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

Concept Stage | Date Prepared/Updated: 24-Jan-2019 | Report No: PIDISDSC25547
### 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>
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<td>Cameroon</td>
<td>P168772</td>
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<td>Valorization of Investments in the Valley of the Logone (P168772)</td>
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<td>Ministry of Economy, Planning and Regional Development (MINEPAT)</td>
<td>SEMRY (Société d'Expansion et Modernisation de Riziculture de Yagoua)</td>
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**Proposed Development Objective(s)**

The Project Development Objective (PDO) is to improve irrigation services, rice production and commercialization in targeted irrigation schemes of the Logone valley.

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

#### SUMMARY

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#### DETAILS

**World Bank Group Financing**

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| Environmental Assessment Category | Concept Review Decision |
B. Introduction and Context

Regional Context

1. The Lake Chad area has a great potential for development but is challenged by multiple and interrelated drivers of conflict as well as social and environmental fragility. As one of the results, the areas surrounding the Lake Chad represent the poorest, most marginalized and neglected part of each respective country and have been left susceptible to crime and violence and promises from radical Islamists. In Cameroon, for example, poverty is increasingly concentrated in the northern parts of the country – the Far North and the North present a poverty rate of 74.3% and 67.9% respectively, and the literacy rate is almost half in the North (43%) compared to the rest of the country (72% nationally). Similarly in Nigeria, average poverty rate is 46% (2015) while in the states around Lake Chad such as Jigawa (88%), Borno (70%) and Yobe (90%) is much higher.

2. The underlying causes of the high levels of poverty, perceived social injustice, include a lack of social service provision, historic marginalization, inadequate economic opportunities, rapid demographic growth and the impacts of climate change and land degradation. The conflict can be traced back to a range of fragility drivers and historical underinvestment in remote areas. Fragility drivers include i) lack of public services; ii) the pressure on the already fragile ecosystem which is significantly increasing due to a high population growth\(^1\), iii) poor natural resource management, and climate and disaster risks in the Region; iv) weak governance and weak presence of state institutions; v) weak agriculture performance, and vi) missing international road corridor and energy transmission linkages.

3. Lake Chad is a large transboundary lake shared between Cameroon, Chad, Niger and Nigeria and a total of 49 million people live from the exploitation of its rich natural resources (fishing, livestock farming, flood-recession agriculture, hunting and gathering). A net exporter of food and a provider of seasonal jobs, it also contributed to the food and job security of people in its hinterlands, including two regional metropolises, N’djamena and Maiduguri, as well as the impoverished regions of the lake’s Sahelian hinterlands (Borno in Nigeria; Diffa in Niger, the Far North Province in Cameroon and the regions of the Lake in Chad). If the lake area represents such a food production hub, it is because it offers, all year long, a relatively secure source of water, fodder and fertile land. Moreover, those mostly family fishing and farming systems are labor intensive and generate significant indirect employment (processing, trade, crafts, and transport).

\(^1\) The population of the four countries around the Lake Chad (Cameroon, Chad, Niger and Nigeria; entire territory of the countries, not vicinities of the Lake Chad) has more than quadrupled in the last 50 years – from 60 million in 1960 to more than 243 million inhabitants in 2017. See UNFPA: From crisis to development around Lake Chad, Strategy for an Integrated, Holistic and Sustainable Response, 2018.
4. The hydrologically active basin is less than half that area, established at 0.97 million km$^2$, with 20 million people. About 20% of the total area of the Basin or 430,000 km$^2$ is called the Conventional Basin with 42% of this area in Chad, 28% in Niger, 21% in Nigeria, and 9% in Cameroon. The majority of the Basin countries are among the poorest in the world based on the HDI rankings. Lake Chad is Africa’s fourth largest lake and the largest in Western and Central Africa.

5. The Charri-Logone river is the backbone of the Lake Chad Conventional Basin with multiple implications upstream and downstream. The Chari-Logone River contributes about 95 percent (38.5 km$^3$) of the total inflow (40.5 km$^3$) into Lake Chad. In recent history, the area of Lake Chad has varied between 3,000 and 25,000 km$^2$, with a variation in its level of over 8 meters and a variation in volume of between 20 and 100 km$^3$. The present water withdrawal in the Logone-Chari of 0.5 km$^3$ (corresponding to 0.2 km$^3$ in Cameroon and 0.3 km$^3$ in Chad) represents 1.3 percent of the average annual water resource (38.5 km$^3$); therefore, most of the variation in the Lake Chad basin are related to the inter-annual variation in precipitation in these two countries. Furthermore, with an average depth of only three meters, the average intra-annual variation of 1 meter translates into huge variations in surface area between summer and winter months (e.g. some 6,000 km$^2$ for 278m above sea level vs. almost 12,000 km$^2$ for 279m).

