Project Information Document/
Integrated Safeguards Data Sheet (PID/ISDS)

Concept Stage | Date Prepared/Updated: 20-Apr-2017 | Report No: PIDISDSC17562
## BASIC INFORMATION

### A. Basic Project Data

<table>
<thead>
<tr>
<th>Country</th>
<th>Project ID</th>
<th>Parent Project ID (if any)</th>
<th>Project Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mali</td>
<td>P159765</td>
<td></td>
<td>Commercial Irrigated Agriculture Development Project (P159765)</td>
</tr>
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<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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<tbody>
<tr>
<td>AFRICA</td>
<td>Mar 19, 2018</td>
<td>May 29, 2018</td>
<td>Water</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Financing Instrument</th>
<th>Borrower(s)</th>
<th>Implementing Agency</th>
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<tbody>
<tr>
<td>Investment Project Financing</td>
<td>Minister for Spatial Planning and Population</td>
<td>Ministry of Agriculture</td>
</tr>
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### Financing (in USD Million)

<table>
<thead>
<tr>
<th>Financing Source</th>
<th>Amount</th>
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<tbody>
<tr>
<td>International Development Association (IDA)</td>
<td>150.00</td>
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<tr>
<td><strong>Total Project Cost</strong></td>
<td>150.00</td>
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</table>

<table>
<thead>
<tr>
<th>Environmental Assessment Category</th>
<th>Concept Review Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-Full Assessment</td>
<td>Track II-The review did authorize the preparation to continue</td>
</tr>
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</table>

### Environmental Assessment Category

#### Other Decision (as needed)

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## B. Introduction and Context

### Country Context

1. Mali is one of the world’s poorest countries, with a per capita gross domestic product (GDP) of US$704.50 in 2014. Life expectancy is low (57 years of age); malnutrition levels are high (28 percent of under five children are stunted); and most of the 17.1 million population is illiterate (69 percent of adults). The economy of this landlocked country is predominantly rural and informal: 64 percent of the population resides in rural areas, and 80 percent of the jobs are in the informal sector.

2. The incidence of poverty is high and predominantly rural. Prior to the 2012 political and security crisis, Mali had succeeded in reducing poverty, due mainly to increased agricultural production and better functioning value chains. Between 2000 and 2010, the incidence of poverty declined from 60 percent to 51...
percent. In 2010 half the population lived below the US$1.9-a-day poverty line and 90% of the poor live in rural areas. Since 2010, drought (2012) and conflict (2012–13) have taken their toll, as a result poverty is likely to have worsened.

3. The performance of the Malian economy remains dependent largely on the agricultural sector (40 percent of GDP). Since 1995, the economy grew at approximately 5.0 percent per year until 2010. However, in 2012, due to the global recession, the military coup, and the deteriorating security situation in the North, Mali’s GDP growth slowed dramatically to 1.2 percent. After normalization of the conflict, in 2013 economic growth resumed, first at a slow pace resulting from following adverse weather conditions that impacted cereal production. In 2014 growth accelerated to 7.2 percent following sizable financial support received from Development Partners which enabled an upsurge in public investment, and the revival of private consumption. The signing of a peace agreement in 2015 (Peace and Reconciliation Accord Resulting from the Algiers Process) strengthened hopes for peace and stability.

4. Seizing Mali’s long-term growth potential through economic transformation will require gradually expanding and diversifying the productive sectors of the economy, particularly agriculture. Prospects for rapid structural transformation are unrealistic, given limited progress in recent years in Sub-Saharan Africa (SSA). This limited progress points to the need of addressing certain key prerequisites for the agricultural sector to seize opportunities arising from urban growth that will increase demand for livestock products and high-value farm products. These prerequisites are: significant productivity gains in agriculture; diversification of products to high value crops; increase in value addition; a flexible labor market and minimum education to adapt to new sectors; and conditions favorable to trade and investment (notably, low transport costs and a good investment climate that includes efficient enabling services). Growing Mali’s agricultural private sector will require to follow a gradual approach, whereby growth prospects should be explored first within existing value chains and sectors and try to expand toward products that are relatively low in economic complexity but still close to what already is being produced.

