft & Rft)/ UNIT	Impact (%)	
12	RIGHT	25.029462, 6.962692	-	Partially Built Abandoned Structure - 5	-	-	-	Residential	Boundary Wall	Pacca	60	48	2880	100%	Partially Built Abandoned Structure. Surveor observed that residential structure consist ony boundary wall.
13	RIGHT	25.028874, 66.953634	-	Religious Structure (grave)	-	-	-	Religious	Grave	pacca	-	-	-	100%	Client will be asked to avoid this
14	RIGHT	25.028619, 66.953857	-	Water Tank	-	-	-	Undefined	Water Tank	pacca	8	7	56	100%	Water Tank next to religious structure
02 Structures in Deh Bund Murad, Tahsil Manghopir, District West, Karachi															
15	LEFT	25.027861, 66.004970	-	Single Standing Boundary Wall	-	-	-	Undefined	Boundary Wall	pacca	598	0	598	100%	Single standing boundary wall with height of 8.3ft and length 598ft
16	LEFT	25.027633, 67.004048	-	Masjid (under-construction)	-	-	-	Religious	Masjid Structure	Pacca	40	40	1600	100%	A under-construction Masjid structure with water tank . Surveor observed that religious structure consist of Prayer area, water tank open space covered with boundary.
									Water Tank	Pacca	9	8	72	100%	
									Boundary (open space)	Pacca	210	72	15120	100%	



	Abbreviated Resettlement Action Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
	Doc. No.: SSEP/ARAP/ 01	Rev.: 00	Appendices	

APPENDIX – IV

ASSETS INVENTORY FOR DEH MITHA GHAR



	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
	Doc. No.: SSEP/ARAP/ 01	Rev.: 00	Appendices	

ASSETS INVENTORY FOR DEH MITHA GHAR, TEHSIL SHAH MUREED, DISTRICT MALIR, KARACHI

ID. No.	Side of the Road	GIS Coord..	Contact No.	Name of DP	Father/Husband Name	Monthly Income	Ownership (Owner, Rente & Other)	Structure Category	Affected Structure	Structr. Type	Size and Impact				Remarks
											Length	Width+ Height	Area (sq.ft & Rft)/ UNIT	Impact (%)	
23 Affected Households including 17 thatched/wooden in Deh Mithaghar, Tahsil Shah Mureed, District Malir, Karachi															
301	Right	25.140708, 67.044267	0334-30333628	Harichand	Chandan	20,000	Owner	House	Rooms	Wooden Thatched	21	17.5	367.5	100%	Wooden Thatched structure, Veranda without roof
									Veranda	Wooden Thatched	17	17.5	297.5	100%	
302	Right	25.14098, 67.044353	0307-9196393	Shree Ram	Mitha Ram	25,000	Owner	House	Room	Wooden Thatched	15	17	255	100%	Wooden Thatched structure
									Poultry Shed	Wooden Thatched	4.5	16.3	73.35	100%	
303	Right	25.140935, 67.04434	0306-1506209	Shankar Lal	Gopi Chand	25,000	Owner	House	Room	Wooden Thatched	15	12	180	100%	Wooden Thatched structure, Veranda without roof
									Veranda (Open)	Open	18	20	360	100%	
304	Right	25.141006, 67.04436	0300-4914082	Rano	Mangho	25,000	Owner	House	Room	Wooden Thatched	13	23	299	100%	Wooden Thatched structure, Veranda without roof
									Veranda (Open)	Open	20	19.7	394	100%	
									Kitchen	Wooden Thatched	5	6.5	32.5	100%	
									Shed	Wooden Thatched	9	9	81	100%	




	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
	Doc. No.: SSEP/ARAP/ 01	Rev.: 00	Appendices	

ASSETS INVENTORY FOR DEH MITHA GHAR, TEHSIL SHAH MUREED, DISTRICT MALIR, KARACHI

ID. No.	Side of the Road	GIS Coord..	Contact No.	Name of DP	Father/Husband Name	Monthly Income	Ownership (Owner, Rentee & Other)	Structure Category	Affected Structure	Structr. Type	Size and Impact				Remarks
											Length	Width+ Height	Area (sq.ft & Rft)/ UNIT	Impact (%)	
23 Affected Households including 17 thatched/wooden in Deh Mithaghar, Tahsil Shah Mureed, District Malir, Karachi															
305	Right	25.141084, 67.044357	-	Sobha Ram	-	15,000	Owner	House	Room	Wooden Thatched	13	13	169	100%	Wooden Thatched structure, Veranda without roof
									Veranda (Open)	Open	25	24.5	612.5	100%	
306	Right	25.140866, 67.044317	-	Kalo	Pehlaj	30,000	Owner	House	Room	Wooden Thatched	23	21	483	100%	Wooden Thatched structure, Veranda without roof
									Veranda (Open)	Open	20	20.5	410	100%	
									Shed	Wooden Thatched	7.6	6.6	50.16	100%	
307	Right	25.140834, 67.044329	0327-2046593	Haresh Kumar	Kalo	20,000	Owner	House	Room	Wooden Thatched	21	12	252	100%	Wooden Thatched structure, Veranda without roof
									Veranda (Open)	Open	25.5	25	637.5	100%	
308	Right	25.140756, 67.044295	0309-3178489	Jeewan Das	Sobha Ram	30,000	Owner	House	Room	Wooden Thatched	15	18	270	100%	Wooden Thatched structure, Veranda without roof
									Veranda (Open)	Open	15	17	255	100%	
									Shed	Wooden Thatched	6	18	108	100%	
309	Right	25.140749, 67.04433	0315-2414772	Muhammad Aslam	Khuda Bux	600,000	Owner	Agriculture	Agriculture Land	Cotton Crop	-	-	11 Acres	100%	Agriculture Land with Cotton Crop (Khareef) and Wheat & Onion In (Rabi)



