Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Note to Task Teams: The following sections are system generated and can only be edited online in the Portal. Please delete this note when finalizing the document.
### BASIC INFORMATION

#### A. Basic Project Data

<table>
<thead>
<tr>
<th>Country</th>
<th>Project ID</th>
<th>Project Name</th>
<th>Parent Project ID (if any)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comoros</td>
<td>P162783</td>
<td>Comoros Solar Energy Integration Platform</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>Estimated Appraisal Date</th>
<th>Estimated Board Date</th>
<th>Practice Area (Lead)</th>
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<tr>
<td>AFRICA</td>
<td>30-Apr-2020</td>
<td>01-Jun-2020</td>
<td>Energy &amp; Extractives</td>
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<table>
<thead>
<tr>
<th>Financing Instrument</th>
<th>Borrower(s)</th>
<th>Implementing Agency</th>
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</thead>
<tbody>
<tr>
<td>Investment Project Financing</td>
<td>Government of the Union of Comoros</td>
<td>Ministry of Production, Environment, Energy, Industry and Handicrafts</td>
</tr>
</tbody>
</table>

**Proposed Development Objective(s)**

Improve the commercial performance of the electric utility and its capacity to dispatch variable renewable energy.

**Components**

- Component 1: Investments in Power Storage, PV and System Upgrades
- Component 2: SONELEC Commercial and Financial Recovery
- Component 3: Technical Assistance, Project Implementation, and Capacity Building Activities

### PROJECT FINANCING DATA (US$, Millions)

#### SUMMARY

<table>
<thead>
<tr>
<th>Total Project Cost</th>
<th>42.60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Financing</td>
<td>42.60</td>
</tr>
<tr>
<td>of which IBRD/IDA</td>
<td>40.00</td>
</tr>
<tr>
<td>Financing Gap</td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### DETAILS

**World Bank Group Financing**

| International Development Association (IDA) | 40.00 |
| IDA Credit                                   | 20.00 |
B. Introduction and Context

Country Context

1. **The Union of the Comoros (UoC)** is a small island nation occupying a strategic geographical position in the Mozambique Channel, between East Africa, Madagascar and the other islands of the Indian Ocean (Seychelles, Mauritius, Reunion). The country has an estimated population of 795,000. Grande Comore is the largest island and is home to about half of the country’s population and the country’s capital, Moroni. Anjouan has the largest population density of 575 inhabitants/km2 and 42 percent of the population, while Mohéli is the smallest and least populated island with 6 percent of the population and 171 inhabitants/km2. The population is predominantly young and continues to grow rapidly (2.9% a year). The current forecast is for the population to reach 1 million by 2028 and to more than double by 2050.

2. Since independence in 1974, Comoros has experienced recurrent political crises and conflicts between the islands. This instability contributed to a very low real income per capita growth, constrained private sector-led growth and limited fiscal space for investment in infrastructure and social sectors. Comoros regained relative political stability after the adoption of the Fomboni Agreement in 2001 (which led to four consecutive democratic transitions), although socio-political tensions remain. A referendum held on July 30th, 2018, endorsed a constitutional change to the Presidential rotation system following a controversial National Conference. The most recent presidential elections were held in the Comoros on 24 March 2019, resulting in the reelection of President Azali Assoumani in the first round of voting with a majority of over 60% according to the electoral commission.

3. Comoros’s economy faces challenges stemming from its geographic remoteness, limited resources, and small
and fragmented domestic market. In combination with low economic diversification and competitiveness, these characteristics contribute to large and persistent trade deficits, a narrow export base, and structural dependence on food imports and remittances (around 9 and 15 percent of GDP, respectively). Economic performance has been sluggish (slowing down recently to 1 percent and the unemployment rate was last estimated to be 19.2 percent), unable to provide meaningful employment for the young and growing population and address a significant inequality and poverty gap. Remittances, while significant, have an unequally distributed alleviating effect on poverty.