Sectoral and Institutional Context

1. The government has put agriculture at the top of its development priorities for several decades. In 2014, budget allocations to the sector increased from 11 to 15 percent of the total budget. The Government Action Plan (Plan d’Action Gouvernemental) developed in 2013 for the period 2013-2018 reiterates the new government’s commitment to the Growth and Poverty Reduction Strategy (Cadre Stratégique pour la Croissance et la éduction de la Pauvreté 2012 - 2017 - CSCRPS) which was adopted by the Council of Ministers in 2011 prior to the crisis.

2. The agriculture sector is under the responsibility of the Ministry of Agriculture (MoA). MoA has a vast experience in working on agricultural productivity across the country. It relies on a regional presence with
various public companies called Offices, Regional Directorates and Local Services, which gives MoA unparalleled ability in Government to map actors in production areas. Due to the importance of the MoA however, leadership tends to be political with a focus on drafting policies, regulations, strategies and programs while little efforts on implementation and delivery of these documents.

3. Despite the Government efforts, agricultural productive capacity in Mali is only slowly improving and much arable and irrigable land remains underdeveloped. Only a small proportion of potential crop yields is exploited, limiting the potential to achieve poverty reduction results. Changing climate conditions is one of the determinants of low agricultural productivity as most agricultural land is rain-fed and droughts severely increase the risk for agricultural producers. Price uncertainty in the market also limits Malian farmers’ private investment in agriculture. Moreover, access to finance for agriculture is low, particularly for women farmers.

4. Rice, largest cereal production in Mali, would greatly benefit from irrigation development. The main commercial agricultural crops are rice and cotton, although farmers also produce significant quantities of millet, sorghum and maize, mainly for their own consumption. While Mali is still a net importer of rice, half of the national rice crop is produced in the south of the country, under rain-fed conditions, but yields are low (at 0.5-1.5 tons/ha). The other half is concentrated in the center north along the Niger River and involves modern irrigated or flooded rice cultivation techniques, yielding an average of 3-6 tons/ha. In the areas under irrigation, agricultural practices have changed from extensive farming to more intensive methods including double cropping (although only 10% is estimated to engage in double cropping). Crop management techniques include transplanting, high fertilizer use, weeding techniques and the adoption of improved varieties of seeds. (IFDC, 2008). Even with a single-cropping rotation system, yields are estimated to average 5 MT/ha under irrigation. In addition, in Office du Niger, almost 90% of the rice production is of Gambiaka variety, which commands higher prices.

5. Office du Niger (OdN) is the largest irrigation scheme in West Africa. Established in 1932 to develop a vast area of 2.8 million hectares using the waters of the Niger river diverted at Markala dam, OdN has since then built and managed a hydraulic system delivering water to close to 120,000 ha mostly cropped with rice and sugarcane and the potential for expansion of irrigable area up to 450,000 hectares¹. OdN is mandated by the Government to undertake irrigation development using public funding from national budget or from projects and has the responsibility to operate and maintain the irrigation systems in partnership with the users who pay an irrigation service fee. OdN also provides extension services. OdN also the land on behalf of the Government (as per the Décret de Gérance) and distribute it to smallholder farmers holding a land use permit on plots developed at the Government’s cost and to investors holding a land lease (bail emphytéotique) on plots developed at their own cost.