6. The Lake Chad Basin Commission (LCBC) was created since 1970s but is a weak institution. The mandate of the LCBC is to sustainably and equitably manage the shared water resources of the Lake Chad Basin, to preserve the ecosystems of the Conventional Basin, and to promote regional integration, peace and security across the Basin. A Water Charter was developed in 2010 and approved in 2012 by the Presidents of each riparian member country. Although the document has yet to be ratified by all parties, this marks a significant step in bringing countries closer to sharing information, joint planning and enforcing rights and regulations over the use of natural resources. All these challenges call for additional efforts, at the policy and investment levels, but also at the national and regional levels to carry through the requested interventions. A Five Year Investment Plan (FYIP) for the Lake Chad was developed in 2012 comprising regional and national components for each of the riparian countries. Because of the lack of commitment and buy-in from the countries towards the national plans, the regional approach for policy dialogue and support should be coupled with specific national engagements.

Country Context

7. A lower middle-income country of about 24 million people, Cameroon is strategically located on the Gulf of Guinea. With a per capita Gross Domestic Product of US$1,374 (current prices) in 2017, the economy is largely driven by its primary sector, agriculture and mineral resources, and benefits from its location in the Congo Basin, the world’s second largest tropical forest zone, which provides exceptional ecological diversity. Despite having one of the most diversified economies in the Economic and Monetary Community of Central Africa region, Cameroon’s economic activity slowed in 2016. Growth

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FAO, AQUASTAT ...
dipped to 3.7 percent at the end of 2017, compared to 4.4 percent in 2016, resulting from the maturity of the main oil fields and to the avian flu epidemic that has damaged the local poultry industry, particularly in the West, which accounts for 80 percent of production. However, continued implementation of the Government’s ambitious infrastructure plan and interventions to boost the agriculture and forestry sectors have significantly contributed to sustained strong growth in public works, construction, and services.

8. The Government of Cameroon’s (GoC) long-term vision, Cameroon Vision 2035, is of an emerging, democratic and united country in diversity. To operationalize this Vision, the Government adopted a Growth and Employment Strategy (DSCE – Document de Stratégie pour la Croissance et l’Emploi) in 2009 and defined specific objectives to be achieved by 2020, such as reducing poverty rate to less than 29 percent and by 10 percent in 2035. The GoC has further adopted the United Nations 2030 Agenda for Sustainable Development. It also endorsed the Paris Agreement under the United Nations Framework Convention on Climate Change and published Cameroon’s Nationally Determined Contributions (NDC) setting out its contribution to climate change mitigation and priorities for adaptation.

9. The DSCE identifies inadequate infrastructure and an unfavorable business environment as the main factors impeding economic growth and employment creation. The agriculture sector, which currently employs about 70 percent of the active population in Cameroon (primarily in the informal sector), is regarded as the potential engine for economic growth and job creation if it can be transformed from traditional farming to diversified and commercially viable farming. The DSCE recognizes the need for agricultural diversification, increased productivity, and large-scale public investment projects in the sector. In fact, notwithstanding Cameroon’s abundance of natural assets and tremendous climatic and land potential, the primary sector’s contribution to GDP growth is very limited at about one percentage point per annum, and is dominated by food crops grown by smallholder farmers.

10. As population growth outpaces poverty reduction, the number of poor increased between 2007 and 2014 by 12 percent to 8.1 million people, with important regional disparities. Despite more than a decade of economic growth, national poverty incidence has remained almost unchanged. Poverty decreased slowly as a percentage of population, from 40.2 percent in 2001 to 37.5 percent in 2014, and its incidence declined in urban areas from 17.9 percent to an estimated 8.9 percent during the same period. In rural areas, on the other hand, the percentage of poor increased from 52.1 percent to 56.8 percent. Even though urban poverty declined significantly in relative terms, the absolute number of urban poor declined only slightly, by 300,000, because the urban population increased by approximately 4.1 million since 2001. In rural areas, higher poverty incidence resulted in 1.1 million additional poor people. Poverty is mainly a rural phenomenon (90 percent rural), and the northern regions exhibit by far the highest poverty rates in Cameroon, with an estimated 56 percent of the poor living in the North and Far North regions alone. In these two northern regions poverty and inequality levels have steadily increased over time relative to the rest of the country where poverty and inequality have declined. They are subject to multiple poverty traps, which are documented extensively in the World Bank Systematic Country Diagnostic (SCD, Report 103098-CM)³, including low agriculture productivity, increasing vulnerability to climate change, poor infrastructure, and limited access to health and education services.

