INTEGRATED SAFEGUARDS DATA SHEET
APPRAISAL STAGE

Date prepared/updated: July 4, 2018

I. Basic Information

1. Basic Project Data

Country: Tunisia - Italy		Project ID: P164625	
		Additional Project ID *(if any)*:	
Project Name: Tunisia-Italy Power Interconnector - Project Preparation TA			
Task Team Leader: Moez Cherif			
Estimated Appraisal Date: July 6, 2018		Estimated RVP Approval Date: July 16, 2018	
Managing Unit: GEE05		Lending Instrument: IPF	
Sector: Energy			
Theme: Power sector			
IBRD Amount (US$m.): 0 IDA Amount (US$m.): 0 GEF Amount (US$m.): 0 PCF Amount (US$m.): 0 Other financing amounts by source: - Trust Funds (ESMAP & GIF): US$ - - US$ 527,000			
Environmental Category: A			
Is this a transferred project	Yes [ ]	No [X]	
Simplified Processing	Simple [ ]	Repeater [ ]	
Is this project processed under OP 8.00 (Rapid Response to Crises and Emergencies)		Yes [ ]	No [X]

2. Project Objectives:

The PDO is to establish the technical, environmental, social, and financial feasibility, and help to structure the proposed Tunisia-Italy Power Interconnector (Elmed Interconnector).

3. Project Description:

The proposed Project (estimated cost: US$ 13.40 million) will comprise the following components:

a) **Component 1: Preparation Studies (estimated cost: US$ 10.64 million):** this component would consist of the following studies:

- **Terrestrial Survey Feasibility Study[1].** The purpose of this study is to determine the optimal site locations in both Tunisia and Italy for: (i) the converter station areas; (ii) the DC cable route from landing point of the marine cable on the coast to the converter stations; and (iii) the AC cable route from the converter stations to the grid nodes. The study will: (a) identify the territorial and environmental characteristics of the passageway lines and the converter station areas relevant to arrange the next phases of the preliminary project and permitting process; (b) look at any archeological, landscape, hydro geological and environmental implications; and (c) complete the line passageway, the geotechnical, archeological and environmental survey and report. The first part of the study, (desk top analysis - DTS), will assess alternative solutions to present to citizens and authorities during meetings in order to take into account their comments and suggestions. Following the DTS, the second part of the study will

[1] The high cost is due to the technical complexity and high-tech nature of marine surveys.

consist of the terrestrial survey with reference to the preferred solution. This study will be carried out in close collaboration with the independent ESIA and RAP consultants.

- **Marine Survey Feasibility Study.** The purpose of the marine survey feasibility study is to determine the feasible and optimal site locations for: (i) the DC marine cable route on the seabed between the two landing points in Italy and in Tunisia; and (ii) the electrodes. The study will: (a) identify the seabed and environmental characteristics of the cable passageway; (b) look at any archeological, hydro, bathymetry, geological, unexplored ordnance, environmental aspects; (c) complete the seabed route, geophysical, archeological and environmental surveys and reports. Furthermore, the study will include a specific environmental benthic survey requested by the Italian Ministry in order to obtain the laying permit, according to the Italian Ministerial Decree no. 31 dated 24th January 1996. This study will be carried out in close collaboration with the independent ESIA and RAP consultants.

  The first part of the study, (Desk top study - DTS), will assess the alternative preferential solutions to present to citizens and authorities during meetings in order to take into account their comments and suggestions. Following the DTS, the marine survey can start with reference to the results of the previous DTS. Based on the results of the public consultations and the above-mentioned technical analysis, potential routes and landing points of the Elmed interconnector will be determined.

  The Survey Studies needs to be carried out in close collaboration with the ESIA and RAP Consultants. Both studies need to be prepared by independent consultants, but in close collaboration and in parallel. The ESIA study will start two months after the start of the Survey Study. The ESIA and RAP Consultants will have an important say in the selection of all the project sites. The environmental and social impacts on the project sites, the archeology, landscape, terrestrial route and the sea-bed are the responsibility of the ESIA Consultants.

- **Network Study.** The study will be performed based on CIGRE Guidelines and will determine the electrical project scheme (monopolar/bipolar, grid node connection and networks reinforcements), the feasible technology (LCC or VSC) and the rated power of the link, the performance required to the DC system. This component is aimed at verifying the security of the two systems when Elmed interconnector is operational, studying the system behavior during contingencies and grid component switching, and evaluating the system reliability and resilience. It will also confirm and identify any network reinforcements that may be required for the safe operation of the Italian and Tunisian grids. The first part of the study will assess the electrical project scheme. In the second part even any necessary reinforcements shall be investigated and confirmed.