¹ Source for all numbers in this paragraph: Étude de Programme d’Aménagement Hydro-Agricole (PAHA) de la zone Office du Niger
6. High demographic growth rates and declining soil fertility have made the OdN area a particularly prized area for land ownership / occupation. The demand for land with irrigation facilities is much higher than their supply (approximately 4,000 ha are built annually in the OdN). While large producers can finance part or the totality of these facilities, smallholder farmers are dependent on the extension of irrigation schemes financed by the Government. Farmers settled on existing schemes have very few if any opportunity to expand their farms. Population growth means these farms get divided among the heirs and their size reduces constantly (from an average of 7 hectares in the eighties to less than 2 hectares presently). As the availability of fertile, irrigable land diminishes and demand for access to OdN land increases, the opportunities for profiteering and rent-seeking in the publicly managed land and irrigation scheme have grown. Concerns over ‘land-grabbing’ and speculative land acquisitions by politically well-connected elites and investors have emerged and point to the significance of the area for the consolidation of political legitimacy or control. These pressures have been counterbalanced by the emergence of grassroot farmer organizations and syndicates with strong leadership and real political weight.

7. The World Bank has financed a landmark study for OdN under the Fostering Agricultural Productivity Project: the *Programme d’Aménagement Hydro-Agricole* (PAHA), a master plan study just completed in June 2016. Based on a water balance for Niger basin, this study lays a plan and sets priorities for the sustainable development of 330,000 ha of additional irrigable land. Importantly, it proposes measures to improve water efficiency and drainage, to develop fish farming and high value crops, to increase the synergy between irrigated agriculture and livestock production, and to enhance land tenure security and management in OdN area. The investment program spans over a period of over 30 years and entails a mix of interrelated public and private investments. It represents a paradigm shift from the current model of irrigation development which is based essentially on rice cultivation with gravity-fed, low efficiency irrigation systems and full public financing (except for the few active private investors and some limited pilot experiences with farmers’ contribution).

8. The Government has recently established an *Agence pour l’Aménagement des Terres et la Fourniture de l’Eau d’Irrigation* (ATI) with a mandate to help finance irrigation development using innovative financing mechanisms to leverage private sector financing. ATI is an autonomous entity entrusted with the mission to accelerate the pace of investment in irrigation and drainage throughout Mali. Its main functions are to (i) negotiate and mobilize public and private funding for irrigation development; (ii) avail irrigated land for producers and ensure the provision of adequate irrigation service; (iii) support the Government services in implementing strategic studies; and (iv) recover part of the investment costs from the producers for use in future investments. ATI’s chief executive officer is in place and the agency is currently in the process of recruiting its core staff.

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2 About 92,000 ha have been allocated to private investors by the Government in OdN area in the past years, but only 17% of this area has actually been developed.

3 ATI was established by a 2015 *Ordonnance* as an EPIC: *Établissement Public à caractère Industriel et Commercial*. 
9. This proposed Project will be prepared and implemented under the auspices of the Sahel Irrigation Initiative, a regional program also supported by the WBG for six countries in Sahel. Building on the Dakar Conference on Irrigation of 2013, the Bank has initiated a regional technical assistance to support harmonization of institutional arrangements and capacity building of relevant organizations that led to the preparation of a regional project. The project will seek to improve the overall performance of irrigation agriculture through the development of solutions of regional significance that countries can adapt to their context. To do so it will (i) work with government on policies (fiscal, trade) and land and water management/irrigation strategies, (ii) investments and access to finance activities (infrastructure investments financed by private, public and PPP interventions, support to larger agriculture operators and access to finance mechanisms for small producers); (iii) support to the introduction and development of irrigation technologies and innovative and efficient farming techniques (access to finance for irrigation equipment distributors, support to the development of efficient and sustainable distribution networks, quality certification schemes, etc.); and (iv) awareness raising and capacity building activities for actors of the value chain, with a focus on producer associations.

10. The project will built on lessons learnt from recently closed and on-going project notably the Agriculture Competitiveness and Diversification Project (P081704), the Fostering Agricultural Productivity Project (P095091) and the Support to Agroindustrial Competitiveness Project (P151449) now under preparation. The first two projects provide interesting lessons on how to support smallholder farmers increase their productivity and strengthen their access to markets using improved technologies. Both projects suffered from the geographical dispersion of activities. The third one gives insights at the engagement with private sector around priority value chains in a more geographically focused way. Earlier another World Bank funded project (National Rural Infrastructure Project) had experimented without success a cost recovery mechanisms for irrigation development at Office du Niger.