	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
	Doc. No.: SSEP/ARAP/ 01	Rev.: 00	Appendices	

ASSETS INVENTORY FOR DEH MITHA GHAR, TEHSIL SHAH MUREED, DISTRICT MALIR, KARACHI

ID. No.	Side of the Road	GIS Coord..	Contact No.	Name of DP	Father/Husband Name	Monthly Income	Ownership (Owner, Rentee & Other)	Structure Category	Affected Structure	Structr. Type	Size and Impact				Remarks
											Length	Width+ Height	Area (sq.ft & Rft)/ UNIT	Impact (%)	
23 Affected Households including 17 thatched/wooden in Deh Mithaghar, Tahsil Shah Mureed, District Malir, Karachi															
310	Right	25.140744, 67.044333	-	Gulzar	Ibrahim	600,000	Owner	Agriculture	Agriculture Land	Cotton Crop	-	-	11 Acres	100%	Agriculture Land with Cotton Crop (Khareef) and Wheat & Onion In (Rabi)
311	Right	25.140746, 67.0443056	0315-3170870	Mumtaz Ali	Arz Muhammad	600,000	Owner	Agriculture	Agriculture Land	Cotton Crop	-	-	11 Acres	100%	Agriculture Land with Cotton Crop (Khareef) and Wheat & Onion In (Rabi)
312	Right	25.14729, 67.04788	0316-0284073	Shah Baig	Fazal Khan	30,000	Owner	House	Room	Wooden Thatched	16	13.3	212.8	100%	Wooden Thatched structure. Have 13 Goats.
									Kitchen	Wooden Thatched	8.4	8	67.2	100%	
									Wooden Boundary	Wooden Thatched	8	7	56	100%	
									Abandoned Room	Wooden Thatched	12	12	144	100%	
313	Right	25.147123, 67.047887	-	Wazeer	-	20,000	Owner	House	Room	Wooden Thatched	14	15	210	100%	Wooden Thatched structure. Have 7 sheeps.
									Kitchen	Wooden Thatched	8	7	56	100%	



	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
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ASSETS INVENTORY FOR DEH MITHA GHAR, TEHSIL SHAH MUREED, DISTRICT MALIR, KARACHI

ID. No.	Side of the Road	GIS Coord..	Contact No.	Name of DP	Father/Husband Name	Monthly Income	Ownership (Owner, Rentee & Other)	Structure Category	Affected Structure	Structr. Type	Size and Impact				Remarks
											Length	Width+ Height	Area (sq.ft & Rft)/ Unit	Impact (%)	
23 Affected Households including 17 thatched/wooden in Deh Mithaghar, Tahsil Shah Mureed, District Malir, Karachi															
314	Right	25.145987, 67.048535	0328-2500520	Nemon	Wall Jee	200,000	Owner	Agriculture	Agriculture Land	Onion crop	-	-	2 Acres	100%	Agriculture Land prepare for onion Crop.
315	Right	25.16474, 67.044135	0336-2576817	Gulzar Mari	Nasir	40,000	Owner	House	Room	Wooden Thatched	10	10	100	100%	Wooden Thatched structure, have 3 Goats, 2 Sheeps and 3 Chickens
									Veranda (Open) no roof	Wooden Thatched	54	54	2916	100%	
									Kitchen	Wooden Thatched	8	5	40	100%	
316	Right	25.163551, 67.043441	-	Abdul Sattar	-	90,000	Owner	Agriculture	Agriculture Land	Cotton Crop			2 Acres	100%	Agriculture land with Cotton Crop. Respondent not available surveyors give information to Hari.
317	Right	25.157108, 67.045897	0315-3429754	Saleem Brohi	-	-	Owner	Agriculture	Agriculture Land	Cotton & Fodder Crops	-	-	115 Acres	100%	115 Acres of agricultural land is also identified. The respondent refused to provide information regarding the land and structures.
318	Right	25.157207, 67.046096	-	Declined to Answer	-	-	Owner	House	Structure	Wooden Thatched	-	-	310	100%	Wooden Thatched Strurtcture identified on this portion of the project.





	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
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ASSETS INVENTORY FOR DEH MITHA GHAR, TEHSIL SHAH MUREED, DISTRICT MALIR, KARACHI

ID. No.	Side of the Road	GIS Coord..	Contact No.	Name of DP	Father/Husband Name	Monthly Income	Ownership (Owner, Rentee & Other)	Structure Category	Affected Structure	Structr. Type	Size and Impact				Remarks
											Length	Width+ Height	Area (sq.ft & Rft)/ UNIT	Impact (%)	
23 Affected Households including 17 thatched/wooden in Deh Mithaghar, Tahsil Shah Mureed, District Malir, Karachi															
319	Right	25.157207, 67.046096	-	Declined to Answer	-	-	Owner	House	Structure	Wooden Thatched	-	-	350	100%	Wooden Thatched Strurtcture identified on this portion of the project.
320	Right	25.157207, 67.046096	-	Declined to Answer	-	-	Owner	House	Structure	Wooden Thatched	-	-	210	100%	Wooden Thatched Strurtcture identified on this portion of the project.
321	Right	25.156961, 67.045265	-	Declined to Answer	-	-	Owner	House	Structure	Wooden Thatched	-	-	583	100%	Wooden Thatched Strurtcture identified on this portion of the project.
322	Right	25.156957, 67.045415	-	Declined to Answer	-	-	Owner	House	Structure	Wooden Thatched	-	-	380	100%	Wooden Thatched Strurtcture identified on this portion of the project.
323	Right	25.156993, 67.045616	-	Declined to Answer	-	-	Owner	House	Structure	Wooden Thatched	-	-	320	100%	Wooden Thatched Strurtcture identified on this portion of the project.