- **Market Study (European Investment Bank financed and executed).** The study will be performed based on ENTSO-E Guidelines and on multiple scenarios, taking into account different economic, social and climatic conditions impacting on generation (additional and in particular from renewable energy resources) and demand within the two Countries. The study will assess social economic welfare and other indicators (such as CO2, RES curtailment, etc.), the implications of the project on the transmission capacity and congestion at the Northern Italian border. Additional components of the study shall assess the contribution of the Elmed interconnector to: (i) the increase of energy exchanges among the Maghreb Countries and with Europe; (ii) the development of the Tunisian Solar Plan; (iii) least cost solution of the Tunisian energy strategy. This study would update the latest economic analysis and confirm that it is the current least cost option generation for Tunisia.

- **Environmental and Social Impact Assessment (ESIA) and Resettlement Action Plan (RAP).** The study will prepare an assessment of the environmental and social impacts of the Elmed Interconnector and recommend measures to avoid, reduce, mitigate, and address these impacts in Tunisia, the marine route between Tunisia and Italy and in Italy. The ESIA and RAP Consultants will closely collaborate with the Feasibility Consultant with regard to site selection of all project sites and line routes, since an adequate site selection significantly reduces the environmental and social impacts of the project. The environmental assessment will include an assessment of the impacts on terrestrial and marine biodiversity at the project sites, resources efficiency and pollution prevention, broader ecosystem impacts, and water/pollution from construction, labor and working conditions, community health, safety

and security. The Environmental and Social Management Plan (ESMP) will develop effective mitigation measures for identified environmental and social impacts and risks, as well the management of expected health and safety risks during construction and operation. The ESMP will recommend that the Contractors prepare and implement their own Construction ESMP (CESMP) and a comprehensive Health & Safety Plan in compliance with OHSAS 18001:2007, NEBOSH or similar. The ESMP will also describe the responsibilities of Contractors, Supervising Engineers, STEG and other stakeholders with regard to environmental and social management, as well as health and safety during construction and operation and the experienced staff with international experience which need to be recruited for this purpose. The ESIA Consultant will also be responsible for obtaining the environmental permits in Tunisia and Italy.

The Resettlement Action Plan (RAP) and social assessment will assess the potential social impacts of the project in Tunisia and Italy, including land acquisition required for the project and the resettlement that may result. In addition, the social assessment will assess the loss of livelihoods and identify interventions to mitigate the impact. This social assessment will examine the potential gender risks that the project may pose, particularly with respect to resettlement and loss of livelihoods.

In terms of citizen engagement, the ESIA will use the findings from the public consultations, as described in the SEP, and the technical studies to develop an ESIA report that will include an archeological study, a landscape study, a geological study, and environmental documentations. The ESIA and RAP will be carried out in line with Italian laws, Tunisian laws and World Bank Performance Standards under OP 4.03 and policies[2], and will assess the potential impacts on the sea-bed between Tunisia and Italy and on the terrestrial parts of the project in Tunisia and Italy. Due to the public private partnership (PPP) nature of the interconnector, the ESIA and RAP will be prepared in accordance with the Bank's Performance Standards under OP 4.03, in addition to relevant Tunisian, Italian and European laws and guidelines. The ESIA also needs to be in compliance with the World Bann General Environmental, Health and Safety Guidelines and the Electric Power Transmission and Distribution EHSG both of April 2007. The ESIA and RAP will be guided by a Stakeholder Engagement Plan (SEP) to be disclose in-country (Tunisia and Italy) and on the World Bank website prior to appraisal. Amendments and additions to the ESIA and RAP reports shall be managed along the permitting process in order to respond to specific requests of local and national authorities.

- **Developing the financial model assessing the viability of the project vehicle.** A preliminary financial analysis of the Elmed Interconnector was undertaken and reviewed by external consultants under Technical Assistance Phase 1 (P162542, ASA project). A refined model would need to be developed to advise more precisely Terna and STEG on the structuring of the financial transaction. This model will be required for the Project sponsors to raise finance and secure guarantees. In addition to equity by the sponsors, finance could be raised from private (equity and debt) providers, and development financial institutions (DFIs).

b) **Component 2: Transaction Advisory (estimated cost: US$ 1.91 million).** Making a decision on the commercial, regulatory, and financial structure of the Elmed interconnector and identifying the agreements necessary for its implementation will require comprehensive support that will be accommodated through this component. Specifically, this component will include advisory work to the Republic of Tunisia and to the implementing sponsor STEG throughout the following tasks:

- agreeing on the commercial and regulatory structure;
- putting the agreed structure in place through establishing the project vehicle and drafting any necessary regulations, contracts, codes regulating access to and use of the line;
- supporting the transaction design, including ownership and governance arrangements for the line, approach to procurement, environmental and social management and framework for providing access to the link and charging for its use;
- negotiating and securing the necessary financing for the Elmed Interconnector, including assessing equity from the sponsors, and liaising with private providers and other DFIs.