11. Other recent projects would also be considered during preparation notably the Alatona Irrigation Project (AIP) financed by the Millenium Challenge Corporation (MCC) and the Programme d’Appui au Développement de la zone Office du Niger Phase 2 (PADON2) financed by AFD. These two project are using innovative land tenure approaches using land title (AIP) or land leases (PADON2) linked to a cost recovery mechanism for the development of irrigation infrastructure in Office du Niger area. The Alatona project was successfully implemented on about 5,000 hectares with more than 8,000 hectares of potential remaining to be developed. PADON2 is currently under implementation.

12. Finally there are several other donors active in the Office du Niger area who are organized in a joint Government – Donors dialogue group. This group is actively involved in the policy dialogue related to Office du Niger governance. Some donors are providing budget support to Office du Niger with triggers related to improved administrative and fiduciary processes. Recently, an audit has identified flaws in the management of the fee collection process by OdN and an action plan was prepared and agreed with the Government. OdN is also experimenting mobile money payment to ease and secure this process.
Relationship to CPF

1. The project will directly contribute to the twin goals of reducing extreme poverty and sharing prosperity through the establishment of smallholder irrigated farms and job creation. It is consistent with the World Bank’s current re-engagement in Mali; it is aligned with the goals in the CPF (2015), NAIP, the government’s legal framework for agriculture (Loi d’Orientation Agricole, LOA 2006) that seeks to promote the modernization of both agriculture and agricultural enterprises through the National Agriculture Sector Investment Program (“Programme National d’Investissement du Secteur Agricole”, PNISA), and current Agricultural Development Policy (PDA 2013).

2. The proposed project supports the second area of focus of the Country Partnership Framework (CPF FY16-19): Creating Economic Opportunities. The Country Partnership Framework (CPF), in line with the Systematic Country Diagnostic (SCD), highlights the importance of Malian agriculture sector development to reduce poverty on a lasting basis. The SCD identifies (i) lack of access to irrigated lands, (ii) yield gaps for crops, and (iii) inefficiencies in the agricultural value chains as binding constraints contributing to low productive capacity of poor farmers and pastoralists and poor agriculture value diversification. Meanwhile, one of the three objectives of the CPF is to create economic opportunities by (a) improving productive capacity and market integration of farmers and pastoralists, (b) diversifying agricultural value and (c) improving infrastructure and connectivity to all Malian. Thus, proposed Project results chain is in line with the CPF, with particular emphasis on the following expected outcomes: (i) increased productivity in agriculture; (ii) expanded access to markets in key agricultural value chains; and (iii) better water and natural resources management.

3. The proposed project also is a pillar of the World Bank Group Joint Implementation Plan (JIP) for Mali, focused on agriculture and livestock: “Reducing Poverty through Private Sector Investment in Agribusiness.” Close coordination among the World Bank, IFC, and MIGA will play an important role in supporting commercial value chain development in areas including governance (investment, land, and water), infrastructure (irrigation, energy, storage, transport, ICT) and services (productive alliances, skills, access to finance). Each institution will contribute based on its respective mandates. JIP lays out the World Bank Group activities planned for Southern Mali and the Office du Niger (OdN): the sequence and proposed timeline, specific roles of various teams, and key milestones and outcomes to monitor progress. The approach of the proposed Project is to increase irrigated lands surfaces. It will create relationships between actors and help industrial firms addressing their supply constraints, and foster large scale investments in the OdN area, thus creating a pipeline of projects for IFC and MIGA.
C. Proposed Development Objective(s)

The Project Development Objective is to develop a reliable irrigation service and to enable commercially viable agriculture in the project areas.

