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

Appraisal Stage | Date Prepared/Updated: 22-Mar-2018 | Report No: PIDISDSA22002



BASIC INFORMATION

A. Basic Project Data

Country Tunisia	Project ID P160245	Project Name Tunisia Irrigated Agriculture Intensification Project	Parent Project ID (if any)
Region MIDDLE EAST AND NORTH AFRICA	Estimated Appraisal Date 02-Apr-2018	Estimated Board Date 17-May-2018	Practice Area (Lead) Water
Financing Instrument Investment Project Financing	Borrower(s) Ministry of Development, Investments and International Cooperation	Implementing Agency Ministry of Agriculture and Water Resources (MARH)	

Proposed Development Objective(s)

The Project Development Objective (PDO) is to improve the reliability and efficiency of the irrigation and drainage services and strengthen market linkages for irrigated products in selected areas.

Components

- Institutional Modernization
- Rehabilitation and Improvement Works
- Support to Agricultural Development and Market Access
- Project coordination

Financing (in USD Million)

Financing Source	Amount
Borrower	23.70
International Bank for Reconstruction and Development	140.00
LOCAL: BENEFICIARIES	8.00
Total Project Cost	171.70

Environmental Assessment Category

B - Partial Assessment



Decision

The review did authorize the preparation to continue

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Other Decision (as needed)

B. Introduction and Context

Country Context

- Five years after the 2011 revolution, Tunisia has successfully completed its political transition but weak economic performance poses a risk to the poverty reduction gains of the past and to the promotion of greater inclusion.** Civil society organizations, including youth groups, have gained more voice and have pushed for greater transparency and accountability in public service and the elimination of corruption. But tangible economic dividends in terms of greater prospects for economic opportunities and private-sector-led jobs for the population are taking longer to materialize than expected. While poverty incidence was halved between 2000 and 2014 (from 32.5 to 15.5%), many households (including some categorized as middle class) remain only slightly above the poverty threshold, making them vulnerable to exogenous shocks. Inequality between regions has risen with poverty increasingly concentrated in a few regions of the country.
- Tunisia's agricultural sector has a considerable potential to help boost shared prosperity.** Agriculture accounts for about 10% of GDP and, with the food-processing industry, 10 to 12% of exports. The value of Tunisia's food production has increased by more than 50% over the last 15 years and now stands at over US\$4 billion. About 33% of the 10.9 million Tunisians live in rural area and roughly 50% depend on agriculture for their livelihoods and employment, representing almost 20% of the labor force. In some lagging regions, close to 80% of the rural population and almost all women depend on agriculture for income and employment. In 2012, a third of the poor household heads worked in agriculture compared to 16% of the non-poor.
- There are significant gaps between women and men in both labor force participation, employment, and unemployment rates.** Despite a history of promoting gender equality dating back to the 1960s, women are less likely to participate in the labor force than men and those who do participate experience higher unemployment rates than men. In rural areas in lagging regions, women (especially above 30 years old) are likely to be engaged in unpaid family work on farms while many young educated women in the same regions are trapped, unable to find a job and with little options of moving to places with possible better prospects. A specific gender analysis has been conducted during project preparation to inform the design of the project.



Sectoral and Institutional Context

4. **Agriculture development is strongly affected by climate change.** Renewable water resources amount to 420 m³/year/inhabitant, which is below the threshold of absolute water scarcity. Agriculture uses close to 80 % of these resources. Already the country has been affected by a severe drought in 2016 and 2017 resulting in substantial reduction (up to 80%) in volumes of water allocated to agriculture. Climate change is predicted to increase temperatures, reduce precipitation, and increase variability. Increased temperatures (an estimated 1-2°C by 2030) will increase water consumption, while lower precipitation (an estimated 5-10 % drop) will reduce supply. Increased variability will make droughts and floods more frequent and severe and increase pressure on already strained aquifers. This will create significant economic challenges in the future since irrigated agriculture contributes about 37 % of the agricultural output and 20 % to the agricultural exports on only 8 % of the agricultural land of Tunisia.
5. **The scope for further mobilization of water resources is very limited in Tunisia.** Major infrastructure investments have allowed Tunisia to capture most of its scarce water, mobilizing 92 % of the renewable resources, and to deliver it where it is most needed. Investments in irrigation infrastructure have been by far the most important compared to other agricultural subsectors reaching 35% of all agricultural investments in the past decades and resulting in the development of 410,000 ha equipped for irrigation, which is 95% of the estimated potential. The irrigated areas are concentrated in the North (48 %) followed by the Center (36 %) and the South (16 %). About 53 % of the equipped area is on public irrigation schemes while the remaining 47 % are private systems. Two third of the irrigated area in Tunisia is equipped with efficient irrigation technologies (sprinkler and drip). In addition, the country has a long-standing program of innovative practices such as artificial aquifer recharge and re-use of treated wastewater, even if on limited surfaces.
6. **The Tunisian Government has recognized the need to evolve from a supply side response (increasing water mobilization) to a demand management approach (improving overall efficiency and favoring the most productive uses of water) with a view to improve the overall resilience to climate shocks.** Improvement in demand management can come from a combination of physical improvements, more accountable institutions, and support to the farmers in improving agricultural value addition.
7. **This shift in approach is more urgent in the North of the country where 63% of the public irrigation areas are concentrated and where most of the water resources are generated from.** Public irrigation schemes built 20 to 40 years ago are caught in the vicious cycle of low added value leading to low cost recovery, lack of maintenance and low level of service. Some areas equipped with irrigation are not exploited (close to 20%); cropping intensity is well below potential (90% versus 120%); part of the crops grown in the areas equipped for irrigation are not irrigated (like cereals and olive trees); and overall, average yields of irrigated crops have a significant margin of increase. Transport losses are estimated to reach 40% of water used, resulting in higher pumping cost per cubic meter delivered to the end user.
8. **The priority to uplift the subsector to its performance potential is to provide a reliable service to the users.** Lack of service reliability is a powerful deterrent to agricultural intensification on irrigation schemes, as farmers will not be willing to take the risk of engaging into more profitable crop production if they are facing a high probability of losing production in the event of a technical failure in the irrigation system. However, aging irrigation schemes in Northwestern Tunisia are characterized by frequent breakdowns resulting in weeks of service interruption per irrigation season.