[2] The analysis and the consultations to be carried in conjunction with the safeguards documents should have a gap analysis of the three legal frameworks, and inform which ones should be applied.

Through this component, STEG will be able to make informed decisions on its role and stakes in the Elmed Interconnector, maximizing financing for the project and bringing it to a financial close.

c) **Component 3: Project management (estimated cost: US$ 0.86 million).** This component will cover project management costs of Elmed Etudes. Project management costs will include the following types of tasks:

- Preparation of technical specifications for several procurement packages, including preliminary environmental and social and technical assessment in order to define the hypothesis line route and internal landing points (i.e., studies undertaken for Component 1). This information will be used as data input for the technical specifications of the packages.
- Technical assessment of the tender proposal during the World Bank procurement phase.
- Technical monitoring of the actions and approval of final reports.
- Participation and organization of co-ordination meetings.
- At the end of the first part of network study (undertaken in Component 1), a list of network reinforcements, not yet planned by STEG and Terna could be defined. In this case, a pre-feasibility assessment would be necessary in order to assess if the electrical scheme identified by the network study is feasible and coordinate its timely realization with the overall project.
- Technical consultations with the supplier of HVDC system.
- Preparing a final report collecting the results of all studies executed. The final report shall summarize all analyses performed to select the final electrical and geographical scheme of the project, and estimates of timing and costs of the project implementation.
- Support for presenting the project to NRAs and other European TSOs under the Cross-Border Cost Allocation analysis required by ACER (the Agency for the Cooperation of Energy Regulators) to cross-border interconnection projects
- Finally, support to communication efforts would be available as part of project management (i.e. capacity to handle communications, stakeholder dialogue, possible opposition, the media, etc.).

Wages of either STEG or Terna staff would be covered by their respective institutions, and not by the grants.

4. Project Location and salient physical characteristics relevant to the assessment of environmental and social risks and impacts:

The physical infrastructure that is being supported by the proposed TA project is a 192 km, 600 MW undersea high-voltage direct current (HVDC) interconnector between Italy and Tunisia. The Elmed Interconnector will enable trade in electricity between Tunisia and Italy. The interconnector consists of a 192km of undersea cable through the Mediterranean Sea between Italy and Tunisia, a 5km underground cable in Tunisia, and a 32km underground cable in Italy. In addition to the HVDC interconnector, the project consists of two HVDC converter stations. One of the stations is located at El Haouaria, in the Cap Bon area of Tunisia. The other station is in Partanna in Sicily, Italy.

The Elmed interconnector requires significant reinforcements to the power systems in both Tunisia and Italy. These include the construction of a new 80-km double-circuit 400 kV link between the converter station at El Haouaria and the bulk transmission system of Tunisia at a new 400 kV substation at Mornaguia. On the Italian side, additional reinforcements are also anticipated, notably the construction of the new double circuit 400 kV Chiaromonte – Ciminna line. This latter reinforcement is currently under development.

The project is expected to be implemented by Elmed Etudes, a joint venture between Terna and Société Tunisienne de l'Electricité et du Gaz (STEG), whose main object is to conduct studies and structuring work in order to prepare the Elmed interconnector project for financing and execution.

Elmed Etudes will use STEG and Terna staff to provide expertise on environmental and social safeguards management, as well as on health and safety and supervision for all studies that are supported by the TA

project, including the Environmental and Social Impact Assessment (ESIA) of the interconnector. Regarding the execution of the ESIA, Elmed Etudes will be selecting an experienced consulting firm.

Elmed Etudes considered as a private entity[3] is responsible for developing an environmental and social management system "ESMS" and for identifying, assessing and managing environmental and social risks and impacts associated with the Private Sector Activity[4], all in accordance with the WB Performance Standards under OP 4.03.