Key Results (From PCN)

1. The proposed key results that would be used to measure the achievement of the PDO are as follows:
   a. Direct project beneficiaries (number), of which female (percentage) [core]
   b. Area provided with new or improved irrigation and drainage services (hectares) [core]
   c. Water users provided with new irrigation and drainage services (number) [core]
   d. Operational water user association created (number) [core]
   e. Share of private investment contribution to on-farm irrigation systems (percentage)

2. Project beneficiaries include:
   a. Key producer groups (farmers and firms) such as (i) 700 market-oriented smallholder farmers (3-10 ha), (ii) 4,000 women farmers (1-5 ha per group), (iii) 350 small and medium scale agro entrepreneurs (10-50 ha), (iv) 3 large scale agro entrepreneurs (500 ha);
   b. Other value chain actors such as processors, wholesalers, exporters, distributors;
   c. Participating private entities such as professional and inter-professional organizations;
   d. Workers who will be employed in the value chains (VCs) supported by the Project;
   e. Agents involved in activities that link with the Project through its backward-linkage (nursery owners, seed producers, agro-input suppliers, local collectors) and forward-linkage (transport operators, retailers, shipping enterprises, suppliers of packaging materials);
   f. Ministries, departments, and agencies such as Ministry of Agriculture and the ATI.

3. The Project will include a citizen engagement review (grievance redress) mechanism. Specific attention will be given to gender inclusion in all Project activities. It is expected that over 10 percent of land allocation or 800 hectares be attributed to women groups, with a plot average ranging from 1 to 5 ha per group i.e. 4,000 women beneficiaries.

D. Concept Description

1. Office du Niger is the only area in Mali with a large potential for a rapid expansion of commercial irrigated agriculture. One or several locations (casiers or schemes) will be selected within OdN area based on criteria that are discussed further below. The project will directly finance the main infrastructure down to farm-gate and support complementary investment from private investors and farmers in on-farm irrigation systems. This support might include matching grant financing (for smaller farmers), partial risk
guarantee and reimbursable advances. The advances would be managed by ATI and the related reimbursements feed into an irrigation investment fund that would help further expand the impact of the project. The project will also finance environmental and social management plan and resettlement action plan for each project site, as well as institutional strengthening for sustainable operation and maintenance of the schemes.

2. The project would use the IPF as financing instrument. It would be financed by US$ 100 million IDA-SUF Loan with a duration of 7 years. The Project will have four components: (a) Component 1 – Infrastructure development ($50 million), (b) Component 2 – On-farm irrigation development ($32 million); (c) Component 3 – Sustainable economic, social and environmental development ($12 million), and (d) Component 4 – Institutional development and project management ($6 million).

Component 1 – Infrastructure development ($50 million)

3. This component will finance technical studies, construction supervision and civil works for the development of 7,500 hectares of irrigated lands in the Office du Niger (OdN) area and supporting infrastructure such as power lines and access roads.

4. Several sites are being considered for this investment based on their level of readiness e.g. availability of feasibility and design studies and of environmental and social impact studies (see Table 1). The project sites will be selected based on the following criteria: (a) readiness for investment i.e. verification of the quality of the available studies; (b) attractiveness for private investors, small and large, based on a specific study to be conducted during preparation (see further below); (c) secured land tenure i.e. land title or long term land lease (bail emphythéotique), (d) secured water allocation for wet and dry seasons; (e) sufficient bulk water supply capacity from Markala diversion weir to the site; and (e) demonstrated agronomic potential of project area allowing for diverse cropping.