9. **The under-performance of the irrigation subsector has been further compounded by an institutional set up that fails to ensure adequate accountability from the service provider to the users (in delivering the service) and from the user to the service provider (in paying for the service).** Currently, the *Commissariats Régionaux de Développement Agricole* (Regional Agricultural Development Directorates of the Ministry of Agriculture, CRDAs) are in charge of the main systems' operations, while they delegate the *Groupements de Développement Agricole* (Agricultural Development Groups, GDAs) for the water distribution. The dilution of responsibilities between CRDA and GDA, the intrinsic weakness of CRDA which are public administrative bodies to deliver a commercial service, their lack of financial autonomy as they rely on annual budgeting process, and the lack of empowerment and capacity of the GDA are the main reasons for the failure of the current system.
10. **A study conducted during project preparation has identified various options for the establishment of autonomous, financially viable, client oriented irrigation management entities.** The general principle is that corporatized entities of viable size be fully responsible for the delivery of the irrigation and drainage (I&D) service and accountable to the users. These entities should be managed on a commercial basis while serving the public interest. A strong emphasis of the corporatization process should be to instill a service oriented culture, with "users" becoming "clients". A common feature of any option is the need for clear agreement and stakeholder buy-in to the institutional reforms, calling for a strong stakeholder engagement process. The options analyzed include: (i) the public authority (*Etablissement public*); (ii) the corporatized public company (*Société publique*, State-Owned Enterprise, SOE); (iii) the public-private company with a majority of public capital (*Société publique à participation*); (iv) the public-private company with a majority of private capital; and (v) the farmer based association or company (an evolution of the GDA). For seven large irrigation schemes located in the North-West and targeted under the project, the proposed option is a semi-public company with participation from the private sector. However, this requires establishing a SOE first, and opening its capital to private investors after a few years, once the conditions are met (proper technical and financial records available, reasonable level of cost recovery). For one irrigation scheme targeted under the project, the proposed option is the farmer based association or company considering the smaller size with sufficient social cohesiveness. The Government is committed to the reform, and consultations held during project preparation showed a broad consensus, all stakeholders being conscious that the current situation cannot continue.
11. **Irrigation service charges (water tariffs) have been recognized as a key economic instrument for water resources management for a long time in Tunisia.** Kept very low in the 80s, they have been increased substantially in the 90s with a view to reach full Operation and Maintenance (O&M) cost recovery. However, they have been frozen since 2002 and as a result they do not cover the growing cost of water services. Current tariffs cover on average 50 to 60% of the recurrent O&M costs, not including the renewal charges. International experience shows that improvement in the water service is an incentive for farmers to accept increase in tariffs and enhance fee collection rate. In parallel, increase in transport efficiency can reduce some O&M costs, considering that a share of the water charges is used for pumping water that is lost before being delivered to the end user, or left unaccounted for.
12. **Options for crowding in private finance for infrastructure rehabilitation and improvement have been considered.** International experience - both in irrigation sector and in other sectors – shows that it is not feasible to get a valuable deal with the private sector under the current settings. However, the consolidation of several irrigation schemes under one single entity of viable size and with proper records, through the establishment of a State-Owned Enterprise (SOE), will enable the mobilization of private



capital at a later stage, thus enabling Maximizing Finance for Development. By transferring the responsibility for delivering irrigation and drainage services from an administrative body to an actual SOE, i.e. a corporate entity running on a fully commercial basis, this project is also consistent with the on-going government's reform of the SOE sector.