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APPENDIX – V

COMPENSATION CALCULATION FOR DEH HALKANI & DEH BUND MURAD





	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
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Summary of Compensation

Total Compensation for Deh Halkani & Deh Bund Murad		
S. No.	Item	Amount (PKR)
1	Compensation for Residential Structures (including relocation, transportation, vulnerability, and livelihood restoration costs)	15,883,740
2	Compensation for Commercial Structures	3,486,000
3	Compensation for Community Structures	10,555,200
Sub-Total (PKR)		29,924,940
4	Monitoring & Evaluation Cost (@5%)	1,496,247
5	Contingencies (@10%)	2,992,494
Total (PKR)		34,413,681



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Residential Structures Compensation

ID. No.	Coordinates	Name of DP	Monthly Income	Ownership (Owner, Renter & Other)	Structure Category	Affected Structure	Structure Type	Size and Compensation								
								Length	Width+ Height	Area (sq.ft & Rft)/ Unit	Rate / Sq. ft/ Rft. (PKR)	Total Compensation for Structure (PKR)	Transport Allowance (PKR)	Relocation Allowance (PKR)	Vulnerability Allowance (PKR)	Grand Total (PKR)
1	25.0142, 67.0007	Abandoned Structure	-	-	Residential	Rooms	Pacca	15	12	180	3,600	1,440,000				1,440,000
						Rooms	Pacca	15	12	180	3,600					
						Bath rooms	Pacca	4	5	20	3,600					
						Bath rooms	Pacca	4	5	20	3,600					
2	25.02979, 67.00077	Declined to respond	-	-	Residential	Room	Pacca	15	12	180	3,600	2,466,600	15,000	37,000		2,518,600
						Room	Pacca	15	12	180	3,600					
						Veranda	Pacca	15	12	180	3,600					
						Kitchen	Pacca	5	5	25	3,600					
						Bath rooms	Pacca	5	5	25	3,600					
						Water Tank	Pacca	7	8	56	3,600					
3	25.028690, 67.001250	Plot boundary wall & Water Tank	-	-	Residential	Boundary Wall (open space)	Pacca	36	30	1080	300	525,600				525,600
						Water Tank	Pacca	7	8	56	3,600					
4	25.028590, 67.001481	Autaq/ Sitting Area	-	-	Boundary Wall	Veranda / Outaq	Kacha	15.5	13	201.5	160	32,240				32,240
5	25.027913,	Mr. Jamshaid	50,000	Owner	Residential	Room	Pacca	15	12	180	3,600	3,038,100	15,000	37,000		3,090,100
						Room	Pacca	15	12	180	3,600					



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ID. No.	Coordinates	Name of DP	Monthly Income	Ownership (Owner, Rentee & Other)	Structure Category	Affected Structure	Structure Type	Size and Compensation								
								Length	Width+ Height	Area (sq.ft & Rft)/ UNIT	Rate / Sq. ft/ Rft. (PKR)	Total Compensation for Structure (PKR)	Transport Allowance (PKR)	Relocation Allowance (PKR)	Vulnerability Allowance (PKR)	Grand Total (PKR)
	67.002308					Veranda	Pacca	12	30	360	3,600					
						Kitchen	Pacca	6	5	30	3,600					
						Bath rooms	Pacca	5	5	25	3,600					
						Boundary Wall (open space)	Pacca			827	300					
6	25.03061 66.96272	Abdul Rasheed	30,000	Owner	Residential	Room	Pacca	16	12	192	3,600	2,385,600	15,000	37,000	111,000	2,548,600
						Room	Pacca	16	12	192	3,600					
						Veranda	Kacha	16	11	176	1,800					
						Kitchen	Pacca	16	5	80	3,600					
						Bath rooms	Pacca	16	5	80	3,600					
Boundary Wall (open space)	pacca	16	23	368	300											
7	25.029516, 66.963092	Mr.Amjad	-	Owner	Residential	Room	Pacca	16	12	192	3,600	3,558,600	15,000	37,000		3,610,600
						Room	Pacca	16	12	192	3,600					
						Room	Pacca	18	14	252	3,600					
						Veranda	Kacha	15	10	150	1,800					
						Kitchen	Pacca	16	5	80	3,600					
						Bath rooms	Pacca	16	5	80	3,600					
Boundary Wall (open space)	Pacca	47	30	1410	300											
8	25.027913, 67.002308	Partially Built Structure 1	-	-	Residential	Boundary Wall	Pacca	30	36	1080	300	324,000				324,000