Table 1: list of potential sites within Office du Niger area

<table>
<thead>
<tr>
<th>Site</th>
<th>Ha</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>Alatona</td>
<td>8,800</td>
<td>Detailed engineering studies and safeguard instruments available, about 5,000 ha have been already developed upstream under MCC compact to settle local inhabitants Special land tenure regime with land titles</td>
</tr>
<tr>
<td>M’Béwani</td>
<td>3,000</td>
<td>Area already allocated to medium-size investors (10-100 ha), no study</td>
</tr>
<tr>
<td></td>
<td>4,900</td>
<td>Study about to be launched on 4,900 ha under PAPAM</td>
</tr>
<tr>
<td></td>
<td>12,600</td>
<td>Possibility to expand on 12,600 ha, no studies available</td>
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<tr>
<td>Molodo Nord</td>
<td>1,385</td>
<td>Study available</td>
</tr>
<tr>
<td>Niaro</td>
<td>2,000</td>
<td>Study available</td>
</tr>
<tr>
<td>Phédié</td>
<td>1,800</td>
<td>Study available, area already allocated to investors</td>
</tr>
<tr>
<td>Singo</td>
<td>2,000</td>
<td>Study available</td>
</tr>
<tr>
<td>Rétail IVbis</td>
<td>800</td>
<td>Study available, on-going project financed by AFD with</td>
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</table>
5. Considering the size of the project, one or several sites could be selected. In order to attract investors of significant scale, the project would need to have one main “anchor” site of substantial scale (say 5,000 ha) which can only be located within Alatona or M’Béwani areas. Alatona is the best option in terms of readiness since the studies are completed thanks to the MCC-funded project and the land can be titled. However it is located far north the OdN zone and suffers from security issues. These two options for the anchor site will be further assessed during preparation.

6. In addition, relatively smaller sites could be added. Rétail IVbis could be an interesting opportunity since it is included in the on-going AFD-funded project (PADON 2) with all due diligence completed and with a program to settle smallholder farmers from neighboring irrigation sectors with secured land leases and a financial contribution to the investment. The additional sites listed in the above table will be screened against notably the quality of the design and impact assessment studies and the feasibility to allocate land to entrepreneur smallholder farmers and some larger investors with secured land lease.

7. Existing designs will be reviewed before construction in order to make available the option of pressurized on-farm irrigation. For smallholder farmers the on-farm irrigation systems could use the semi-californian technique (low pressure pipe system) which has been successfully developed in different places in Sahel. For larger scale investors drip or center pivot irrigation would likely be a good option. Energy would be provided from the grid (power line financed by the project) or from photovoltaic panels (notably for smallholders). Surface irrigation will remain available as a fallback option.

Component 2 – On-farm irrigation development ($32 million)

8. This component will finance a matching contribution to the cost of on-farm irrigation systems. It will include a matching grant and a reimbursable advance mechanism managed by the recently established Agence pour l’Aménagement des Terres et la Fourniture de l’Eau d’Irrigation (ATI). The advances allocated by ATI would be reimbursed over the life period of the on-farm equipment and guaranteed by the land lease. The matching grant and reimbursable advances would be complemented by the farmers / investors contributions estimated at $15 million.

9. An alternative mechanism will be considered during project preparation to finance the development of solar pumping, notably for smallholder farmers: the project funding would go to partially finance and/or guarantee a Pay-As-You-Go (PAYG) mechanism implemented by solar pumping distributors. PAYG has been successfully developed for household solar energy and experiments are on-going (in Senegal for example) for solar pumping. Project preparation would build on IFC’s experience in this subject matter.
Component 3 – Sustainable economic, social and environmental development ($12 million)

10. This component will support economic development and finance social infrastructures and environmental management in the project intervention areas. It will incorporate all necessary environmental and social impact mitigation measures as determined by the related plans.

a. The project will finance Technical Assistance (TA) and training activities in support of economic and commercial development encompassing: (a) the land allocation process, including the selection of skilled farmers and investors using appropriate criteria and with a special attention given to the inclusion of women and youth; (b) the support to agricultural intensification through the provision of training and extension services; (c) the facilitation of productive alliances e.g. business development services, contract farming etc.; and (d) pilot market infrastructure works for the New Agriculture Villages (NAV). The project would build on on-going TA work financed by USAID in Alatona area.

b. The project will finance social infrastructures including buildings, wells, access roads and drainage works etc. that are required to host the incoming population. In addition, project affected people will be compensated as per the approved Resettlement Action Plans and will be provided housing as need be (this to be funded by Government counterpart funds). Environmental management activities will also be financed for the duration of the project.