13. **With a secured irrigation service, numerous market opportunities for irrigated agriculture are available in Tunisia**, including fruit trees, industrial crops, vegetable crops, supplementary irrigation for cereals and fodder crops and so on. However, in spite of the successive plans that have made the development of value chains a priority, processing of agriculture products has remained much below expectations. For example, olive oil is still mostly exported in bulk and so are citrus; 75% of tomato production in Tunisia is used as low value input in the industry of concentrated tomato paste, instead of exports of fresh tomatoes. At the same time, there are significant spare capacities in the food processing industry, which demonstrates weak linkages between production and transformation. This is largely related to the fragmented production systems and the absence of farmer organizations able to manage storage, (pre-) processing and commercialization of their members' production. Hence, the Government has decided to link irrigation rehabilitation with a strong support to the development of higher value-added agribusiness value chains. This more holistic approach represents a paradigm shift from previous projects.
14. **The Government and the World Bank have agreed on the implementation of a coordinated value chain support mechanism** across all IBRD financed projects involving such activities in Tunisia, in order to avoid duplication of effort in the same geographical areas and to generate economies of scale. A shared multi-agency task force is being established to this end, with financial support already committed from three active or recently approved projects, namely EDP3 (P132381), ILMP (P151030) and YEIP (P158138). This project will support the extension of the Task Force's activities to additional value chains related to irrigated agricultural products and not already included in these other projects. Operational synergies with ILMP beyond value chain coordination have also been considered during preparation.
15. **Agricultural development activities under the project will contribute to mobilizing private finance.** The project will leverage its matching grant component not only to crowd in investments by local farmers in higher value-added activities, but also to de-risk activities that would benefit from private sector investment (such as cold-chain logistic services). The possible intervention of International Finance Corporation (IFC) in support of value chain development and in liaison with the task force is under consideration. The project intervention will also need to be coordinated with the public subsidy scheme implemented by APIA under *Code des Investissements*.

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)

The Project Development Objective (PDO) is to improve the reliability and technical and financial efficiency of the irrigation and drainage services and strengthen market linkages for irrigated products in selected areas.



Key Results

16. PDO-level results indicators are the following.
 - a. Reduction in days with water service disruption per year (%)
 - b. Irrigation system efficiency (%)
 - c. O&M cost recovery ratio (%)
 - d. Share of production value marketed through contractual arrangements within value chains (%)

D. Project Description

Component 1: Institutional modernization

17. **Subcomponent 1.1: Establishment of a new irrigation management entity.** This subcomponent will finance the cost of establishing a new, autonomous irrigation management entity – or operator – responsible for the delivery of an improved, more reliable irrigation service. This will include the financing of transaction advisory services, equipping the newly established operator with state of the art operation and maintenance tools (software etc.), payment of transitional O&M subsidy, and building the capacity of the operator’s staff. The role of the existing GDAs will be adjusted to the new institutional model and their capacity strengthened to fulfill their new responsibilities.
 - a. Consultants acting as transaction adviser will support (i) the legal establishment of the new operator, including the questions of assets and staff transfer and the feasibility to open the operator’s capital to the private sector; (ii) the definition of contractual terms –including new tariff structure– and performance standards for the delegated O&M functions; (iii) an in-depth farmer engagement process to ensure understanding and ownership of the proposed institutional model; (iv) the setting up of the customer relationship function and other key functions within the new operator; and (v) the evaluation of CRDA and GDA staff competencies and training requirement before their transfer to the new operator.
 - b. O&M subsidy will be paid to the operator on a transitional basis to cover the gap between the actual O&M cost and the expected receipts from the irrigation service fee. This subsidy would be decreasing over time as tariff and fee collection rate increase. The annual subsidy amount will be defined in a performance-based contract signed between the Ministry of Agriculture and the operator.
 - c. Operating software, office building and equipment will be financed as need be to allow the operator to provide a reliable irrigation service and to handle its customer relationship functions.
 - d. Training activities will strengthen the capacity of the irrigation management operators, the GDAs and the public authorities in charge of their oversight. A specific attention will be given to the gender dimension in the way both the re-designed GDAs and the new irrigation management entity operate.
18. **Subcomponent 1.2: Irrigation efficiency improvement.** This subcomponent will finance consultancy services for the development of an information system for irrigation, piloting of in-field water management systems, and development of an irrigation alert system (based on crop water requirements) to help the farmers make the most efficient use of their allocated water and improve water accounting. An accountability mechanism will be established to monitor the satisfaction of the



irrigation users.

Component 2: Rehabilitation and improvement works

19. **Subcomponent 2.1: Common services and goods.** This subcomponent will finance consultant services in support of CRDA's role as "project owner" (*Assistance à Maîtrise d'Ouvrage*, AMO) as well as goods and services that are centrally purchased for economies of scale.
- a. AMO's services will consist in providing the CRDAs with specific skills that they do not already have with the aim to provide contract management capacity and technical O&M skills. These skills will cover all areas necessary for the conduct of operations from the technical, administrative, regulatory, financial, and project management points of view at construction and post-construction stages. AMO's services will also include the production of technical guidelines and tools for national use and the preparation of the bidding documents for centrally purchased goods.
 - b. Centrally purchased goods and services include the supply of meters and flow limiters, using a framework contract as well as topographic survey and establishment of a Geographical Information System (GIS) to be managed by the operator.
20. **Subcomponent 2.2: Rehabilitation and improvement works.** This subcomponent will finance engineering services and rehabilitation and improvement works for seven I&D schemes on 21,920 ha, irrigation expansion on 470 ha, plus some additional road and new drainage works for four additional schemes covering about 5,100 ha.
- a. Engineering services (*Maîtrise d'Oeuvre*) will include: (i) complements to available project studies, as required; (ii) scheduling, coordination and site management; (iii) management of the execution of works contracts; and (iv) assistance to the contracting authority for provisional and final acceptance of works. One such consultancy contract will be established for each CRDA.
 - b. Rehabilitation and improvement works will include: (i) the renovation of the pumping stations, with an increase of their capacity in some cases, and the construction of new pumping stations; (ii) renovation of existing reservoirs and construction of new ones; (iii) the renovation of all main pipeline equipment, replacement of obsolete or undersized sections, and creation of new main lines; (iv) the renovation and reinforcement of distribution networks; (v) the creation of remote management systems (SCADA); (vi) the rehabilitation of feeder roads and service roads and ditches where they are in poor condition; and (vii) the construction of drainage systems in some parts of the schemes.
21. The cost of implementing the environmental and social management plans related to the construction works financed by the project is also included under this component. The new infrastructure is mainly located on public land. The cost of compensation to be paid to project affected people, if any, will be borne by the Government.