4. While Comorian society is matrilineal, giving women an important role in society in terms of asset ownership and bequeathal, gender inequalities in the Comoros are entrenched. The 2018 HDI value for females in the Comoros was 0.504 in contrast with 0.568 for males, resulting in a GDI (Gender Development Index) value of 0.888, placing it slightly below the average for Sub-Saharan Africa. Despite gender equality being enshrined in the Constitution, women have significantly lower school completion and higher unemployment rates, the latter indicating that they disproportionately perform unpaid work. Their participation in the labor force is only 33 percent compared to 57 percent for men. This participation rate is one of the lowest in the region, and compounds women’s economic vulnerability.

5. After a period of relative stability, the political environment has deteriorated. Following hard-fought, but peaceful elections, Mr. Azali Assoumani became President in mid-May 2016. The President appointed a coalition Government in early June 2016 comprising the President’s own party, the Convention for the Renewal of the Comoros (Convention pour le Renouveau des Comores, CRC), and Juwa, the second-biggest party in the legislature. However, the Coalition ended after only a year, leading to the appointment of a new Government in July 2017. Furthermore, a controversial constitutional referendum held on July 30, 2018 has introduced changes to the Presidential rotation system and has moved Comoros away from a federal structure. The changes sparked armed riots in October 2018. Though ultimately contained, these riots have illustrated yet again the high degree of fragility of the country.¹

6. The new vision of the Government is to turn Comoros into an emerging middle-income economy by 2030. This Vision is outlined in the revised National Development Strategy (SCA2D) approved in December 2018 and covers the period 2018-21. The NDS is organized around three axes: (i) Acceleration of Economic Structural Transformation and Sustainable Management of Environment; (ii) Accelerating the development of human capital and promoting social welfare; and, (iii) Consolidation of governance and promotion of rule of law. The Government aims to transform the country’s economy through the development of infrastructure, a better functioning financial sector, and by tackling the long-standing issue of energy supply. It also aims to foster the development of the private sector including in the sectors of tourism, fisheries and the seafood industry as well as agri-industry. In order to realize the vision, President Azali has called for a public revenue increase of 50 percent and the cutting of public sector wage bill by 40 percent.

¹ Compared to an SSA average of 0.5 tons of oil equivalent per capita.
Sectoral and Institutional Context

7. The Energy and Water Directorate (DGEME), as part of the Ministry of Production, Environment, Energy, Industry and Handicrafts, is the lead government agency overseeing the energy sector. Responsibility for day-to-day electricity service delivery is in the hands of the public electricity utility SONELEC (Société Nationale de l’Electricité des Comores), providing electricity to the islands of Anjouan, Grande Comore and Mohéli. Two decrees signed in January 2019 effected two simultaneous organizational realignments among Comorian public utilities: (i) the separation of Gestion de l’Eau et l’Electricité aux Comores (MAMWE), the former joint utility for Grande Comore and Mohéli, into independent power and water utilities, respectively SONELEC and the Société Nationale d’Exploitation et de Distribution d’Eau (SONEDE); (ii) the merger of MAMWE and the electricity utility for Anjouan, Electricité d’Anjouan (EDA), into created SONELEC. As a result, SONELEC now manages generation, transmission, and distribution across all three islands.

The Comorian energy sector is beset with a multitude of interrelated challenges:

8. First, reliance on imported fossil fuels for power production. In 2018, electricity generation in the Comoros consisted of small-scale diesel generators adding up to a total installed capacity of 31.5 MW: 19.4 MW in Grande Comore, 7.4 MW in Anjouan, and 4.70 MW in Mohéli. Due mainly to the lack of proper maintenance and rehabilitation of the generation equipment, the available generation capacity regularly dips below installed values and is inadequate to consistently satisfy demand across the three islands. Total primary energy consumption is 0.2 tons of oil equivalent per capita, one of the lowest in the world, and commercial energy consumption is even lower at only 0.06 tons of oil equivalent per capita. It is estimated that biomass (wood and charcoal) currently makes up 70 percent of energy use in Comoros. The remainder comes almost entirely from imported diesel oil, most of which is used to generate electricity.