11. During the preparation of the Project, several activities will be conducted such as (a) a socio-economic assessment for the selection of commercial value chains and implementing modalities for the establishment of irrigated farms (through an addendum to PAHA contract under PAPAM), (b) a call for expression of interests for private investors in farming, and (c) a feasibility study for the New Agriculture Villages (NAV). Environmental and social impact assessment studies will be updated as need be during preparation and new studies conducted for project sites that were not yet selected at the time of project approval. A Environmental and Social Management Framework (ESMF) and a Resettlement Policy Framework (RPF) will be established to this effect (see below). It is expected that a specific site be selected. Thus the costing for access roads and powerlines will be refined.

Component 4 – Institutional development and project management ($6 million)

12. This component will ensure that Project activities are implemented in accordance with the agreed work schedule and in compliance with the Loan Agreement. In addition, it will build the capacity of ATI, OdN and local organizations to operate and maintain the schemes and to foster further economic development.

13. Institutionally the operation and maintenance of the new schemes will fall under the mandate of OdN. However, in the case of this project a special arrangement would need to be devised to ensure proper oversight from the farmers and investors over the use of the irrigation service fee.
14. Besides, the project will build the capacity of the newly established ATI in managing a land allocation process and implementing a financing mechanism by which the beneficiaries contribute to the investment.

15. During the preparation of the Project, the following activities will be conducted: (a) recruitment of the PIU, (b) organization of two technical workshops, (c) organization of fiduciary trainings, (d) drafting of the operations manual, (e) drafting of environmental and social management framework, (f) drafting of resettlement policy framework, (g) drafting of a pest management plan, and (h) drafting the communication plan. These activities would need to be financed from on-going project.

SAFEGUARDS

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

The project will be implemented in the Office du Niger area. The main pre-identified project location is Alatona, located in the towns of Diabaly and Dogofry in the Ségou region and within the service area of the Office du Niger. The project area is located at the developed end of the Fala of Molodo which forms the western part of the natural drainage network of the Niger’s “Dead delta” (“Delta mort”) and is fed by the Niger River waters, which flow varies according to the rainfall regime. The static groundwater level of Alatona varies between 4 and 20 meters of depth in the southern part of the perimeter and goes down to 50 meters to the east.; and groundwater flow measurements range from 7 to 20 m³/h.

The project area is located in the southern margin of the Sahel climatic belt. Annual rainfall is 400 mm on average, but can vary from year to year from 200 to 700 mm. The vegetation of the area is characterized by a monotonous landscape comprising mostly irrigated rice fields between Niono and the village of Rizame. Serious shortages of firewood and timber are frequently experienced, as well as the lack of other wood products such as animal feed, food and medicines, fiber, etc.

Other new sites could be selected during project implementation but still within the Office du Niger area.

B. Borrower’s Institutional Capacity for Safeguard Policies

Borrower institutional capacity for safeguard policies is limited. Training activities on safeguards requirements to ensure compliance with the project’s safeguards instruments will be included in the overall project’s activities.