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ID. No.	Coordinates	Name of DP	Monthly Income	Ownership (Owner, Renter & Other)	Structure Category	Affected Structure	Structure Type	Size and Compensation								
								Length	Width+ Height	Area (sq.ft & Rft)/ UNIT	Rate / Sq. ft/ Rft. (PKR)	Total Compensation for Structure (PKR)	Transport Allowance (PKR)	Relocation Allowance (PKR)	Vulnerability Allowance (PKR)	Grand Total (PKR)
9	25.02758 2, 67.00246 2	Partially Built Abandoned Structure - 2	-	-	Residential	Boundary Wall	Pacca	30	36	1080	300	324,000				324,000
11	25.02953 1, 66.96288 1	Partially Built Abandoned Structure - 4	-	-	Residential	Boundary Wall	Pacca	25	30	750	300	225,000				225,000
12	25.02946 2, 6.962692	Partially Built Abandoned Structure - 5	-	-	Residential	Boundary Wall	Pacca	60	48	2880	300	864,000				864,000
14	25.02861 9, 66.95385 7	Water Tank	-	-	Undefined	Water Tank	Pacca	8	7	56	3,600	201,600				201,600
15	25.02786 1, 66.00497 0	Single Standing Boundary Wall	-	-	Undefined	Boundary Wall	pacca	598	0	598	300	179,400				179,400



	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
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Commercial Structures Compensation

ID. No.	Coordinates	Name of DP	Monthly Income	Ownership (Owner, Rantee & Other)	Structure Category	Affected Structure	Structure Type	Size & Compensation							Remarks			
								Length	Width+ Height	Area (sq. ft. & Rft) / UNIT	Rate / Sq. ft / Rft. (PKR)	Total Compensation for Structure (PKR)	Compensation for Commercial Land (PKR)	Transport Allowance (PKR)		Relocation Allowance (PKR)	Vulnerability Allowance (PKR)	Grand Total (PKR)
10	25.028871 66.969805	Partially Built Abandoned Structure - 3	-	-	Commercial	Room	Pacca	15	15	225	3,600	810,000					810,000	Partially Built Abandoned Structure. Surveyor observed that residential structure consist on one room, water tank remaining open space covered with boundary wall.
						Water Tank	Pacca	10	11	110	3,600	396,000					396,000	
						Boundary Wall	Pacca	76	100	7600	300	2,280,000					2,280,000	





	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
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Religious Structures Compensation

ID. No.	Coordinates	Name of DP	Monthly Income	Ownership (Owner, Rentee & Other)	Structure Category	Affected Structure	Structure Type	Size and Impact				Structure Compensation (PKR)
								Length	Width+ Height	Area (sq.ft & Rft)/ UNit	Unit Rate (Sq ft. & R.ft)	
13	25.028874, 66.953634	Religious Structure (grave)	-	-	Religious	Grave	pacca	-	-	-	-	to be avoided
16	25.027633, 67.004048	Masjid (under-construction)	-	-	Religious	Masjid Structure	Pacca	40	40	1600	3,600	10,555,200
						Water Tank	Pacca	9	8	72	3,600	
						Boundary (open space)	Pacca	210	72	15120	300	



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	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
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APPENDIX – VI

COMPENSATION CALCULATION FOR DEH MITHA GHAR



	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
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Summary of Costs

Total Compensation for Deh Mitha Ghar		
S. No.	Item	Amount (PKR)
1	Compensation for Residential Structures (including relocation, transportation, vulnerability, livelihood restoration and employment loss)	6,061,503
2	Compensation for Crops	97,520,000
Total (PKR)		103,581,503
3	Monitoring & Evaluation Cost (@5%)	5,179,075
4	Contingencies (@10%)	10,358,150
Total (PKR)		119,118,728





	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
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Residential Structure Compensation

ID. No.	Coordinates	Name of DP	Monthly Income	Ownership (Owner, Rentee & Other)	Structure Category	Affected Structure	Structure Type	Size and Compensation										Remarks		
								Length	Width+ Height	Area (sq.ft & Rft) UNIT	Rate/ Sq ft/ Rft (PKR)	Total Compensation for Structure (PKR)	Compensation for Residential Land (PKR)	Transport Allowance (PKR)	Relocation Allowance (PKR)	Vulnerability Allowance (PKR)	Agricultural Land Loss Compensation (PKR)		Employment Loss Compensation (PKR)	Grand Total (PKR)
301	25.140708, 67.044267	Harichand	20,000	Owner	House	Rooms	Wooden Thatched/ Straw	21	17.5	367.5	250	166,250		15,000	37,000	111,000		111,000	440,250	Wooden Thatched structure, Verandan without roof
						Veranda	Wooden Thatched/ Straw	17	17.5	297.5	250									
302	25.14098, 67.044353	Shree Ram	25,000	Owner	House	Room	Wooden Thatched/ Straw	15	17	255	250	82,088		15,000	37,000	111,000		111,000	319,088	Wooden Thatched structure
						Poultry Shed	Wooden Thatched/ Straw	4.5	16.3	73.35	250									
303	25.140935, 67.04434	Shankar Lal	25,000	Owner	House	Room	Wooden Thatched/ Straw	15	12	180	250	45,000		15,000	37,000	111,000		111,000	319,000	Wooden Thatched structure, Verandan without roof
						Veranda (Open)	Open	18	20	360	0									
304	25.141006, 67.04436	Rano	25,000	Owner	House	Room	Wooden Thatched/ Straw	13	23	299	250	103,125		15,000	37,000	111,000		111,000	377,125	Wooden Thatched structure, Verandan without roof
						Veranda (Open)	Open	20	19.7	394	0									
						Kitchen	Wooden Thatched/ Straw	5	6.5	32.5	250									
						Shed	Wooden Thatched/ Straw	9	9	81	250									
305	25.141084, 67.044357	Sobha Ram	15,000	Owner	House	Room	Wooden Thatched/ Straw	13	13	169	250	42,250		15,000	37,000	111,000		111,000	316,250	Wooden Thatched structure, Verandan without roof
						Veranda (Open)	Open	25	24.5	612.5	0									
306	25.140866, 67.044317	Kalo	30,000	Owner	House	Room	Wooden Thatched/ Straw	23	21	483	250	133,290		15,000	37,000	111,000		111,000	407,290	Wooden Thatched structure, Verandan without roof
						Veranda (Open)	Open	20	20.5	410	0									