9. Second, a very high cost of electricity at US 33 c/kWh, reported to be second highest in Africa. As a small archipelago, the Comoros’ access to commodity markets is constrained by limited economies of scale and inherent difficulties in the country’s fuel supply chain. As a result, the fuel cost faced by the Comorian utilities has consistently remained above international benchmarks, and during periods of high petroleum prices during the past years, placed an unsustainable burden on the company’s operational performance. Moreover, due to the utility’s unfavorable generation infrastructure (exclusively consisting of small, fast-spinning, and high-maintenance backup/peaking diesel gensets with no appropriately sized, slower-spinning and less maintenance-intensive units to cover the baseload), the islands’ cost of electricity service was the second highest according to a recent comparative study on the performance of power utilities in Sub-Saharan Africa.

10. Third, poor electricity service, despite relatively high access rates. Access rates vary by island, with the highest access rate on Grande Comore (80.2%), and lower access rates on Mohéli (52.9%) and Anjouan (43.7%). Despite this disparity between islands, all islands have access rates higher than the Sub-Saharan regional average of 37.5%. However, the poor quality of Comorian electricity services results in a per-capita electricity supply comparable to many SSA countries with much lower access rates. The overwhelming majority of Comorian households with de-facto – but low quality – access to electricity, show a near complete dependence on kerosene and candles for lighting, commercial charging stations for mobile phone charging, and very significant household expenditures on disposable batteries to power radios and other

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2 Compared to an SSA average of 0.5 tons of oil equivalent per capita.
small appliances.

11. **Fourth, the sector is highly dependent on government transfers.** In 2017, and again in 2018, government transfers to cover SONELEC commercial losses amounted to around US$6.5 million, equivalent to approximately 8% of tax revenues or 0.6% of GDP. The sector thus represents a substantial burden on public finances. With additional thermal generation assets having come online in 2017 and 2018 (14MW based in Voidjou, single sourced from a private developer under commercial financing, of which only 4MW are still operational), and both fuel prices and fuel price volatility a major risk, the burden on the government’s finances is expected to escalate further. Sector commercial performance is further hampered by poor billing practices and high levels of theft, though bill collection rates have experienced significant recent improvements. In 2014, 45% of SONELEC electricity generation was never billed, and, of the sales billed, 42% were never collected.

12. **Fifth, urgently needed investments in generation and grid rehabilitation that could improve sector performance have suffered from continued delays.** With the majority of SONELEC’s generation assets having either reached the end of their lifetimes or being run by independent operators with little or no incentives for fuel efficiency, specific generation cost has further escalated, and technical breakdowns have become rampant. While the increase in per-kWh fuel consumption is further reducing the utility’s already unsustainable margins, the deterioration of service quality is also affecting collection rates, as a growing share of disgruntled customers is becoming reluctant to pay their electricity bills in a context of increasingly long and frequent power cuts.

13. **Sixth, frequent changes of senior energy sector appointees continue to jeopardize donor project implementation and compromise utility independence.** The previous World Bank funded project Electricity Sector Recovery Project (ESRP, P131659), for instance, included the hiring of external experts as senior managers to lead the commercial and financial restructuring of the utility. Following a costly and time-consuming search and recruitment of suitable candidates, the ability of the international resident experts to fill their dual mandate of leading the company’s operational recovery and building local management capacity by working side by side with the MAMWE (SONELEC’s predecessor company on the island of Grande Comore) team of senior directors was derailed by sustained Government interference. During project implementation, three MDs and an interim managing committee as well as three Chief Financial Officers (CFOs), three commercial directors, and two technical directors succeeded each other at the helm of MAMWE. The persistent lack of continuity at the MAMWE’s senior management also affected the morale of international staff as their efforts to foster knowledge transfer and strengthen local managerial skills through cross-training and working in tandem with MAMWE’s senior directors were undone with every change of their local counterparts. As a result, some resident experts asked to significantly reduce time spent at MAMWE while others refused to renew their contracts. Adding to the above challenges, the international resident experts were never granted the critical managerial and decision-making authority to effectively lead the implementation of reforms. Therefore, as experts were only provided with an advisory mandate, they could not ensure continuity or shield ongoing reforms from the disruption created by the frequent change of MAMWE’s senior management.