Component 3: Support to agricultural development and market access

22. **Subcomponent 3.1: Strengthening the capacity of producers (and producer organizations) and linking them to the market.** The objective is to improve the management of farms and producer groups through the provision of advisory services, with a view to achieve productivity gains and to add value to the production. The main market failure addressed by this subcomponent is imperfect information and coordination failures. The recommendations of the Pest Management Plan (PMP) adopted by the Government of Tunisia for the project will be incorporated in the design of this subcomponent's activities



as need be. The component will be designed with a strong gender lens. The activities implemented under this subcomponent will include:

- a. Consultancy services for the development and implementation support of an integrated and participatory agricultural development plan for each irrigation scheme considered under this project. This plan will be based on extensive agro-socio-economic analysis of the current management of each irrigation scheme: farmer categories, crops, production systems, market linkages, input purchases, marketing channels, etc. The development plan will be validated by each category of stakeholders prior to subscription to the water service from the newly established irrigation management entities. It will include as necessary the establishment of aggregation models like e.g. productive alliances and other forms of contract farming and will select priority value chains for consideration under subcomponent 3.2, in coordination with the TFDCV and will incorporate specific support for women and youth groups in an inclusive approach e.g. dedicated awareness raising activities and training sessions to increase their knowledge for market opportunities and to empower them economically, using all training and investment opportunities provided under this component.
- b. Consultancy services to carry out an in-depth analysis of the concession holdings of the “organized sector” (SMVDA, OTD, technicians and young farmers leasing public land) with a view to initiate a dialogue with the concessionaires on opportunities for value addition, job creation, and aggregation models.
- c. Direct support—in the form of coaching, training and small equipment—to existing producer organizations, as well as to facilitate the emergence and consolidation of aggregation models following the recommendations of the agricultural development plan—notably Productive Alliances. In particular, a very careful attention to the gender dimension will be incorporated into the design of Productive Alliances.
- d. Support to the dissemination of research results through MoUs with specialized institutes (INRA, INGC and others) and inter-professional groups for the management of operational costs and small equipment. Activities supported will include: demonstration on farmers’ fields of varietal improvement and certified seeds, monitoring of water management and soil fertility, improved technical and economic benchmarks, and support for the monitoring of product quality. The needs will be assessed based on the agricultural development plans and the value chain analyses carried out in sub-component 3.2.

23. **Subcomponent 3.2: Boosting product marketing and developing competitive value chains** This second subcomponent tackles coordination failures and information asymmetries in agricultural value chains. It will include support in the form of commercial prospecting and promotion of product quality (certification, labeling, geographical indications). It will also support the financing of private and cooperative investment in the modernization of supply chains and post-harvest infrastructure, with a focus on (i) local value addition and (ii) women groups. The activities provided under this subcomponent will include:

- a. Consulting services, equipment and operating costs to carry out market studies and strategic analyses for promising value chains, ensure adequate coordination of value chain development support with other World Bank funded operations active in the same regions (cf. paragraph 14), and assist preparation and implementation of investment proposals to be financed under the matching-grant mechanism, with a specific focus on women and youth groups.



- b. Consulting services, services other than consultants, equipment and operating costs for the implementation of actions to promote the quality of products (inter-stakeholder consultation forums, certification, labeling, geographical indications, communication and advertising campaigns), with focus on consolidation and expansion of successful initiatives.
- c. The implementation of a matching grant mechanism to support the financing of private and cooperative investments in farm modernization, technical capacity building, marketing activities, and post-harvest infrastructure in selected value chains, while ensuring complementarity with existing governmental program implemented by APIA and with the other World Bank funded projects. Overall, the design of the matching grant mechanism will incorporate a strong gender dimension.

Component 4: Project Management

This component will support the establishment and functioning of the Project Implementing Unit (*Unité de Gestion par Objectif*, UGO) within the MARHP. The UGO will be responsible for project coordination and management, monitoring and evaluation activities, and fiduciary responsibilities. It will compile the reports from the citizen engagement feedback mechanisms under the project (through the operator, the GDA and so on). Through the provision of goods, consultants' services and training, the Component will cover: (i) the equipment cost for the unit; (ii) training of UGO staff; (iii) short term expertise; (iv) impact assessment studies; (v) training, communication and expertise related to the implementation of the project's ESMF; and (vi) the incremental operating costs for the project, all of which at both, central and regional levels. The salaries of UGO staff and the project audit will be paid by the Government.