11. Poverty incidence is correlated with agro-ecological zones. The four poorest regions (the Far-North, the North, the North-West and the Adamawa), belong to three agro-ecological zones—the Sudano-Sahelian, the Western Highlands, and the Guinea Savannah. These three zones account for 80 percent of all poor (see figure below). In the largely arid Sudano-Sahelian zone, comprising the Far North and North regions, agricultural output (millet, maize, peanuts, and cotton) depends heavily on rainfall. Animal production is also vulnerable to drought. In this zone, 72 percent of the population (equivalent to 56 percent of all the poor in Cameroon) live below the poverty threshold. Malnutrition is rampant with 3 out of 4 food insecure people located in the North and Far North regions. In the Western Highlands, comprising the North-West and West regions, a cattle and coffee-based system with corn, (coco) yams, potatoes, and peanuts as the main food crops, predominates. Thirty-nine percent of the population in this agro-ecological zone live below the poverty threshold.

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³ Republic of Cameroon: Priorities for Ending Poverty and Boosting Shared Prosperity, June 20, 2016
representing 18 percent of all the poor in Cameroon. Twenty percent of the poor live in the remaining two agro-ecological zones.

12. **Social and economic gaps between regions are likely to worsen as a result of climate change.** The Sudano-Sahelian area (North and Extreme North) is the most environmentally fragile zone in Cameroon. It is particularly exposed to drought and increased temperatures with serious implications for the majority of inhabitants who depend on agriculture and livestock for their livelihoods. The Climate and Disaster Risk Screening results conclude that the project area is at high risk of extreme temperatures, drought, and extreme precipitation and flooding. Similarly, the Think Hazard profile for the Far North region\(^4\) also notes wildfire concerns are high due to climate change are expected in the region, in addition to the aforementioned climate risks. Regional climate change projections suggest that an overall decrease in the quantity of water available could exacerbate water shortages in many rural areas of northern Cameroon. The quality of water will also be affected. An increase in temperatures and greater dryness are likely to result in net capillary movement and the salinization of both water and soils. Rice, one of Cameroon's main food imports, grown in the north by both traditional and modern methods, will particularly be affected, but also other food crops such as millet, sorghum and maize. These climate risks are particularly acute in the Far North, which is where the project area is located.

![Figure 1: Cameroon: incidence of poverty by agro-ecological zone.](image)

**Sectoral and Institutional Context**

13. **Agriculture remains the backbone of Cameroon's economy, employing 70 percent of its workforce, while providing 42 percent of its GDP and 30 percent of its export revenue.** Food crops contribute 64 percent to agricultural GDP, followed by livestock (13 percent), forestry (9 percent), industrial and export crops (8 percent), and fisheries (6 percent). About 54 percent of all households have at least one member who owns a crop field of about 2.4 hectares (ha) as documented in the DSCE. Yet, a series of constraints have led Cameroon's agriculture sector to be characterized by low productivity and low-production subsistence farming, especially in the North and Far North. Declining soil fertility, limited use of fertilizer, low adoption of high yielding varieties and improved farming techniques are among the core reasons for constrained yields. Techniques and approaches to address these constraints exist, and Cameroon is blessed with a multitude of high quality agricultural research institutions. Nevertheless, the adoption of improved practices remains limited, as no functional extension system is in place, as evidenced by the size of the yield gaps.

14. **Irrigation is fundamental to ensuring regional food security in the Far North.** The Sudano-Sahelian agro-ecological zone is the most environmentally fragile and vulnerable to climate shocks of the five zones in Cameroon. The Far North region has an average annual precipitation (P) of 800 mm, March to September, and the potential evapotranspiration (EPT) is 2,400 mm per year (P/EPT<0.33). This permanent deficit (EPT) translates into water stress and reduced photosynthesis and therefore lower yields. This high level of evapotranspiration reflects the climate risks identified in paragraph 6. In the absence of other natural resources, the Far North is not surprisingly the poorest region in the country.