*Investment in renewable energy, primarily solar PV, can enhance energy security and affordability but important advances in planning, sector performance, and governance are required:*

14. **Comoros has a good level of solar radiation.** With the expected further rise of both petroleum price levels and volatility on international commodity markets, renewable energy solutions are becoming increasingly attractive means for reducing and stabilizing the cost of electricity services of small island systems. Solar photovoltaic (PV) and storage systems – characterized by low operating cost, falling CAPEX, relative site-flexibility, modularity, and short construction times – have tremendous potential to contribute to both reducing SONELEC’s cost of generation and improve the utility’s
service quality. Recent and reliable data on solar irradiance potential in Comoros is scarce, but according to ESMAP’s Global Solar Atlas, the Comorian Islands, with an estimated average solar PV output of 1,500 kWh/kWp per year, have a good level of solar radiation capable of supplying solar photovoltaic installations at scale.4

15. **The scale-up of renewable energy generation is still in its infancy.** So far, the use of renewables is limited to less than 150 kW of (micro-) hydropower installations in Anjouan and Mohéli, negligible solar energy use, and very early stage efforts for the long-term development of geothermal energy. A number of development partners are active in the energy sector, with an increasing interest in renewables, such as the European Union (EU), the African Development Bank (AfDB) and the Arab Fund for Economic and Social Development (FADES, Fonds Arabe pour le Développement Economique et Social). A recent example is the EU-funded elaboration of a National Strategy for the Energy Sector in Comoros (over a 20-year period) accompanied by a 5-year Action Plan in January 2013. Based on the plan, the EU is currently supporting the development of two hybrid (solar PV and diesel powered) pilot sites of 125kW and 50kW capacity, respectively, for injection in Mohéli’s medium voltage (MV) grid. In addition, two 3 MW PV + battery storage pilot IPP projects are currently under development by private developers, one in Grande Comore (“Innovent”) and one in Anjouan (“VIGOR”). While this marks an encouraging first step for private sector investment in the Comorian power sector, both projects are facing challenges, including politically-motivated selection of suboptimal sites (both in terms of insolation and environmental impact), a lack of sector transparency and coordination, and high, frontloaded tariffs to compensate for substantial utility payment and sector governance risk (both projects are 100% equity-financed).

16. **The current SONELEC financial situation is a major hindrance to private sector participation in renewable capacity expansion.** Though World Bank operations have helped to strengthen SONELEC, significant additional efforts will be required to improve the credibility and financial viability of the utility as an off-taker and decrease risk for would-be investors. Therefore, efforts to further improve SONELEC’s financial management and commercial performance will have to be continued. This will involve all management information, customer management, as well as billing and metering systems on the Islands of Grande Comore and Mohéli put in place under the previous WB-financed ESRP to be rolled out on the island of Ajouan as well.

17. **Enhancements to the sector framework to improve governance are underway.** With the support of the African Development Bank (AFDB), institutional reforms and legislation aiming to improve sector planning and promote renewable energy IPPs are ongoing, including the finalization and adoption of a Power Sector Masterplan, the country’s first grid code, and the adoption of standard Power Purchase Agreements (PPAs). However, implementation of these critical reforms has been stalling for lack of institutional capacity. Therefore, additional technical and institutional support remains necessary, in particular with regard to strengthening the GoC’s sector planning and oversight capacity.

*The proposed ComorSol Project will address the sector challenges and enable Comoros to harness its renewables potential by creating the technical and institutional infrastructure necessary to integrate solar energy into the grid:*

18. **The proposed ComorSol project will support the creation of SONELEC’s “Solar Energy Backbone”** towards a more affordable, reliable, and available energy supply, adding critical grid, battery storage, pilot generation, and dispatch infrastructure, as well as the institutional and operational capacity necessary to integrate intermittent solar energy to the grid. A National Delegated Project Management and Coordination Unit (PMCU) will coordinate the planning, financing and the integration of the country’s first utility-scale solar PV plants, and will ensure coherent, dependable coordination of

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4 For comparison, the neighboring island of Mayotte has heavily invested in combined PV and storage facilities and was obtaining 30% of power from solar PV in 2016.
related energy sector interventions by different donors.

