

INTEGRATED SAFEGUARDS DATA SHEET CONCEPT STAGE

Report No.: ISDSC1229

Date ISDS Prepared/Updated: 16-Apr-2014

Date ISDS Approved/Disclosed: 16-Apr-2014

I. BASIC INFORMATION

A. Basic Project Data

Country:	Morocco	Project ID:	P131256
Project Name:	Noor II and III Concentrated Solar Power Project (P131256)		
Task Team Leader:	Fanny Kathinka Missfeldt-		
Estimated Appraisal Date:	06-Jun-2014	Estimated Board Date:	18-Sep-2014
Managing Unit:	MNSEE	Lending Instrument:	Specific Investment Loan
Sector(s):	Other Renewable Energy (95%), Public administration- Energy and mining (5%)		
Theme(s):	Other environment and natural resources management (100%)		
Financing (In USD Million)			
Total Project Cost:	3307.81	Total Bank Financing:	350.00
Financing Gap:	428.90		
Financing Source			Amount
Borrower			490.00
International Bank for Reconstruction and Development			350.00
African Development Bank			252.00
Clean Technology Fund			218.00
EC European Commission			123.43
EC European Investment Bank			480.00
FRANCE French Agency for Development			68.57
GERMANY KREDITANSTALT FUR WIEDERAUFBAU (KFW)			896.91
Total			2878.91
Environmental Category:	A - Full Assessment		
Is this a Repeater project?	No		

B. Project Objectives

The project development objectives (PDO) of the Noor II and III projects are (i) to scale-up generation of solar-based electricity in Morocco through an increase of the Noor "Solar Complex" capacity; (ii) pilot solar tower technology in Morocco; and (iii) to mitigate greenhouse gas emissions and local environmental pollutants.

The project will also contribute to Morocco's long term objective of reducing its dependency on fossil fuels, to the global public good of mitigating climate change through acceleration of global deployment of Concentrated Solar Power (CSP), and to accelerating the momentum towards European Union- Middle East and North Africa renewable energy integration.

C. Project Description

The proposed Project is designed to support the development of the second phase of the Noor Solar Complex (500 MW). The first phase, the Noor I Project of 160 MW, is under construction. This phase will consist of two distinct plants: (a) a 150-200 MW parabolic trough CSP plant (Noor II); and (b) a 100-150 MW tower CSP plant (Noor III). Both plants would be constructed on lots adjacent to Noor I that have already been acquired by the Moroccan Agency for Solar Energy (MASEN). No new land acquisition will be required for Noor II and III. Noor II and III have the same associated facilities as Noor I (the water pipeline linking the Mansour Eddahbi dam reservoir with the Noor Solar Complex, the already existing 60 KV line, and the 220 kV Ouarzazate Errachidia transmission line) except for the 220 kV Ouarzazate - Tazarte transmission line. The project will entail limited additional land acquisition in the context of associated facilities to the Noor Solar Complex that remain to be built, namely the Ouarzazate - Tazarte transmission line and the water pipeline from the Mansour Eddahbi Dam to the site of the Noor Solar Complex. The safeguards documentation for the transmission line still has to be finalized, while the safeguards documentation for the water pipeline has been disclosed at the World Bank's infoshop on 19th of March 2014.

The Project is expected to consist of the following components: (a) the support for a formation of a Public-Private Partnerships (PPP) between MASEN and a competitively selected private partner(s) to develop CSP plant(s) under the second phase of the Noor Solar Complex; and (b) help reduce the fiscal impact of this subsidy by lowering the Government of Morocco's cost of capital through a financing mechanism to improve the long-term sustainability of the fiscal investment.

D. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The Project is to be located in the Ghesat council and at the «Tamzaghten Izerki» village, about 10 km north east of Ouarzazate city, a town of approximately 50,000 inhabitants situated in south-central Morocco, at about 160 km south-east of Marrakesh. The site is well suited for solar projects, especially for the development of CSP, for the following reasons:

The site disposes of excellent solar resources. On-site measurement stations have allowed data collection since 2010, including solar insolation, indicating that the site's direct normal irradiation (DNI) is significantly higher than typical site qualification limits and used in the preliminary modeling. This conclusion is based on: (a) comparisons of the Noor Solar Complex site data with insolation data from the Andasol site in Granada, Spain and the Solar Energy Generating Systems (SEGS) site in the Mojave Desert, California, United States; and (b) an analysis of 30 years of satellite data. These analyses indicate that 2010 was an atypical year.

The site disposes of sufficient water resources. Although the area around Ouarzazate is a desert environment, a reservoir of the Mansour Eddahbi dam, with a capacity of 480 Mm³ is located approximately at 4 km from the CSP Noor Solar Complex site. Water use for Noor II and III is limited by the fact that the projects are required to use dry-cooling only. The Noor Complex's impact on the overall water resources in the region is minimal. Its water consumption has been estimated at approximately 0.8 percent of the regular annual volume of the Mansour Eddahbi dam and 0.5 percent of the overall water resources available in the region once the construction of the Tiouine dam further north is completed. It should be noted that the Tiouine dam is not directly linked with the Noor Solar Complex site, and only the Mansour Eddahbi dam can provide water directly to the site.

The site is easily accessible. The site is accessible via paved road originating from the National Highway 10 ("Route Nationale No.10") or RN10 that runs from the port city of Agadir, at approximately 350 km to the site, through to the city of Ouarzazate. The Agadir port is located at a relatively short distance and for the Noor I project is being used to import and transport heavy equipment from abroad to avoid the Atlas Mountains. The use of the Casablanca port requires crossing the Atlas Mountains.