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Poverty increased from 56 percent in 2001 to 74 percent 2014, indicating both the severity and a worsening trend of poverty. The region is highly populated and environmentally degraded and is subject to ongoing immigration pressure from the socio-political destabilization in the border areas with NE Nigeria, Chad and Niger. Most households rely on rainfed farming for food provisioning but are particularly vulnerable to climate change in the Sahelian context, anticipated to worsen over time. More than half of households spend above 75 percent of their income on food purchases and more than 60 percent are vulnerable to food insecurity. In this zone improved irrigation, in particular, is critical to increasing food availability, diversity, and affordability for poor households.

15. Société d’Expansion et Modernisation de la Riziculture de Yagoua (Society for the Expansion and Modernization of Rice Cultivation in Yagoua, SEMRY) is a parastatal agricultural support and irrigation and drainage agency established in 1971 with the construction of the SEMRY I scheme at Yagoua (5,500 ha: 1972-1977) and SEMRY II scheme at Maga (6,500 ha: 1978-1986). The 27 km long earthen Maga dam was constructed on the upper part of the Waza-Logone floodplain in 1979 to provide water for the SEMRY II scheme (also called Maga scheme) and for fish farming. The Maga dam remains the largest piece of infrastructure in the Logone-Chari River system, with a maximum capacity of 620 million m$^3$. When SEMRY was established in 1971 the operation and maintenance of the hydraulic infrastructure of the Logone dyke and the Maga dam was its core mandate. During the 1990s the mandate to operate and maintain the large-infrastructure (flood dyke and dams) was transferred to the Government, under MINEPAT, Ministère de l’Economie, de la Planification et de l’Aménagement du Territoire (Ministry of Economy, Planning, and Regional Development). SEMRY has since focused only on the operation of the irrigation services, along with the agricultural support and land-preparation services described above.

16. SEMRY presently undertakes three main functions: (i) irrigation, Operations, Management and Maintenance (OMM) at all levels of the schemes; (ii) provision of land-preparation services; and (iii) post-harvesting of rice (milling, bagging and transport). SEMRY has a substantial staff contingent of 300 personnel (50 management, 250 support), machinery workshops and stores, new and old heavy construction machinery, and a fleet of trucks among other. The budget for 2018 was approximately US$ 6 million, yet governance norms such as financial audits, administration systems, and accounting transparency, are weak. A severe lack of mechanization in the area, and a near-complete absence of explicit rules for land-access and control and irrigation water management, are key issues to be addressed. The present multiple roles originate from historical evolutions that have entrenched a highly centralized bureaucratic character of the organization requiring brief explanation to inform the proposed modernization approach.

17. Despite the many challenges it faces, the GoC is committed to increasing investment in the agriculture sector for poverty reduction and economic growth. A growth strategy that focuses on products cultivated by the poorest has a greater likelihood of successful poverty reduction, and as the majority of the poor can be found in the rural areas of northern Cameroon, a poverty reducing growth strategy would focus on the value chain development of coarse grains (rice, maize, millet, and sorghum) but also livestock, beans and cotton, which is the main cash crop grown in the Northern regions. In this context, the GOC’s agriculture strategy is expressed in three key national strategy and planning documents: (i) «Vision 2035» envisages agricultural growth beyond 5 percent by 2020; the DSCE foresees significant productivity increases in agriculture and livestock farming; (ii) the 2005 - 2009 Rural Development Strategy and its 2013 update (“Document de Stratégie de Développement du Secteur Rural,” - DSDSR) commit to a modernization of rural infrastructure and agricultural production and sustainable management of natural resources; and (iii) Cameroon has engaged in the African Union’s Comprehensive Africa Agriculture Development Program (CAADP), and with CAADP support, Cameroon is currently finalizing its 2014-2020 National Agriculture Investment Program (“Plan National d’Investissement Agricole,” - PNIA11).

18. The Logone river is part of the Lake Chad basin with multiple implications upstream and downstream. The Chari-Logone River contributes about 95 percent (38.5 km$^3$) of the total inflow (40.5 km$^3$) into Lake Chad. In recent history, the area of Lake Chad has varied between 3,000 and 25,000 km$^2$, with a variation in its level of over 8 meters and a variation in volume of between 20 and 100 km$^3$. The present water withdrawal in the Logone-Chari of 0.5 km$^3$ (corresponding to
0.2 km$^3$ in Cameroon and 0.3 km$^3$ in Chad) represents 1.3 percent of the average annual water resource (38.5 km$^3$); therefore, most of the variation in the Lake Chad basin are related to the inter-annual variation in precipitation.