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																				portion of the project.
321	25.156961, 67.045265	Declined to Answer	-	Owner	House	Structure	Wooden Thatched/ Straw	-	-	580	250	145,000		15,000	37,000			111,000	308,000	Wooden Thatched Strurtcture identified on this portion of the project.
322	25.156957, 67.045415	Declined to Answer	-	Owner	House	Structure	Wooden Thatched/ Straw	-	-	380	250	95,000		15,000	37,000			111,000	258,000	Wooden Thatched Strurtcture identified on this portion of the project.
323	25.156993, 67.045616	Declined to Answer	-	Owner	House	Structure	Wooden Thatched/ Straw	-	-	320	250	80,000		15,000	37,000			111,000	243,000	Wooden Thatched Strurtcture identified on this portion of the project.




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Agricultural Crop Compensation

ID. No.	Coordinates	Name of DP	Monthly Income	Ownership (Owner, Rentee & Other)	Structure Category	Type	Type of Losses	Affected Land (acres)	Rate for Rehabilitation Allowance (PKR/acre)	Rehabilitation Allowance (PKR)	Rate for Crop Compensation (PKR/acre)	Crop Compensation (PKR)	Severity Allowance (PKR)	Grand Total (PKR)	Remarks
309	25.140749, 67.04433	Muhammad Aslam	600,000	Owner	Agricultural Land	Cotton Crop	Complete Land	11	370,000	4,070,000	270,000	2,970,000		7,040,000	Agriculture Land with Cotton Crop (Khareef) and Wheat & Onion In (Rabi)
310	25.140744, 67.044333	Gulzar	600,000	Owner	Agricultural Land	Cotton Crop	Complete Land	11	370,000	4,070,000	270,000	2,970,000		7,040,000	Agriculture Land with Cotton Crop (Khareef) and Wheat & Onion In (Rabi)
311	25.140746, 67.0443056	Mumtaz Ali	600,000	Owner	Agricultural Land	Cotton Crop	Complete Land	11	370,000	4,070,000	270,000	2,970,000		7,040,000	Agriculture Land with Cotton Crop (Khareef) and Wheat & Onion In (Rabi)
314	25.145987, 67.048535	Nemon	200,000	Owner	Agricultural Land	Onion crop	Complete Land	2	800,000	1,600,000	600,000	1,200,000		2,800,000	Agriculture Land prepare for onion Crop.
316	25.163551, 67.043441	Abdul Sattar	90,000	Owner	Agricultural Land	Cotton Crop	Complete Land	2	370,000	740,000	270,000	540,000		1,280,000	Agriculture land with Cotton Crop. Respondent not available surveyors give information to Hari.
317	25.157108, 67.045897	Saleem Brohi	-	Owner	Agricultural Land	Cotton & Fodder Crops	Complete Land	113	370,000	42,550,000	270,000	31,050,000		72,320,000	115 Acres of agricultural land is also identified. The respondent refused to provide information regarding the land and structures.



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APPENDIX – VII

ARAP SURVEY QUESTIONNAIRE



ID No. _____

Census & Assets Inventory Survey Form

(Both for Male and Female)

Name of the Interviewer:	Date:
Settlement:	District:
Coordinate North:	Coordinate East:
Respondent Name:	Father's Name:
Contact Number:	
Gender:	<input type="checkbox"/> 1- Male <input type="checkbox"/> 2- Female <input type="checkbox"/> 3- Transgender

Respondent Demographics

1. What is your Religion? 1- Muslim 2- Christian 3- Hindu 4- Qadiani 5- Other
2. What is your age? _____
3. Respondent Marital Status: 1. Married 2. Unmarried 3. Widow /Widower 4. Divorcee
4. What is your caste /ethnic group? _____
5. What is your mother tongue? 1- Urdu 2- Punjabi 3- Sindhi 4- Pashto 5- Balochi
 6- Kashmiri 7- Sariaki 8- Hindko 9- Barahvi 10- Other
6. What is your education?
 1- Never (Illiterate) 2- Less than Primary 3- Primary 4- Middle 5- Matric 6- Intermediate
 7- Diploma/Certificate 8- Graduate 9- Master & above 10. Other specify _____
7. What is the type of your family system? 1. Joint 2. Nuclear
8. What is your profession?