The site is close to the power grid. The existing grid and planned reinforcements by the Office National de l'Electricité et de l'Eau Potable (ONEE) will allow evacuation of the full capacity of the power plants at peak output conditions. Furthermore, Noor II and III power plants will be fitted with thermal energy storage capabilities allowing the optimization of peak outputs to meet the network carrying capacity within reasonable limits.

E. Borrowers Institutional Capacity for Safeguard Policies

10. During the preparation of the Ouarzazate Phase I Project, which is now called the Noor I Project, the World Bank team conducted several missions to strengthen MASEN's capacity on safeguards policies and provided hands-on training. Although MASEN is staffed with high quality personnel who have acquired significant experience, MASEN's capacity on safeguard policies for Noor II and III is expected to be strengthened for satisfactory implementation of the second phase of the Noor Complex. Preparation and supervision of Noor II/III will see the provision of a dedicated social safeguard consultant to MASEN's team to support compliance and coordination with external stakeholders.

F. Environmental and Social Safeguards Specialists on the Team

Emmanuel Ngollo (AFTSG)

Andrea Liverani (MNSSU)

Taoufiq Bennouna (MNSEE)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/ BP 4.01	Yes	The project has potential adverse environmental risks in its area of influence due to water consumption (mirror washing) and risk of toxic fluid leaks. The FESIA (Framework Environmental and Social Impact Assessment) prepared under the Ouarzazate Phase I (now the "Noor I") Project is being updated to cover the

		<p>environmental and social safeguards issues for the Noor II and Noor III Projects, as both concern the same site and the same type of infrastructure (except for the solar tower) to be developed on the site.</p> <p>As this project is a scale-up activity to the solar thermal plant under construction, cumulative environmental impacts especially on the ecosystems and soil/groundwater should be assessed in the updated FESIA and ESIA for each power plant.</p>
Natural Habitats OP/BP 4.04	No	Project phase II (Noor II and III) is adjacent to the phase I on the existing site dedicated for the construction of the Noor Solar Complex where no natural habitat was affected and the OP 4.04 was not triggered. As no new expansion of the site is foreseen at this stage for Noor II and III, there is no need to trigger this policy.
Forests OP/BP 4.36	No	There are no forests located near or on the site as the terrain is marked by a desert environment.
Pest Management OP 4.09	No	TSince there is no agricultural area involved nor any patch of weed requiring the use of chemicals, this policy will not be triggered
Physical Cultural Resources OP/BP 4.11	No	There are no physical cultural resources on the site of the Noor Solar Complex.
Indigenous Peoples OP/BP 4.10	No	There are no indigenous people on the site of the Noor Solar Complex.
Involuntary Resettlement OP/BP 4.12	Yes	OP 4.12 was triggered for Noor I and will continue to be triggered for Noor II/III. The large part of the land acquisition needed for the project (mainly for the actual Solar Complex) was carried out during phase I. The 10,000 ha of land acquired for the site consisted entirely of communal land. Although the sale was based on a willing buyer willing seller agreement, the Bank required a Land Acquisition Plan (LAP) to be prepared and disclosed. During phase II, particular attention will be given to monitoring of land acquisition for Associated Facilities with a view to ensuring due process and minimizing impacts on local vulnerable populations.
Safety of Dams OP/BP 4.37	Yes	The needs of raw water for the Noor I cooling system and ancillary use for the site will be satisfied and dependent upon the pumping of water from the existing Mansour Eddahbi dam reservoir; The cooling for the Noor II & III

		projects will be dry cooling and therefore does not require water from the dam reservoir. The project's performance will be dependent upon the performance of the existing dam or the failure or misuse of the dam may result in damage to the project. The Mansour Eddahbi dam is subject to the regular monitoring requirements under Moroccan law. MASEN will follow the monitoring process of the dam.
Projects on International Waterways OP/BP 7.50	No	There are no international waterways nearby or associated with the Noor Solar Complex.
Projects in Disputed Areas OP/BP 7.60	No	The site is not located in a disputed area.

III. SAFEGUARD PREPARATION PLAN

A. Tentative target date for preparing the PAD Stage ISDS: 27-May-2013

B. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing¹ should be specified in the PAD-stage ISDS:

The FESIA (Environmental and Social Impact Assessment Framework) prepared under the Ouarzazate Phase I Project, now known as the Noor I Project, is being updated to cover the environmental and social safeguards issues for the Noor II and Noor III Project, as both concern the same site and the same type of infrastructure to be developed on the site. A specific Environmental Impact Assessment will be developed for each power plant (Noor II and Noor III) when the specific details of these CSP plant will be known after the finalization of the bidding process. At this stage no additional documentation is expected to be required in relation to OP 4.12. The already disclosed LAP covers the land acquisition aspects for the Noor II and III site. The FESIA will confirm and further detail the start of construction of the Ouarzazate - Tazarte line, which is currently not expected until late 2014, and for which a Resettlement Action Plan (RAP) will need to be produced, cleared and disclosed ahead of work construction.

IV. APPROVALS

Task Team Leader:	Name: Fanny Kathinka Missfeldt-	
<i>Approved By:</i>		
Regional Safeguards Coordinator:	Name: Maged Mahmoud Hamed (RSA)	Date: 16-Apr-2014
Sector Manager:	Name: Charles Joseph Cormier (SM)	Date: 16-Apr-2014

¹ Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.