19. According to the existing Lake Chad Water Charter, developed in 2010 by the Lake Chad Basin Authority (CBLT) and approved in 2012 by the Presidents of each member country, the potential withdrawal for the entire basin was established at 6 km$^3$, with a potential irrigation area of 80,000 ha for Cameroon (present irrigated area is 12,000 ha). The importance of the Logone river to the Lake Chad basin also means that climate shocks to the river will reverberate through the wider basin. There are agreements within the CBLT and the Monou agreements that need to be respected:

(i) Limit total water withdrawal for the Chari-Logone sub-basin to 2 km$^3$/year (presently water withdrawal is 0.5 km$^3$/year);
(ii) In the dry season preservation of the ecosystem and guarantee of the availability of the resources for the people living along the river with a minimum water discharge of 22 m$^3$/s in Bongor/Yagoua (in Cameroon), and
(iii) In the wet season in order to sustain the function of floods in the wetlands (e.g. 1,500 m$^3$/s downstream of Bongor/Yagoua). There are not enough gauging stations in the Chari and Logone basin to ensure this minimal water discharges.

20. The trans-boundary water resources agreements are being developed and enforced by the Lake Chad Basin Commission (CBLT) in collaboration with the Member States. CBLT is a weak institution that needs to be supported and reinforced. As an example, the present Flood Emergency Project (Projet d’Urgence de Lutte Contre les Inondations – PULCI), World Bank funded, has signed a MoU with CBLT in order to support water resources monitoring and information sharing between Cameroon and Chad. Increasing the number of gauging stations in the Chari and Logone sub-basin to ensure the minimal water discharges agreed and information sharing is fundamental for improving livelihoods in the region.

Relationship to CPF

21. The project objective is fully consistent with the Cameroon Country Partnership Framework (CPF) for 2017-2021 to support poverty reduction and shared prosperity in Cameroon, which identified constraints to achieving the World Bank’s Twin Goals of eliminating poverty and fostering shared prosperity in a socially and environmentally sustainable way. The CPF has concluded that in the short-term, the largest opportunity for increasing shared prosperity and reducing acute poverty in Cameroon is an improvement in rural livelihoods, largely based on agriculture. Eighty-five percent of all poor people live in the countryside. Of these a majority live in the Sudano-Sahelian areas of the North and the Far North regions. Cameroon has a strong potential to increase agriculture productivity. It has a comparative advantage in primary products based on a relative abundance of natural resources and unskilled and semi-skilled labor. There is also significant unmet internal demand for cereals, meat and animal products. The development of labor-intensive agro-industry could offer a path towards more diversified, complex and higher value forms of manufacturing. Key issues include low agricultural yields, limited infrastructure for transportation, delivery, and storage, as well as the need for improved irrigation and water harvesting to improve farm production in some areas.

22. The proposed project addresses key issues identified in the CPF and would valorize prior major infrastructure investments (Maga Dam, pump stations, irrigation intake structures and main canals) already developed on the Logone River under the PULCI project. The focus would be on institutional transformation and on the rehabilitation of downstream infrastructure assets. This would lead to increased irrigation farming productivity and profitability, improved livelihoods, greater regional food-supply, and additional local economic benefits through the multiplier effect. The proposed project promotes much-needed modernization in the irrigation sector that has not yet been addressed in Cameroon and presents an opportunity to develop and demonstrate transformative measures tailored for the country context. Modernization will focus on both the institutional and technical domains of scheme operations, management and maintenance (OMM), and the restructuring of SEMRY along clear business lines including mechanization services, bulk irrigation-water supply, and
the rice processing. This will be pursued in tandem with the transformation of the irrigated agricultural support and value-chain environment through the promotion of small and medium private-sector agri-enterprises. The supporting project components would involve the development and dissemination of new agricultural technologies (particularly mechanization), enhanced market linkages for smallholder farmers, and water-resource monitoring and coordination in the wider Chad basin. Further the project would have positive impact in terms of environmental protection, and reduced greenhouse emissions by enhancing irrigation efficiency, reducing pumping-energy requirements, and promoting higher value crops which reduce water consumption. In these ways the proposed project will be closely aligned to the findings and recommendations contained in the CPF.