19. The proposed ComorSol project will contribute to mitigating a number of risks for private companies to participate in the energy sector. The project encompasses a number of activities to support SONELEC’s path to becoming a creditworthy off-taker for future Independent Power Producers (IPPs). These will include a second stage of the successfully completed revenue protection program of the ESRP, further investments in state-of-the-art customer management systems and metering infrastructure, as well as upgrades to storage and transmission infrastructure. A structured least-cost planning process managed by the PMCU and complementary technical and institutional support will create a favorable environment for private sector investment in the Comorian energy sector.

20. ComorSol’s ‘platform’ approach will allow other development financiers to support renewable energy. High-potential solar and battery storage sites across all three islands have already been identified during project preparation. A pre-feasibility study was conducted for solar plus storage of 10 MWp on Grande Comore, 4 MWp on Anjouan, and 1 MWp on Mohéli across 11 potential sites, and draft ESIs and RAPs have been prepared. With these studies in place, the project will have created a plug-and-play enabling environment for future solar investments by the private sector or other development financiers.

21. The proposed ComorSol project will also support urgent infrastructure investments to mitigate the effects of Cyclone Kenneth. Post Kenneth cyclone recovery operations require continued actions on grid rehabilitation and maintenance of thermal production units. Cyclone Kenneth hit particularly the northern part of Grande Comore on the night of 24 April 2019, causing significant damage to SONELEC’s infrastructure. SONELEC’s infrastructure recovery budget was estimated at approximately US$3 million, 90% of which is being used to rehabilitate the power grid on the island of Grande Comore. The other urgent actions identified are the reinforcement of SONELEC’s maintenance teams and equipment in line with anticyclonic construction standards and carrying out maintenance of thermal units in order to ensure baseload generation.

C. Proposed Development Objective(s)

Note to Task Teams: The PDO has been pre-populated from the datasheet for the first time for your convenience. Please keep it up to date whenever it is changed in the datasheet. Please delete this note when finalizing the document.

Development Objective(s) (From PAD)

Improve the commercial performance of the electric utility and its capacity to dispatch variable renewable energy.

PDO Level Results Indicators: PDO level indicators are (i) improved average billing and collection rates across all three island systems (%); and (ii) improved capacity of the grid to dispatch solar power generation (MW).

D. Project Description
E. Implementation

Institutional and Implementation Arrangements

**Note to Task Teams:** The following sections are system generated and can only be edited online in the Portal. *Please delete this note when finalizing the document.*

F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

The project will be implemented on all three islands of the Comoros

G. Environmental and Social Safeguards Specialists on the Team

Paul-Jean Feno, Environmental Specialist
Andrianjaka Rado Razafimandimby, Social Specialist
Mario Rizzolio, Social Specialist
Hasina Tantelinirina Ramarson Ep Rafalimanana, Social Specialist

**SAFEGUARD POLICIES THAT MIGHT APPLY**

<table>
<thead>
<tr>
<th>Safeguard Policies</th>
<th>Triggered?</th>
<th>Explanation (Optional)</th>
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<tbody>
<tr>
<td>Environmental Assessment OP/BP 4.01</td>
<td>Yes</td>
<td>Solar PV power generation does not produce any pollutant. The panels of some solar PV sub-technologies, however, contain chemicals such as cadmium which might require particular attention in their replacement, and during de-commissioning in case of damage. The project will provide investment climate to promote investors to install PV parks. The project will be build SONELEC’s “Solar Energy Backbone” by adding the grid, storage, and dispatch infrastructure and developing the institutional and operational capacity necessary to integrate intermittent Solar Energy to the grid. The identification mission and available pre-feasibility studies have selected the potential sites</td>
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could be used for the PV solar parks, transmission lines and storage sites in the three Islands. The main concern is expected to be on workers safety issues during construction; impacts on birds, including impacts such as deterioration of air quality and noise, health & safety of workers and communities, land acquisition and resettlement and economic displacement. VBG risk is evaluate as low however the project needs to develop prevention measures. These potential environmental and social impacts from physical works are expected to be site-specific, temporary and manageable to an accepted level and can be readily avoided/mitigated through implementation of the project environmental management plan. Therefore, the proposed project is Category B as per OP4.01.