5. Environmental and Social Safeguards Specialists on the Team:

Mohamed Adnene Bezzaouia, Environmental Safeguards Specialist
Antoine Lema, Sr. Social Safeguards Specialist
Robert Robelus, Sr. Environmental Safeguards Consultant

6. If PS 1 and PS 2 are NOT applicable, provide a brief explanation why:

N/A

II. Key Safeguard Policy Issues and Their Management

A. Summary of Key Safeguard Issues

See attached Environmental and Social Review Summary (ESRS), which is also available at the following website: Worldbank.org

B. Disclosure Requirements

Disclosure Requirement	Date
Environmental and Social Review Summary:	
Dates of "in-country" disclosure	June 20, 2018 in Tunisia July 3, 2018 in Italy
Date of submission to Bank website	July 5, 2018
For Category A projects, date of distributing the Executive Summary of the client's ESIA to the Executive Directors	N/A
If in-country disclosure of any of the above documents is not expected, please explain why: N/A	

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

Performance Standards			
Client's Environment and Social Assessment			
Does the project require a stand-alone Environmental and Social Assessment (including EMP) report?	Yes [ ]	No [ ]	N/A [X]
If yes, then did the Regional Environment Unit or Sector Manager (SM) review and approve the EA report?	Yes [ ]	No [ ]	N/A [X]
Client's Environmental and Social Management System			
Has the client developed an appropriately detailed ESMS, and does the client have the technical and organizational capacity to implement it?	Yes [ ]	No [ ]	N/A [X]
Labor and Working Conditions			
Does the client have a written human resources policy available to all employees that describes labor and working conditions?	Yes [ ]	No [ ]	N/A [X]

[3] Please see the definition of Private Entity in OP 4.03
[4] Please see the definition of Private Sector Activity in OP 4.03

Biodiversity and Natural Resource Management			
If PS 6 is applicable, would the project result in any significant conversion or degradation of critical natural habitats?	Yes [ ]	No [ ]	N/A [X]
If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?	Yes [ ]	No [ ]	N/A [X]
If the project entails use of living natural resources, has certification been obtained or a time-bound plan established to obtain certification?	Yes [ ]	No [ ]	N/A [X]
Physical Cultural Resources			
If PS 8 is applicable, does the project design include adequate measures related to physical cultural resources?	Yes [ ]	No [ ]	N/A [X]
Indigenous Peoples			
If PS 7 applicable, and have Indigenous Peoples communities been consulted in accordance with requirements of PS 7?	Yes [ ]	No [ ]	N/A [X]
Have the requirements for Free Prior Informed Consent been met, and is there reasonable evidence of broad community support by the affected Indigenous Peoples communities?	Yes [ ]	No [ ]	N/A [X]
Involuntary Resettlement			
If PS 5 is applicable, have the requirements been complied with by the client?	Yes [ ]	No [ ]	N/A [X]
Pollution Prevention and Efficient Use of Resources			
Does the project comply with good international industry practice as presented in the WBG EHSGs or a similar internationally recognized benchmark?	Yes [ ]	No [ ]	N/A [X]
Is the project designed for energy efficiency and waste minimization?	Yes [ ]	No [ ]	N/A [X]
Community Health and Safety			
Has the assessment determined that local communities could face significant adverse impacts in event of an accident or emergency situation associated with the project?	Yes [ ]	No [ ]	N/A [X]
If so, has an Emergency Preparedness Plan (EPP) been prepared and arrangements been made for public awareness and training?	Yes [ ]	No [ ]	N/A [X]
Projects on International Waterways			
Have the other riparians been notified by the Bank of the project?	Yes [ ]	No [ ]	N/A [X]
Projects in Disputed Areas			
Has the memo conveying all pertinent information on the international aspects of the project, including the procedures to be followed, and the recommendations for dealing with the issue, been prepared by the Bank?	Yes [ ]	No [ ]	N/A [X]
Disclosure			
If Category A or B, has the ESRS been sent to the World Bank's Infoshop?	Yes [X]	No [ ]	N/A [ ]
Have relevant assessment documents prepared by the client been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?	Yes [ ]	No [ ]	N/A [X]
Monitoring and Reporting			
Has the client agreed to submit an Annual Monitoring Report to the Bank to report on the management of environmental and social risks and impacts, and does the Legal Agreement contain this provision?	Yes [ ]	No [ ]	N/A [X]
Has the client agreed to report at least annually to local affected communities on how the project is performing with respect to environmental and social risks and impacts of concern to those communities?	Yes [ ]	No [ ]	N/A [X]

D. Approvals

Signed and submitted by:	***Name***	***Date***
Task Team Leader:	Moez Cherif	July 5, 2018
Approved by:		
Regional Safeguards Adviser:	Nina Chee / Brandon Carter for	7/5/18
Comments:		
Sector Manager:	Erik Fernstrom	7/5/18
Comments:		