23. **The proposed project is aligned with the Bank’s twin goals** of ending extreme poverty and promoting shared prosperity. The targeted area of intervention is located in the Far North region of Cameroon where, with the North region, an estimated 56 percent of the poor live, where poverty and inequality levels have steadily increased over time relative to the rest of the country. The project will reduce exposure to food insecurity with the increase of rice production. This is expected to reduce poverty and boost shared prosperity by increasing revenue per household; this will enable family to have a better access to health and education services.

24. **The proposed project will contribute to Maximize Financing for Development (MFD)** by promoting the role of private sector in key areas and optimizing the use of scarce public resources. Indeed, Cameroon’s rice subsector has strong potential for growth if the value chain, and especially local processing, can improve. This project will help to promote private sector participation (PSP) in key areas where it has a clear value added and where SEMRY operated so far with very low results. The areas where PSP is expected is broad and can intervene all along the value chain: (i) in preparation of land, which requires perfect land-leveling and high level of mechanization that can only be offered by private operators; (ii) in milling, where several small operators already stand ready to operate if SEMRY would recognize their legitimacy; and also (iii) all along the chain of commercialization (transformation, packaging, transport, commercialization) to enable Cameroons population to have access to this local produce at an affordable price.

25. **Link with other existing projects.** The proposed Project builds on previous work and results of the Flood Emergency Project (PULCI - P143940), building upon the relationship with SEMRY and the uncompleted infrastructure works. The project will also coordinate closely with the Agriculture Investment and Market Development Project (PIDMA - P143417) and the Cameroon Transport Sector Development Project (P150999). PULCI, following previous work from Cameroon Agricultural Competitiveness Project (PACA - P112635), is working to improve irrigation and flood protection in a sustainable manner for the riverine population of the Far-North. Furthermore, the Bank is currently preparing a similar project in the North region called Valorization of Investments in the Valley of the Benue Project (P166072) where lessons learnt, and economies of scale will be derived to improve the conditions of the poor farmers in the North and Far-North. In addition, the project will be implemented in coordination with the Regional Lake Chad Recovery and Development Project (P161706). This project focuses on knowledge sharing, improving connectivity and support to livelihoods in the Chad basin and the Logone-Chari sub-basin bring 96 percent of the water to the Chad Basin. Strategies for transboundary water resources monitoring in support of integrated management and flood-response coordination will be explored. Finally, synergies will also be sought with the Western Africa and Sahel Regional HydroMeteorological Services Modernization Program Phase I (P166987) which includes Chad, Mali and Togo, but not yet Cameroon. Similarly, the Sahel Irrigation Initiative Support Project (P154482) covers all of the Sahelian countries except Cameroon and synergies in their modernizing of institutional framework and knowledge management components will be sought. This project will also use the experience of projects implemented in rural areas, like the Cameroon Sanitation Project (CAMSAN - P107102), and also the Community Development Program Support Project (PNDP - P144637), which developed specific mechanism of implementation to provide access to basic services to the rural population.
26. The Government of Cameroon asked support from the World Bank to improve irrigation services and thereby valorize the recent major water-resource investments in the Logone River Valley, in the Far North of Cameroon. The recent PULCI Project focused mainly on emergency flood protection measures through upgrading of the 72 km flood dyke along the Logone River and the 27 km of the Maga dam. The project also included rehabilitation of the irrigation bulk-water infrastructure located on the dam and dyke, including some intakes, main canals and secondary canals. These supply the adjacent Yagoua Irrigation Scheme (also called SEMRY 1 = 5,500 ha), and the Maga Irrigation Scheme (called SEMRY II, 6,500 ha).

PULCI has thereby ensured a workable, reliable and adequate bulk water supply for irrigation and further rehabilitated approximately 30 percent of downstream irrigation infrastructure at the two schemes. These included variously: main and secondary canals. Yet both schemes remain grossly underutilized due to a mix of limiting factors that include: the archaic highly-centralized institutional arrangements of the SEMRY parastatal that was established in 1954 and last re-organized in 1971; mostly dilapidated irrigation and drainage infrastructure constructed between 1972 and 1986; and wholly inadequate farm-systems support arrangements.

C. Proposed Development Objective(s)

27. The Project Development Objective (PDO) is to improve irrigation services, rice production and commercialization in targeted irrigation schemes of the Logone valley.

Key Results (From PCN)

28. The Key Project Indicators (KPI) will be:

a) Area provided with new/improved irrigation and drainage infrastructure (in hectare, Corporate Results Indicator);
b) Area managed by Water User Organizations, legally established and operational (in hectare);
c) Number of farmers reached with agricultural assets or services (disaggregated by gender, Corporate Results Indicator);
d) Cropping intensity (area harvested per year/area equipped for irrigation);
e) Rice production commercialized by private sector (ton/year).