E. Implementation

Institutional and Implementation Arrangements

24. **Implementing agency.** The project will be implemented by the Ministry of Agriculture (MARHP). MARHP has a long experience of working with the World Bank acquired on several projects, both in drinking water supply and in irrigation, the latest project being PISEAU 2 just recently closed. The *Direction Générale du Génie Rural et de l'Exploitation des Eaux* (General Directorate for Rural Engineering and Water Management, DGGREE) within MARHP will be responsible for the overall coordination of the project. It will be directly responsible for the implementation of the Component 1, subcomponent 2.1 and Component 3, the latter in close coordination with *Direction Générale de la Production Agricole* (General Directorate for Agricultural Production, DGPA).
25. **Implementation at regional level.** The *Commissariat Régional du Développement Agricole* (Regional Office for Agricultural Development, CRDA) in the six Governorates (Béja, Bizerte, Jendouba, Nabeul, Sfax and Siliana) will be responsible for the implementation of subcomponent 2.2. The CRDA will be responsible for the oversight of all construction and construction supervision activities, including the related procurement and financial management, within their areas of jurisdiction (i.e. the region). They will also be involved in the implementation of specific activities under Components 1 and 3 and in the monitoring of all activities in the region.
26. **Project management unit.** A Project Management Unit (*Unité de Gestion par Objectif*, UGO) will be set up within DGGREE to strengthen the capacity of DGGREE, DGPA and the CRDA in implementing the project. The UGO will consist of staff appointed from the MARHP. Short term experts will be mobilized to cater for other aspects of the project, notably safeguards. At regional level, the CRDA will avail their



regular staff on part-time basis. In addition, and considering the expected workload, the UGO will have full time staff in the CRDA where the project activities are most substantial. The UGO will be established after the loan agreement is ratified by the Tunisian parliament and its staff appointed thereafter. In the meantime, the DGGREE and DGPA team who is already working on project preparation will keep handling project implementation.

27. **Value chain development and matching grant mechanism.** The market studies and strategic value chain analyses as well as the coordination of value chain development support under subcomponent 3.2 would be delegated by DGGREE to the Value Chain Development Task Force (TFDCV) supported by the World Bank, once established. In the meantime, the UGO will manage these activities in coordination with the other World Bank-funded projects. The management of the matching grant mechanism under the same subcomponent will be delegated to *Agence de Promotion des Investissement Agricoles* (APIA) in line with its mandate. To this effect, MoU will be signed between DGGREE on one hand and the TFDCV and APIA on the other hand. The matching grant mechanism will be established as a special program within APIA, with targeting and eligibility criteria harmonized with the other World Bank-funded Projects to ensure synergies. A subproject selection committee will be established for the purpose of implementing the selection process for this project. APIA will otherwise follow its regular procedures applicable under the *Code de l'Investissement* and work with its regional agencies to implement the matching grant mechanism. No disbursement shall occur under the matching grant mechanism unless the matching grant manual has been prepared in a manner satisfactory to the World Bank and the subproject selection committee has been established. Finally, a number of contracts with various agencies and organizations will be signed for the implementation of specific activities under Component 3. These contracts are (or will be if not yet known) identified in the project's procurement plan.
28. **Scheme operator.** Following the consultations held during project preparation, MARHP intends to establish one single SOE in charge of all I&D schemes rehabilitated under the project and located in the NorthWest (Beja, Bizerte, Jendouba and Siliana regions). The operator will be implementing O&M activities once transferred from the CRDAs and GDAs. It will receive an O&M subsidy as stipulated in a program agreement signed with MARHP. Until such time the operator is established, the CRDA and GDA will continue handling O&M activities.
29. **Policy Guidance.** Improving coordination of the irrigated agriculture sector was recognized as a key priority by the Government and a *Comité National de Valorisation des Périmètres Irrigués* (National Irrigation Schemes Intensification Committee) was established by MARHP. The committee is chaired by the Minister and includes representatives from relevant ministerial departments, public agencies and private entities (like value chain organizations). This committee will be used to provide policy guidance to DGGREE with regard to the project. In addition, regional committees (*Commissions Régionales de Valorisation des Périmètres Irrigués*) chaired by the respective Governors have been established in each target Governorate. Finally, the strategic issues related to wastewater reuse will be submitted for discussion and guidance to the *Comité National de Suivi de la Réutilisation des Eaux Usées* (National Wastewater Reuse Monitoring Committee).
30. **Steering Committee.** In addition to these existing committees, a Project Steering Committee (COPIL) will be established to provide oversight role, review annual work plans and budgets and validate annual project reports prepared by the UGO. The COPIL will be chaired by the Minister at MARHP or his representative and comprise *a minima* of the following directorates and professional organizations: DGGREE, DGFIOP, DGPA, DGEDA and APIA from MARHP, MDICI, Ministry of Finance, DGIAA from the Ministry of Commerce and Industry, one representative from MALE, and one representative from each



CRDA. The secretariat of the Steering Committee meetings will be handled by the UGO. The COPIL will need to be established no later than three months after project effectiveness. In order to ensure necessary coordination with ILMP, the core membership of both projects' steering committees will be shared as long as the two projects are both active.