Five (05) Standalone Environmental and Social Impact Assessments (ESIAs)/ESMPs for each preselected site were prepared approved at RSA level and disclosed in the country and to WB’s external website prior to appraisal.

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<th>Performance Standards for Private Sector Activities OP/BP 4.03</th>
<th>No</th>
<th>Not applicable</th>
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<tr>
<td>Natural Habitats OP/BP 4.04</td>
<td>No</td>
<td>There is no natural habitat site located in the potential sub-project PV solar parks, transmission lines and storage sites. Sensitive natural habitat areas will be avoided.</td>
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<tr>
<td>Forests OP/BP 4.36</td>
<td>No</td>
<td>No investments in forests will be supported under the Project and there are no forests in the proposed project locations in the three Islands of Comoros.</td>
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<tr>
<td>Pest Management OP 4.09</td>
<td>No</td>
<td>The project will not purchase or use pesticides.</td>
</tr>
<tr>
<td>Physical Cultural Resources OP/BP 4.11</td>
<td>Yes</td>
<td>No physical cultural resources are located in the potential sub-project PV solar park areas. As there may be chance finds during construction. However, for due diligence, the prepared ESIA includes chance finds procedure in case any physical cultural resources are found during the construction phase.</td>
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<tr>
<td>Indigenous Peoples OP/BP 4.10</td>
<td>No</td>
<td>There are no Indigenous Peoples living in Comoros. The policy is therefore not triggered.</td>
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<tr>
<td>Involuntary Resettlement OP/BP 4.12</td>
<td>Yes</td>
<td>OP 4.12 is triggered because of the potential social impacts resulting from project activities to support developers Construction of solar PV and battery storage across the three islands, and the reinforcement of transmission lines and</td>
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</table>
transformers. The project activities will require land acquisition, temporary displacement, economic displacement, which will induce a loss of assets, but physical resettlement is not likely to occur, as investment zones are selected on none uninhabited areas. Therefore four (04) Resettlement action plans (RAPs) have been prepared by the Borrower: Three (03) RAPs for the potential PV sites in the three islands and one RAP for the storage in Anjouan. No Process framework is necessary to this project as access restriction to natural resources is not expected to happen under the project. RAPs have been reviewed and cleared by the Bank and disclosed both in-country and on the Bank’s external website prior to appraisal.

<table>
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<tr>
<th>Safety of Dams OP/BP 4.37</th>
<th>No</th>
<th>The Project is not financing any activities related to dams. This policy is not triggered.</th>
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<tr>
<td>Projects on International Waterways OP/BP 7.50</td>
<td>No</td>
<td>This policy is not triggered as Comoros is an Island country that does not share international waters with neighboring countries</td>
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<tr>
<td>Projects in Disputed Areas OP/BP 7.60</td>
<td>No</td>
<td>This policy is not expected to be triggered by any of the project activities.</td>
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**KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT**

**A. Summary of Key Safeguard Issues**

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

The project is a Category B project and three safeguard policies triggered: OP 4.01 Environment Assessment; OP 4.11 Physical Cultural and OP 4.12 Involuntary Resettlement. The proposed project will support to improve the commercial performance of SONELEC and its capacity to dispatch variable renewable energy. It is expected to have positive overall environmental and social impacts through promoting renewable energy development and energy efficiency measures by adding the grid, storage, and dispatch infrastructure and developing the institutional and operational capacity necessary to integrate intermittent Solar Energy to the grid.