D. Concept Description

29. The project development objective would be achieved by rehabilitating and upgrading the irrigation schemes, and by overhauling SEMRY, the parastatal agricultural support and irrigation and drainage agency. The overhaul of SEMRY would aim to segment the business lines into discreet operations, with an appropriate mix of private and public-sector ownership. These would be along the general lines that follow, noting the entity names are provisional: (i) SEMRY-Land
for land preparation for farmers; (ii) SEMRY-Rice for rice commercialization; and (iii) SEMRY-Water would be established for the main works as a bulk-water service operator. Funds would be provided for studies in regard to privatization and corporate structuring options, development of business plans for operational sustainability, and strategic plans for institutional transformation, including specification of staffing, role definitions, and governance arrangements. The project would also include flood-preparedness and transboundary cooperation in the Logone Valley that is part of the globally-significant Chad basin (all of the latter under component 1). The project has been designed to build resilience against several of the aforementioned climate risks facing the Far North, especially drought, extreme precipitation and flooding.

Component 1: Regional Water Security and Governance (US$ 50M IDA, US$ 100M regional IDA, US$ 150M Total)

30. The primary goal of this component is to ensure sustainable and equitable water resources and irrigation management in the Logone valley. This will be achieved by converting SEMRY into a modern water institution (such as the SAED - Société d’Aménagement et d’Exploitation des terres du Delta et de la Vallée du fleuve Sénégal - in Senegal) focusing in the main infrastructure (dams, dykes and main collectors) and water resources. In order to do this, the irrigation schemes need to be rehabilitated so they can be properly transferred to the Water Users Organisations (WUOs), extensive training of the WUOs need to be undertaken and performing agreements between the WUOs and SEMRY put in place and a water resources unit within SEMRY needs to be established. This component may qualify for both climate change adaptation and mitigation co-benefits. This component will finance studies, consulting services, works and equipment, and training.

Subcomponent 1a: Bulk Water Services (to fully equip 12,000 ha)

31. SEMRY-Water would be established as a bulk-water service operator responsible for the OMM of the pump stations, main irrigation inlet works. In this third role, SEMRY-Water would be a public institution acting in the farmers’ interests, with accountability, participation and transparency firmly institutionalized. While aiming to achieve cost-recovery, SEMRY-Water would not strive for profit generation. Funds would be provided for studies in regard to privatization and corporate structuring options, development of business plans for operational sustainability, and strategic plans for institutional transformation, including specification of staffing, role definitions, and governance arrangements.

32. The pumped Yagoua Scheme (SEMRY I) consists of five major irrigation blocks of 5,500 ha. The gravity fed Maga scheme (SEMRY II) consists of four major irrigation blocks of 6,500 ha that are supplied by the Maga dam. These activities have the potential to realize energy efficiency gains from improved pumping and locking-in the continued use of zero-emissions gravity-fed systems. PULCI targeted rehabilitation of various elements with a priority on the bulk-supply system including all of the pump stations, Maga Dam, the main irrigation canal inlets, main canals, and variously, secondary and tertiary canals and drains, and structures. The project would invest in repair and re-construction of all remaining infrastructure elements of the schemes and also in completing rip-rap protections of the Maga dam and the Logone dyke, thereby ensuring downstream system-functionality and maximization of the benefits of investments made under PULCI.

33. In Sub-component 1a, VIVA Logone would adopt a socio-technical modernization approach in conjunction with Sub-component 1b. This would involve not only rehabilitation (repair of what was previously constructed), but where necessary introduce appropriate infrastructure to enable and strengthen the practical aspects of irrigation and drainage management under the new institutional arrangements. This would require the establishment of suitably sized, financially viable, and autonomous (technical) hydraulic units for the self-governing WUOs to be established under Sub-component 1b. Technical design would therefore require attention to flow-control and flow-measurement at key outlet points, to enable performance-based legal agreements between the WUO and the higher-level bulk-water operator (ostensibly SEMRY-Water). Hydraulic structures would also be needed to enable practical and enforceable distribution modalities within the boundary of the WUO area of operation. Funds would be provided for feasibility studies and detailed design, and for infrastructure rehabilitation construction and supervision.