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

The project will physically rehabilitate existing irrigation schemes in agricultural areas, mostly working along existing pipelines and using existing pumping stations and reservoirs, and existing service roads. For Djebba, El Hajeb, Medjez El Bab and Testour new regulating reservoirs and connecting pipelines will be required. Drainage works will consist mainly in laying underground drainage pipelines and desilting existing drainage canals. Beja Governorate - Djebba scheme: New water supply system + rehab for existing irrigated areas 790 ha; Irrigation system expansion 331 ha - Medjez El Bab scheme: Irrigation system rehabilitation 3,791 ha; New drainage 300 ha; Service roads 7 km - Testour scheme: Irrigation system rehabilitation 1,406 ha; Service roads 7 km - Gouboullat scheme: New drainage 1,550 ha; Service roads 8 km Bizerte Governorate - Mateur scheme: Irrigation system rehabilitation 1,930 ha; New drainage 300 ha; Service roads 10 km - Ghézala & Teskraya schemes: New drainage 750 ha; Service roads 6 km Jendouba Governorate: - Bou Heurtma scheme: Irrigation system rehabilitation 9,446 ha; New drainage 2,200 ha; Service roads 76 km Nabeul Governorate: - Grombalia scheme: New drainage 700 ha Siliana Governorate: - Gaafour – Laaroussa: Irrigation system rehab 4,420 ha; New drainage 245 ha; Service roads 52 km . Rmil: New drainage 200 ha Sfax Governorate: - El Hajeb scheme: Irrigation system rehabilitation 450 ha; New expansion 150 ha Total: 11 schemes - Irrigation system rehabilitation ~22,230 ha - New expansion ~480 ha - New drainage ~6,240 ha - Total new and improved I&D service area ~25,900 ha

G. Environmental and Social Safeguards Specialists on the Team

Markus Friedrich Vorpahl, Social Safeguards Specialist
Mohamed Adnene Bezzaouia, Environmental Safeguards Specialist
Mehrez Chakchouk, Environmental Safeguards Specialist



SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	<p>This policy is triggered because of the potential environmental and social impacts associated with rehabilitation of irrigation and drainage schemes and expansion of one scheme. The majority of the intervention sites are known, however the contours of the intervention area in some sites is not yet known (sites still under study) and/or may vary according as a result of the participatory engagement process with beneficiary farmers. Specific environmental and social risks can be associated to the activities of the program components notably: hydrological risk related to the drainage works, minor impacts usually related to civil work during rehabilitation and expansion activities, pollution and sanitary risks related to the use of treated wastewater and to the manipulations during possible replacements of asbestos cement pipes.</p> <p>An ESMF has been prepared. The ESMF will screen and exclude Category A-type sub-projects. The ESMF has been prepared as – while sites are known - technical design is still on-going. ESIA's will be prepared during implementation when technical design is finalized, following provisions of ESMF and RPF.</p> <p>The ESMF will contain provisions to ensure labor aspects, including the exclusion of child labor and management of labor influx, if any, are properly addressed in the documents prepared during project implementation, including ESIA's, ESMP's, bidding documents, and civil works contracts. The ESMF will ensure proper consultation with project beneficiaries, in particular on tariff increases, willingness to pay will be assessed during the planning process of tariff change. All land that benefits from the improved irrigation schemes is agricultural land, and the vast majority (>95%) is already managed under the irrigation schemes to be improved.</p> <p>Stakeholders engagement during planning will be included into project safeguards instrument design. All the safeguard documents (ESIA's, ESMP's, RAP's)</p>



		<p>prepared will be consulted and will be physically accessible to PAPs at the regional CRDA level before any subproject implementation in paper format. A consultation workshop on ESMF was held in mid-November 2017. The ESMF has been disclosed in country and on the Worldbank external site on March 15, 2018.</p>
Natural Habitats OP/BP 4.04	No	<p>This policy is not triggered. Based on current information the known activities will not impact natural habitats and future sub-projects would be intended to exclude these impacts.</p>
Forests OP/BP 4.36	No	<p>This policy is not triggered. Based on current information the known activities will not impact natural habitats and future sub-projects would be intended to exclude these impacts.</p>
Pest Management OP 4.09	Yes	<p>Although the project does not plan to finance pesticides it will support agricultural intensification and diversification which may result in increased use of pesticides. A Pest Management plan have been be prepared and will be disclosed prior to appraisal.</p>
Physical Cultural Resources OP/BP 4.11	Yes	<p>Considering Tunisia's rich archeological past and despite the fact that the construction works are mostly related to rehabilitation of existing infrastructure. A chance find procedure contained as an annex in the ESMF would be used during civil works.</p>
Indigenous Peoples OP/BP 4.10	No	<p>No groups that would qualify as Indigenous Peoples under the definitions of OP 4.10 are negatively impacted or beneficiaries of the project.</p>
Involuntary Resettlement OP/BP 4.12	Yes	<p>This policy is triggered because of the potential impacts of involuntary land taking associated with rehabilitation of irrigation and drainage schemes and expansion of one scheme. These impacts will be limited to loss of or loss of access to agricultural land. No physical displacement will happen under the project. Although the irrigation schemes to be habilitated have been identified, the exact alignment of most pipelines and drainage canals has not been defined, as the final technical design will be demand driven. Some small regulation reservoirs and pumping stations will likely be constructed. The contours of the intervention area in some sites is not fully developed and may vary as a result of the</p>



participatory engagement process with beneficiary farmers.
An RPF has been prepared by the borrower during project preparation to ensure proper preparation of resettlement instruments for those investments that require involuntary land taking. A screening process has been integrated into the Resettlement Planning Framework (RPF) and the project ESMF to ensure the mitigation instruments are prepared for all relevant sites following the prescriptions of the RPF. The RPF has been publicly consulted by the borrower on November 16, 2017.