The proposed activities could potentially induce adverse environmental and social impacts during PV system operation, as well as potential impacts related to the civil works of Central PV, transmission lines and storage systems, including the effects related to: (i) deterioration of air quality and noise, (ii) health & safety of workers and communities, (iii) liquid waste (used oil) generation inducing the pollution of surrounding area and underground water; (iv) occupational health and safety risks in case employees are not equipped with appropriate protective materials; (v) any machinery accidental risks; (vi) hazardous solid waste from the solar PV systems, once they reach their end-of-life time; (vii) harm to potential chance finds of physical cultural resources during the civil works of transmission line extension; (viii) land acquisition and economic displacement (113 Households are identified to be
affected directly or indirectly by the project) which will induce a loss of assets. However no physical displacement is expected), (ix) HIV and GBV risks due to likely labor influx (event though GBV risk is assessed as low). The salient physical characteristics are prominent in the power-distribution lines construction sub-component, which shall involve excavations and earthworks, vegetation clearance of both grass and trees, establishment of equipment storage areas, land take/displacement of land-uses and thus associated compensation. By nature of the project activities, there are no large scale or irreversible impacts associated with the project. These potential impacts are moderate, site-specific and could be readily avoided, minimized, and mitigated with good design and sound construction management. Based on the High-potential solar sites across all three islands and the pre-feasibility study, the Borrower has prepared five (05) Environmental and Social Impacts Assessments (ESIAs) with its respective Environmental and Social Management Plan (ESMP): ESIAs for PV central, transmission line and storage in Grande Comores; two standalone ESIAs for storage in Ntrenami and Fomboni and two others standalone ESIAs for Central PV for Moheli and Anjouan and also four (04) RAPs: RAP for PV central, transmission line and storage in Grande Comores, for PV for Moheli and Anjouan and for Storage in Anjouan.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:
No long-term risks or impacts are anticipated as a result of potential future project activities. Overall project impacts are considered modest and will be site specific.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.
N/A

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.
As the High-potential solar sites across all three islands and the pre-feasibility study are known and available in the preparation phase, all ESIAs with its ESMP, satisfactory to the Bank, have been prepared by the borrower with the support of an environmental consulting firm.

Environmental and Social Impact Assessments (ESIA): In compliance with OP 4.01 (Environmental Assessment), five stand-alone Environmental and Social Impact Assessments (ESIA) have been prepared for the solar sites across all three islands. The preparation of the ESIAs were carried out in accordance with Comorian national requirements, as well as with the Bank’s OP 4.01 Environmental Assessment and the International Finance Corporation’s Health and Safety (EHS) Guidelines, and Electric Power Transmission Distribution guidelines. The ESMP includes a sound and consistent environmental and social assessment and management plan to avoid, minimize and mitigate potential environmental and social impacts. It also includes a set of standard Environmental Codes of Practice (ECOP) for common environmental and safety issues encountered during the civil works and operational phases. The ECOPs will be included in the Project Implementation and Operations Manual as a guidance tool for project implementation. The ECOPs will also be included, at a later date, in the contract of the selected private investor operating on these potential sites to develop their renewable PV infrastructure in compliance with the required E&S standards. The proposed project will not finance the construction of a PV power plant and storage facility.

The project’s support for storage could generate waste in the form of depleted batteries containers thus creating the need for a nationwide used battery management plan. While Comoros thus far has no legislation on used battery management, the country could apply international standards on rendering investment compatible with the environment. Therefore, it was proposed that used batteries will be stored in containers in a secure location until a more rational method can be found. The battery management plan will be supervised by the Environmental Unit of the Minister in charge of the Energy with the support of Ministry in charge of the Environment. Regarding Solar PV accessories and batteries which are hazardous waste, it has been adopted that the selected suppliers and private investors shall be required to collect, transport and return them for recycling, i.e. to take them back after their useful
life as a contractual obligation.

ESIAs and its ESMPs also contain GBV prevention and case management measures in accordance with the standard developed in guidance note on GBV. Based on the relatively small scale of the planned interventions, it is not expected that a large mobilization of workers will be necessary. Nevertheless, the ESIA of the project was also developed to cover worker mobilization issues and health security and safety measures for workers, which will include the development of code of conduct for workers.

Public consultations and field visits have confirmed that no archaeological vestiges or any sites defined as physical cultural resources will be impacted. For more assurance, the relevant safeguard documents have made provisions for cultural resources management in the event that the Physical Cultural Resources OP 4.11 is triggered during the implementation phase and comprises “chance finds” procedures for inclusion in the contractor contract.