1. Sales of Construction Material	2. Contractors/Sub Contractors	3. Real Estate Agent
4. Sales of Grocery items	5. Sales of steel / iron	6. Pan Shop
7. Workshops	8. Tea Hotel	9. Puncture Making
10. Sales of Bamboo	11. Cobbler	12. Carpenter
13. Small Business Owner	14. Non-earning occupation (Internee / Apprentice)	15. Government servant
16. Private service	17. Skilled labour	18. Unskilled labour
19. Miscellaneous	20. Agriculture Related	21. Livestock Rearing
22. Poultry Farming	23. Other if Any, please specify _____.	99. Refusal to respond

9. Household composition? Male _____ Female _____ Transgender _____ Total _____

HOUSEHOLD INFORMATION

For Age 18 & above having NIC Y/N	Ask Age 5 and above family members			FOR ALL FAMILY MEMBERS							
	Last 12 month Activities	Education Passed	Literacy Status	Nationality	Mother Tongue	Religion	Marital Status	Age	Gender	Relation with HH	Name / S.No.
1- Yes 2- No	1- Do Work/Job 2- Searching Job 3- Student 4- HH Work 5- Other	0-Never 1-Less than Primary 2-Primary 3-Middle 4-Matric (Equal) 5-Inter (Equal) 6-Diploma/ Certificate 7-Graduate (Equal) 8-Master & above 9-Other	1-Literate 2-Illiterate	1-Pakistani 2-Other	1-Urdu 2-Punjabi 3-Sindhi 4-Pashto 5-Balochi 6-Kashmiri 7-Sariaki 8-Hindko 9-Barahvi 10-Other	1-Muslim 2-Chirstian 3-Hindu 4-Qadiani 5-Other	1-Unmarried 2-Married 3-Widow(er) 4-Divorced Note: if age <10 put code=1	Note: if age <1year enter code=0	1-Male 2-Female 3-Transgender	1-H.Head 2-Husband/Wife 3-Son/Daughter 4-Son/Daugh.in law 5-Grand Child 6-Father/Mother 7-Brother/Sister 8-Other Relative 9-Non-Ralative	
											-1
											-2
											-3
											-4
											-5
											-6
											-7
											-8
											-9
											-10
											-11

10. What is your average family monthly income (PKR)?

11. How much is your average family monthly expenditures (PKR)?

12. Number of years since you are staying here:

13. What is type of ownership of your Residential Structure (house)?

1. Self-Owned 2. Rented 3. Encroachers/Squatters

14. What is type of construction of your residential structure?

1. Pacca 2. Semi-pacca 3. Kacha 4. Hut 5. Other Specify
- _____

15. What are the sources of water for your domestic use?

1. Public Water Supply 2. Borehole (Hand Pumps / Electric Motor) 3. Tanker
4. Any other (Please Specify) _____

16. What are the sources of water agriculture if you practice?

1. Public Water Supply 2. Borehole (Hand Pumps / Electric Motor) 3. Tanker
4. Rain-fed 5. Any other (Please Specify) _____

17. Are you satisfied with the water quality? 1. Yes 2. No.

If no, please specify reasons:

18. Any prevalent diseases in the area?

19. Principle mode of transport from this locality to major urban centers?

1. Public 2. Private 3. Both

20. Do you know about the Project? 1. Yes: 2. No:

21. **ACCESS TO SOCIAL AMENITIES IN THE AREA (TICK)**

ACCESS TO SOCIAL AMENITIES IN THE AREA (TICK)			Amenities if available Satisfaction level		Reason for non-satisfaction
Social Amenities	Available	Not Available	Satisfactory	Non-Satisfactory	
1-Electricity	1-Yes	2-No	1	2	
2-Gas	1-Yes	2-No	1	2	
3-Water Supply	1-Yes	2-No	1	2	
4-Telephone/Mobile	1-Yes	2-No	1	2	
5-Sewerage/Drainage	1-Yes	2-No	1	2	
6-Dispensary/BHU	1-Yes	2-No	1	2	
7-School	1-Yes	2-No	1	2	
8-Hospital	1-Yes	2-No	1	2	
9-Road	1-Yes	2-No	1	2	
10-Transport	1-Yes	2-No	1	2	

11-Swearage System	1-Yes	2-No	1	2	
12-Solid waste Management	1-Yes	2-No	1	2	
13-Masjid	1-Yes	2-No	1	2	

22. Does any NGO Exist in your Area? 1. Yes 2. No
 (a) If yes, Name of NGO: _____ (b).Area of Work: _____

(c) Are you member of NGO? 1. Yes 2. No
 (d) If yes, role in NGO: _____

Harassment, Violence and Safety/Security Section

23. Have you ever faced harassment and violence during travelling in the public transport?

1. Yes 2. No (if no Skip to Q25)

24. If yes, what kind of harassment have you encountered most frequently?

1. Verbal harassment 2. Physical harassment 3. Obscene gestures
 4. Being followed or stalked 5. Others (Please specify) _____

25. Have you ever faced crime and security issue during traveling on the road?

1. Yes 2. No (if no Skip to Q28)

(a) If yes, how many times? _____ (b) Where? _____

26. What kind of security issues and criminal situation have you faced? :

27. What kind of assets you lost? 1. Cash 2. Mobile 3. Documents 4. Jewelry 5. Cloths 6 other

28. Any complaint or voice raised against violence and Harassment to NGO or Police?

1. Yes 2. No (if no Skip to Q31)

if yes where _____

29. Was action taken? 1. Yes 2. No

If yes, what result and consequences of that complaint? _____

30. Are you satisfied with the action taken? 1. Yes 2. No

If Not. Why? _____

Security and Protection

31. What kind of personal protections are required for **women's** during traveling?

1. Separate sitting place at bus station 2. Separate Queue
 3. Separate portion in bus 4. Security Staff 5. Other specify _____