The project does not include any funding for new dam construction. However, several of the irrigation schemes to be rehabilitated rely on existing large dams for their water supply. Previous assessments of dam safety or recommendations of improvements needed in the existing dam have been provided by the borrower and show evidence that (a) an effective dam safety program is already in operation, and (b) full-level inspections and dam safety assessments of the existing dams have already been conducted and documented. The team has reviewed during preparation the documentation provided by the Borrower and found that the dam safety measures in place are appropriate and respond to the Bank policy requirements. Some needed actions are already planned by the Borrower and their implementation will be monitored at implementation stage.

This policy is triggered because some schemes are supplied from dams fed by the Medjerda basin which is shared with Algeria. The proposed works will mostly focus on rehabilitation or minor additions or alterations to existing irrigation schemes. As such, it is expected that neither the quality nor quantity of water available to the other riparians will be adversely impacted. An exception to the requirement of notifying other riparians requirement has been prepared and signed by RVP on January 11, 2018.

The project interventions are not under dispute.

Safety of Dams OP/BP 4.37

Yes

Projects on International Waterways
OP/BP 7.50

Yes

Projects in Disputed Areas OP/BP 7.60

No



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:

Most of the works are simple rehabilitation without any major impact except those usually related to civil works. Specific environmental and social risks can be associated to the activities of the program components, notably: hydrological risk related to the drainage works, pollution and sanitary risks related to the use of treated wastewater for the expansion of El Hajeb (Sfax) scheme and to the manipulations during possible replacements of asbestos cement pipes. Agricultural intensification and diversification can lead also to increased use of pesticides with all the risks involved. Some constructions may have happened on the footprint of the irrigation infrastructure to be rehabilitated or in the right of way when installing the drainage system and might result in loss of assets or access to assets. Other environmental and social risks may be related to the state and safety of dams for a sustainable water supply. Involuntary land taking will be limited to small-scale temporary or permanent involuntary land taking for rehabilitation of existing infrastructures, such as pipelines and drainage canals, or for reservoirs, pumping stations and other structures needed in the expansion of irrigation schemes. No physical displacement of persons will be necessary under the project. All land that benefits from the improved irrigation schemes is agricultural land, and the vast majority (>95%) is already managed under the irrigation schemes to be improved.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area: Agricultural intensification may result in water pollution downstream the irrigation schemes and in soil degradation if not properly managed. The scheme will have positive impact on energy consumption thanks to the increased efficiency of the irrigation systems.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts. Safe soil management practices will be promoted. The value chain development support will analyze the viability of organic farming. Reasoned use of pesticides and herbicides will be promoted for traditional agriculture. The locations of linear infrastructure to be rehabilitated will mostly following existing alignments. For sites of new structures such as small reservoirs, the locations will be determined taking into account results of public consultations.

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. Safeguard screening will be conducted before commencement of construction for each irrigation scheme and each infrastructure subproject to be financed under the matching grant facility. The screening will exclude Category A-type sub-projects, Sub-projects involving potentially negative impacts on: (i) natural habitats, (ii) Forest resources (iii) archaeological and historical heritage sites, (iv) Large areas classified as sensitive or part of the international heritage and (v) Large tracts of land generating involuntary resettlement of affected people or leading to a significant loss of income;

Dam safety reports submitted by the DGBGTH relating to the auscultation and annual inspection of the four dams were reviewed and found complete and of good quality. Specific recommendations from these reports will be implemented by the Government and monitored as part of project supervision.

An Environmental and Social Management Framework has been prepared by the Borrower to screen and mitigate environmental and social impacts during construction and scheme operation. A Pest Management Plan was prepared



to help manage the risk of pollution related to agricultural intensification.

Activities to be financed by the Project will follow the environmental screening process by means of an Environmental and Social Diagnostic Fact Sheet (FDES) that will determine the magnitude of negative impacts of sub-projects on the human and biophysical environment, and any required safeguard tools. Based on the information included in the FDES, it will be possible to determine if a complete Environmental and social impact assessment (ESIA), or an Environmental and Social Management Plan (ESMP) will be required, in order to identify expected risks and related measures aimed at reducing/avoiding them. Mitigation measures identified in these safeguard tools will be included in the Terms and Specifications documents (Cahiers des charges) for operators and entrepreneurs. At the stage of implementation, and as dictated by the screening checklist, site-specific Environmental and Social Management Plans (ESMPs) and/or ESIA will be prepared, reviewed, approved and disclosed in-country prior to commencement of any civil works. All the safeguard documents (ESIAs, ESMPs) prepared will be consulted and will be physically accessible to PAPs at the regional CRDA level before any subproject implementation.