C. Environmental and Social Safeguards Specialists on the Team

Salamata Bal, Social Safeguards Specialist
Dahlia Lotayef, Environmental Safeguards Specialist

D. Policies that might apply
<table>
<thead>
<tr>
<th>Safeguard Policies</th>
<th>Triggered?</th>
<th>Explanation (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Assessment OP/BP 4.01</td>
<td>Yes</td>
<td>The project is proposed to be classified as environmental category A due to the relatively large surface area to be transformed in commercially viable irrigated land and the scale of the supporting infrastructure. The impacts on water resources in general and on the water balance in specific will need to be carefully assessed and the appropriate mitigation measures defined. Due consideration will also be given to the cumulative impacts of the proposed interventions. As the exact sites of some proposed investments are already known (e.g. Alatona site), ESIA and related ESMPS will be developed during preparation as appropriate, in addition to an overall ESMF. OP 4.07 on Water Resource Management is also triggered and the project design will take the requirements of this policy into consideration.</td>
</tr>
<tr>
<td>Natural Habitats OP/BP 4.04</td>
<td>Yes</td>
<td>Although the project is not expected to intervene in any critically important natural habitat, the exact sites of the proposed investments are not yet known. The impacts of severe climate conditions, insecurity and conflicts situations may lead to expanding activities in areas requiring specific management considerations.</td>
</tr>
<tr>
<td>Forests OP/BP 4.36</td>
<td>No</td>
<td>The project will not intervene in the areas known for dense wooded acacia forests with dense In the western part of the site, along the banks of the Fala de Molodo.</td>
</tr>
<tr>
<td>Pest Management OP 4.09</td>
<td>Yes</td>
<td>The project does not intend to finance specific agriculture activities, but the fact that it deals with irrigation schemes for agriculture purposes, especially in the context of Component 2 (On-farm irrigation schemes) implies the possibility of handling and using pesticides within the areas of intervention or the areas of influence of the project. Country specific Pest Management Plans will be prepared and annexed to the regional ESMF.</td>
</tr>
<tr>
<td>Physical Cultural Resources OP/BP 4.11</td>
<td>Yes</td>
<td>The eligibility criteria for investment projects will ensure that no investments are selected in areas with a cultural heritage potential, but given that the exact locations of these activities have not yet been determined, chance-find procedures will be included in work contracts.</td>
</tr>
<tr>
<td>Topic</td>
<td>Requirement</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------------</td>
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</tr>
<tr>
<td>Indigenous Peoples OP/BP 4.10</td>
<td>No</td>
<td>There are no Indigenous Peoples in the project areas, as defined by OP/BP 4.10.</td>
</tr>
<tr>
<td>Involuntary Resettlement OP/BP 4.12</td>
<td>Yes</td>
<td>No physical displacement is anticipated due to the nature of the project. However, the planned irrigation schemes and support infrastructures might create a need to compensate for the loss of property or identification of alternative livelihoods.</td>
</tr>
<tr>
<td>Safety of Dams OP/BP 4.37</td>
<td>TBD</td>
<td>Some of the project activities are dependent on the existing Markala dam, which is in practice a weir diverting some of the Niger Basin water. A final decision will be taken during preparation, after all activities have been identified, to confirm the triggering of this policy.</td>
</tr>
<tr>
<td>Projects on International Waterways OP/BP 7.50</td>
<td>Yes</td>
<td>This policy is triggered because the proposed hydro-agricultural developments can indirectly affect the Niger River, which is an international waterways shared by nine countries.</td>
</tr>
<tr>
<td>Projects in Disputed Areas OP/BP 7.60</td>
<td>No</td>
<td>The project will not be implemented in any disputed areas.</td>
</tr>
</tbody>
</table>

**E. Safeguard Preparation Plan**

Tentative target date for preparing the Appraisal Stage PID/ISDS

Jan 18, 2017

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

Environmental and Social Management Framework will be completed before appraisal. At least one full Environmental Impact Assessment Study for one priority site would be disclosed before appraisal. Existing studies will be used.

**CONTACT POINT**

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APPROVAL

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<th>Task Team Leader(s):</th>
<th>Xavier Chauvet De Beauchene, Mahamoud Magassouba, Soulemane Fofana</th>
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</thead>
</table>

Approved By

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<thead>
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<th>Maman-Sani Issa</th>
<th>05-May-2017</th>
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<tr>
<td>Country Director:</td>
<td>Michael Hamaide</td>
<td>27-Sep-2017</td>
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