Resettlement Action Plan (RAP): In compliance with OP 4.12, 04 Resettlement Action Plans have been prepared for the solar sites across all three islands to address all aspect related to land acquisition, temporary or permanent economic displacement, loss of livelihoods. The RAP also outlines variable compensation and resettlement support which fits on households and PAPs categorization, and without exclusion even if some PAPs are irregular occupants. RAPs also define a global grievance redress mechanism (GRM) which will capture all complaints related to the project including those from resettlement issues. The RAPs include a clear and coherent implementation plan, including an institutional arrangement with a total budget of around $ 672,820 which will be co-financed by the government and the project.

Environmental and Social Capacity Building: The capacity assessment conducted as part of the ESIA concluded that the SONELEC will be strengthened for monitoring the management of environmental and social safeguards aspects of the project. The project need to hire full time Environmental specialist and social specialist. The above-mentioned staff shall be fully responsible for compliance with all environmental and social safeguards as well as communications requirements during implementation of project activities as per the legal and policy framework of GoC and the World Bank policies. They shall also manage the necessary handling of grievances / complaints including preparing reports on such grievances and will produce on a quarterly basis reports on the compliance with the Environmental and Social documents. These E&S specialists will be the counterpart of the ESH specialist at private investor level.

Bank environmental and social development experts will provide guidance to the project implementing agency on addressing relevant issues that arise during project implementation. They will provide hands on training in management of environmental and social safeguards risks and implementation of approved ESIAs, including the new Environmental and Social Framework (ESF). The ESIAs include institutional arrangements outlining the roles and responsibilities for the various stakeholder groups involved for implementation and monitoring of their mitigation measures and capacity building activities needed.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

Consistent with best practice in developing ESIAs and RAPs, consultations were held with relevant stakeholders in the three Islands of Comoros. The stakeholders and beneficiaries of the project were identified after undertaking literature review and discussion with SONELEC. The Consultations were carried out using group discussions, community meetings, and individual appointments with government officials. During implementation, the Project Management and Coordination Unit (PMCU or “Maitrise d’Ouvrage Déléguée – MOD”) of the project will consult all relevant stakeholders, project-affected groups, and local nongovernmental organizations regarding all environmental
and social aspects of the project and will take their views into account. These public consultations will be conducted as early as possible and will provide all relevant material in a form and language(s) that are understandable and accessible to the groups being consulted in a timely manner prior to consultation. All the Safeguard instruments (ESIAs, RAPs) have been approved by the Bank and disclosed in-country and to World Bank’s External Website before appraisal.

B. Disclosure Requirements

<table>
<thead>
<tr>
<th>Environmental Assessment/Audit/Management Plan/Other</th>
<th>For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of receipt by the Bank</td>
<td>Date of submission for disclosure</td>
</tr>
<tr>
<td>20-Nov-2019</td>
<td>03-Mar-2020</td>
</tr>
</tbody>
</table>

"In country" Disclosure
Comoros
19-Feb-2020

Comments

Resettlement Action Plan/Framework/Policy Process

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"In country" Disclosure
Comoros
19-Feb-2020

Comments

RAP of PV for Grand Comore disclosed on February 19th, and RAP of PV for Anjouan and Moroni and for the energy storage in Anjouan on March 3rd

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

OP/BP/GP 4.01 - Environment Assessment

Does the project require a stand-alone EA (including EMP) report?
Yes
If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?
Yes

Are the cost and the accountabilities for the EMP incorporated in the credit/loan?
Yes

**OP/BP 4.11 - Physical Cultural Resources**

Does the EA include adequate measures related to cultural property?
Yes

Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?
Yes

**OP/BP 4.12 - Involuntary Resettlement**

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?
Yes

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?
Yes

**The World Bank Policy on Disclosure of Information**

Have relevant safeguard policies documents been sent to the World Bank for disclosure?
Yes

Have relevant documents 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

**All Safeguard Policies**

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?
Yes

Have costs related to safeguard policy measures been included in the project cost?
Yes

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?
Yes

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?
Yes
CONTACT POINT

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Borrower/Client/Recipient

Government of the Union of Comoros

Implementing Agencies

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APPROVAL

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Approved By

Safeguards Advisor: Nathalie S. Munzberg 30-Apr-2020
Note to Task Teams: End of system generated content, document is editable from here. Please delete this note when finalizing the document.