32. Do you know about the proposed project? 1. Yes 2. No

33. Is your land or any asset being acquired due to the implementation of this proposed project?

1. Yes 2. No

(a) If yes, please give details _____

34. In your opinion, this project implementation will be beneficial for local communities?

	1. Yes		2. No
If Yes, then reason (Beneficial)	Response	If No, then reason (Non-Beneficial)	Response
1. Improved Transport facilities	1	1. Loss of Structures	1
		2. Loss of income	2
2. Creation of job opportunities	2	3. Dust & noise pollution	3
3. Increase in income generating activities	3	4. Reduction in number of Customers / Loss of business	4
4. Value enhancement of the project area	4	5. Movement problem / Traffic Issue	5
5. Any other (please specify)		6. Any other (please specify)	
99. No response	99	99. No response	99

35. In your opinion, what will be possible impacts of this project?

Impacts (During Construction)	Response	Impacts (After Construction)	Response
1. Loss of income	1	1. Better Water supply Facilities	1
		2. Improved sewerage Facilities	2
2. Dust & noise issue	2	3. Improved Waste management	3
3. Traffic issue/ Movement Problem	3	4. Employment Opportunities	4
4. Safety hazards due to Construction	4	5. Value enhancement of the project area	5
5. Privacy issues	5	6. Improvement in income	6
6. Loss of business	6	7. Improvement in Health conditions	7
7. Loss of Structures	7	8. Other Specify	8
8. Employment Opportunities	8		
9. Other Specify			
99. No response	99	99. No response	99

36. Any other concern with respect to the proposed Project?

37. What protective measures do you suggest to safeguard your interests?

38. In your opinion, what are some pressing needs of this area?

Assets Inventory Record

39. DETAIL OF AFFECTED PROPERTY/ASSETS

If land, provide following details:

Type of Land	Total Land (Acre/ Kanal/	Affected Land Acre/ Kanal/	Ownership Status of affected/acquired land (Tick the relevant)			
			Titled land	Leased (state/private) land	Encroached ROW	Don't Know
			(1)	(2)	(3)	(4)



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	Marla)	Marla				
	Guntha	Guntha				
1- Agriculture			1	2	3	4
2- Residential			1	2	3	4
3- Commercial			1	2	3	4
4- Forest/Orchard Land			1	2	3	4
5- Wasteland			1	2	3	4
Total Area			1	2	3	4

40. identification/details of joint owners of affected/acquired land and land parcels.

Sr. No.	Name	Type of Business	% Share	Documents Available (1. Yes / 2. No)		If Yes, What is the status?
1.				1	2	
2.				1	2	
3.				1	2	
4.				1	2	
5.				1	2	

41. Any effect on arable agricultural land, if yes provide following details: Yes No. skip -Q43

Type of Land	Total cultivated area AH owns (In Acre)	Affected Crop Area (in Acre)	Ownership Status 1. Owner 2. Tenant 3. Encroacher 4. Other	Production and Income		
				Production	Expenses	Net income
a) Crop area (Rabi)						
b) Crop Area (Kharif)						
c) Orchards Area						

**42. Any effect on Residential Structure due to Project:- Yes No. skip -Q43
if yes provide following details: type of building Single Storey Double Storey Triple Storey**

Structure	Type of Construction *	Nos. and size of Structure			% of affected Structures
		Nos	*Type Roof	Size (sft rft)	
a) Room					
b) Veranda					
c) Kitchen					
d) Bathroom/ Latrine					
e) Boundary Wall (rft)					
f) Hand Pump/Electric Motor					



g) Electric Meter			
h) Any other			

* 1- Kacha. 2- Semi-Pacca 3- Pacca 4-Wooden thatched / Straw

43. Any effect on Commercial Structures under Project Impact:- Yes No. skip –Q44
 Single Storey Double Storey Triple Storey

Kind Structure	Type and size of Structure		% Affected
	*Type of Construction	Size (sft)	
a)Shop			
b)Shed			
c)Kiosk			
d)Other			

* 1- Kacha 2- Semi-Pacca 3- Pacca 4- Wooden thatched / Straw 5- Type of Roof

44. Any Community/Public and Religious Structures under Project Impact:- Yes No. skip –Q45
 Single Storey Double Storey Triple Storey Land

Kind of Structure	Type and size of Structure			% Affected
	Type of Construction *	Type of Roof *	Size (sft)	

* 1- Kacha. 2- Semi-Pacca 3- Pacca 4- Wooden thatched / Straw 5- Type of Roof

45. Any effect on Cattle/Livestock Structure, Specify Category of Structure Yes No. skip –Q46

Structure	Type of Construction *	Nos. and size of Structure			% Affected
		Nos	Type of Roof *	Size (sft- rft)	
a-Room					
b-Shed					
c-Boundary Wall					
d- Hand Pump/Electric Motor					
e-Electric Meter					
f- Any other					

* 1- Kacha. 2- Semi-Pacca 3- Pacca 4- Wooden thatched / Straw

46. Water Supply assets/ fixture affected: Yes No. skip –Q47

Type of Asset	No.	Size (sft- rft)	Value (Rs.)	When Purchased / Installed (No. of Years.)	Type of Roof *	% Affected
a-Room						
b-Tube well bore hole						

c-Bore hole of electric water pump						
d-Well						
e-Water Box						
f-Other (specify)						

47. If any Shareholder/Tenant affected: Yes No. skip –Q48
If yes, provide the detail of shareholder/tenant:- _____ Nos.

Sr. No.	Name	Relationship with Respondent	Type of business	Share in % age	Document Available (Yes/No)
1.					
2.					
3.					
4.					
5.					