The borrower has prepared an RPF to guide the preparation of the safeguards instruments for investments that may require temporary or permanent involuntary land taking for rehabilitation of existing infrastructures, such as pipelines and drainage canals, or for reservoirs, pumping stations and other structures needed in the expansion of irrigation schemes.

The borrower is aware of Bank safeguards policies and processing. In addition, an environmental and social specialist will be recruited by the UGO He/she will be responsible for applying the screening checklist and following up and reporting on the mitigation measures of the site-specific ESMPs.

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

The project will directly benefit agricultural producers on selected schemes who will get access to new or improved irrigation and drainage services and receive assistance for agricultural intensification and market access. The beneficiaries include a mix of small and medium scale farmers, and of public and private farming companies using public land within the scope of the project's influence. The project will, through participatory selection processes in consultation with beneficiaries, establish mechanisms to target disadvantaged population, youth groups, unemployed graduates, women in the provision of business support and capacity building measures, and thus reduce inequitable access of women to employment and training in the agricultural sector.

An Environmental and Social Management Framework has been prepared by the Borrower to screen and mitigate environmental and social impacts during construction and scheme operation. A Pest Management Plan was prepared to help manage the risk of pollution related to agricultural intensification. A Resettlement Policy Framework document has been prepared by the Borrower to screen and mitigate impacts of land acquisition, and prepare the required safeguards instruments during project implementation.

The ESMF, PMP and RPF have been consulted and discussed with various stakeholders (involving representatives of the main national, regional and local institutions and NGOs) during one national workshop (Bizerte November 15 and 16, 2017). The main recommendations and comments were the following : (i) strengthening scientific research for improving and monitoring the quality of waste water for irrigation purposes; (ii) securing the water supply from dams whose capacity is increasingly affected by siltation; (iii) institutional organization at regional level ; and (iv) need of technical assistance for implementation, monitoring and reporting on safeguard aspects at the regional level.

Regarding the RPF, questions were asked about the procedures of land acquisition and the preparation of Resettlement Action Plans (RAP), and details on the valuation process of ground attachments, which were clarified to the satisfaction of the stakeholders.

A Grievance Redress Mechanism (GRM) is going to be provided for the management of all project-related questions, comments or complaints. The GRM covers social and environmental aspects and can deal with problems of acquisition of land, environmental impacts, or other project-related issues (e.g. compensation and evaluation, nuisances, or



damage caused by construction). The GRM will cover several stages and involve grievance resolution by local, sub-national and national project entities.

It will be in place from the outset of the project and should continue until the completion of the project implementation work and does not deprive the affected or damaged person (s) of recourse to the courts. The GRM, its legitimacy, and the procedures underpinning it and to which the WB attaches major importance were discussed during the public consultations.

The final version of the ESMF, PMP and RPF have been disclosed in-country through the Ministry of Agriculture website and through the Bank external website on March 15, 2018.

Site specific instruments will be prepared and disclosed for each scheme before construction start. All the safeguard documents (ESIAs, ESMPs, and RAPs) prepared under the project will be subject to public consultations. The safeguards instruments will be physically accessible to PAPs at the regional CRDA level in paper format before any subproject implementation.

B. Disclosure Requirements

Environmental Assessment/Audit/Management Plan/Other

Date of receipt by the Bank 07-Dec-2017	Date of submission for disclosure 15-Mar-2018	For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors
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"In country" Disclosure

Tunisia
15-Mar-2018

Comments
<http://www.agriculture.tn/images/PIAIT1.pdf>

Resettlement Action Plan/Framework/Policy Process

Date of receipt by the Bank 07-Dec-2017	Date of submission for disclosure 15-Mar-2018
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"In country" Disclosure

Tunisia
15-Mar-2018

Comments
<http://www.agriculture.tn/images/PIAIT2.pdf>



Pest Management Plan

Was the document disclosed prior to appraisal?

Yes

Date of receipt by the Bank

07-Dec-2017

Date of submission for disclosure

15-Mar-2018

"In country" Disclosure

Tunisia

15-Mar-2018

Comments

<http://www.agriculture.tn/images/PIAIT3.pdf>

If the project triggers the Pest Management and/or Physical Cultural Resources policies, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.

If in-country disclosure of any of the above documents is not expected, please explain why:

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 4.09 - Pest Management

Does the EA adequately address the pest management issues?

Yes

Is a separate PMP required?

Yes

If yes, has the PMP been reviewed and approved by a safeguards specialist or PM? Are PMP requirements included in project design? If yes, does the project team include a Pest Management Specialist?

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

OP/BP 4.37 - Safety of Dams

Have dam safety plans been prepared?

NA

Have the TORs as well as composition for the independent Panel of Experts (POE) been reviewed and approved by the Bank?

NA

Has an Emergency Preparedness Plan (EPP) been prepared and arrangements been made for public awareness and training?

NA

OP 7.50 - Projects on International Waterways

Have the other riparians been notified of the project?

No

If the project falls under one of the exceptions to the notification requirement, has this been cleared with the Legal Department, and the memo to the RVP prepared and sent?

Yes

Has the RVP approved such an exception?

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

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APPROVAL

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Approved By

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