48. Any Private Owned Trees under project impact Yes No. (skip –Q49)

Sr. No.	Type	Number	Size / age		
			Mature	Girth	Sapling
1	Non-fruit Trees				
2	Fruit Trees				
3	Other if any				

49. Any Govt. Trees under Project Impact: Yes No (skip –Q50)

Sr. No.	Type	Numbers	Size/ age		
			Mature	Girth	Sapling
1	Non-Fruit Trees				
2	Fruit Trees				
3	Other if any				

50. **Employee Description: How many employees do you have? No.** _____

Sr. No.	Name of Employee	Nature of Employment	Average Monthly Wage (Rs.)
1			
2			
3			
4.			

RELOCATION OPTION

51. Do you have some other place to move? 1. Yes 2. No (skip to Q52)

- If Yes: a) How far away from this place? _____(km) place located at _____.
- b) Do you own that place? 1. Yes 2. No
- c) if No, who own that place? _____

52- Remarks to be noted (In case possible PAP does not have any option to move):

COMMENTS / OBSERVATIONS

53. General Remarks of the Respondents: (optional) [1] Given [0] None Given

54. Pressing Needs of the Respondent:

55. Closing observations by interviewer (observe and respond)

Checked by	
Data Processed By	

 SINDH SOLAR ENERGY PROJECT	Abbreviated Resettlement Plan (ARAP)			 ENERGY DEPARTMENT <small>UNLEASH THE POWER OF ENERGY</small>
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
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APPENDIX – VIII

PICTURES



	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
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25/06/24 – Deh Halkani & Deh Bund Murad – Meeting and discussion with people claiming to own the land (no legal claims)



25/06/24 – Deh Halkani & Deh Bund Murad – Meeting and discussion with people claiming to own the land (no legal claims)




25/06/24 – Deh Halkani & Deh Bund Murad – Meeting with AH for Assets Inventory & Census Survey



25/06/24 – Deh Halkani & Deh Bund Murad – Meeting with AH for Assets Inventory & Census Survey



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Latitude: 25.027919
Longitude: 67.002085
Elevation: 56.03±3.00 m
Accuracy: 3.54 m
Time: 25-06-2024 11:52:53
Note: Structure 5

25/06/24 – Deh Halkani & Deh Bund Murad – Meeting with AH for Assets Inventory & Census Survey



Latitude: 25.028674
Longitude: 66.953634
Elevation: 41.60±3.00 m
Accuracy: 3.54 m
Time: 25-06-2024 14:08:39
Note: Religious structure

25/06/24 – Deh Halkani & Deh Bund Murad – Gravesite at the extreme left end of the site



Latitude: 25.029411
Longitude: 66.962279
Elevation: 41.96±3.00 m
Accuracy: 3.54 m
Time: 25-06-2024 14:27:36
Note: Structure 8



25/06/24 – Deh Halkani & Deh Bund Murad – Measurement of structure



Latitude: 25.027913
Longitude: 67.002308
Elevation: 55.10±3.00 m
Accuracy: 3.54 m
Time: 25-06-2024 12:07:45
Note: Partially built abandoned Structure 1

25/06/24 – Deh Halkani & Deh Bund Murad - Partially Built Structure



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01/07/24 – Deh Halkani & Deh Bund Murad – Single Erect Wall (unclaimed)



01/07/24 – Deh Halkani & Deh Bund Murad – Under Construction Mosque



01/07/24 – Deh Halkani & Deh Bund Murad – Measurements by Survey Team



01/07/24 – Deh Halkani & Deh Bund Murad – Abandoned Structure



	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
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27/06/24 – Deh Mitha Ghar – Structures of Agricultural Workers at Site



27/06/24 - Deh Mitha Ghar – Information Disclosure of Project and Census Survey



27/06/24 – Deh Mitha Ghar – Consultations with locals and census survey



27/06/24 – Deh Mitha Ghar – Agricultural Crops Observed at Site



	Abbreviated Resettlement Plan (ARAP)			
	Solar Installations at Deh Halkani & Deh Bund Murad (120 MW), & Deh Mitha Ghar (150 MW)			
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27/06/24 – Deh Mitha Ghar – Consultations with locals and census survey



27/06/24 – Deh Mitha Ghar – Agricultural Crops observed at the site



28/06/24 – Deh Mitha Ghar – Consultations with locals and census survey



28/06/24 – Deh Mitha Ghar – Measurement of Structures



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28/06/24 – Deh Mitha Ghar – Consultations with women



28/06/24 – Deh Mitha Ghar – Consultations with women



28/06/24 – Deh Mitha Ghar – Census Survey



28/06/24 – Deh Mitha Ghar – Consultations with women



	Abbreviated Resettlement Plan (ARAP)			
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08/07/24 – Deh Mitha Ghar – Visit to project site with Mukhtiarkar and Tappedar



08/07/24 – Deh Mitha Ghar – Visit to project site with Mukhtiarkar and Tappedar



08/07/24 – Deh Mitha Ghar – Site Visit with Mukhtiarkar and Tappedar



08/07/24 – Deh Mitha Ghar – Site Visit with Mukhtiarkar and Tappedar