Sub-component 1b: Improving Irrigation and Drainage Management at Scheme Level
34. The schemes have operated under a heavily centralized and bureaucratic system where irrigation farmers have been highly dependent and played no role in the planning and decision-making around water distribution and allocation. The transformation of approximately four decades of entrenched practice will involve strategic attention to the legal, social and individual dimensions that involves a process of change over long timelines of the entire project.

35. The new Irrigation and Drainage (I&D) institutional arrangements will build on three fundamental principles: (i) the transfer of responsibility to water user organizations of around 1,000 ha in size so as to be administratively, technical and financially viable; (ii) bulk-water delivery would be the responsibility of SEMRY-Water (or a similarly-established entity); and (iii) explicit and legally-binding service-delivery agreements would be put in place between SEMRY-Water and WUOs with specified service parameters (e.g., flow, duration, timeliness etc.). WUOs would be responsible for water-distribution and allocation within each of their defined and agreed area of operation (boundary/perimeter), and for fee collection and enforcement of water rules. The role of women farmers and their representation in WUOs would be given specific attention, both through awareness raising and by specific WUO constitutional provisions; in that purpose, training of farmers will include technical sessions targeting the empowerment of women in technical aspects they may have been excluded from previously. This will contribute to shifting of perspectives among men of the value, capability and importance of women being involved in WUO technical, administrative and leadership functions. In the last two years of PULCI, a pilot program for the establishment of Water User Organizations (a legal form of WUOs) was put in place and has begun establishing and training farmers, and raising awareness of modernized I&D service-delivery approaches and principles.

36. These institutional changes to SEMRY are expected to lead to more efficient water use for irrigation, thus reducing the stress on existing water sources during times of extreme climate events like droughts. In addition, these activities will ensure agricultural inputs will be used more sustainably, preserving the quality of local groundwater sources and reducing the pollution risk of runoff to surface water sources.

37. Through modernizing the relevant irrigation infrastructure, the project will ensure that the physical capacity to use water resources more efficiently for agricultural purposes, thus reducing the stress on those sources. Introducing improved water resources management practices will also improve the technical capacity to ensure that these climate-informed goals will be realized. Improvement to drainage management and services will also allow beneficiaries to better manage and respond to the risk of climate-induced flooding, while also protecting physical infrastructure and soils against flood risk.

Subcomponent 1c: Logone River Water Resources Monitoring and Coordination

38. A water resources monitoring and coordination unit would be established within the new SEMRY. This would include the establishment of flow-monitoring infrastructure on the Logone River and on major tributaries, along with a set of strategically-located meteorological stations. SEMRY-Water would be responsible for water-resource data collection, analysis and distribution of results. They would also be responsible for coordination in regard to transboundary water-resource management and flood protocols with the Lake Chad Basin Commission (CBLT) of which Cameroon is a founding member. The Commission is located relatively close by in N’Djamena, just 200 km to the north on the opposite bank of the Logone River. Funds would be provided for studies in regard to water-resource monitoring equipment, maintenance thereof, data collation and analysis, and institutional coordination with the CBLT.

39. The sub-component would include technical assistance for the establishment of a water-resource unit, located at SEMRY-Water, along with training, computer equipment and linkages for coordination with other key role-players. Four main activities are envisaged:

- Activity 1. Modernization of the Water Resources Monitoring Network and Information System. This would include support to establish and modernize monitoring systems for weather, water levels, river-flows, water quality, groundwater, and sediment loads in the Logone Valley in Cameroon. The activity would support the
introduction of modern technology including real time low-cost GSM telemetry and will be linked to national and regional CBLT water resources monitoring and information systems.

- Activity 2. Development of a Structured Knowledge Base. The activity would include the establishment of a structured knowledge base and analytical tools to improve strategic planning in the Logone catchment, an important sub-basin of the Lake Chad system. This activity includes the collation of existing information using modern GIS, remote sensing, and other spatial datasets and tools. The work would be conducted in close consultation with the CBLT.

- Activity 3. Regional Coordination, Capacity Building and Strategic Basin Planning would directly support regional coordination with the Lake Chad Basin Commission. The development of the Logone Sub-basin strategic plan would be closely aligned to the priorities defined by the Commission's Basin Committee for Strategic Planning (BCSP) that coordinates local activities between the member states.

- Activity 4. Establishment of a joint Cameroon-Chad flood forecasting model in the Logone-Chari river sub-basin and improving decision support systems within the Chad Basin.

40. Information on monitoring data from the local environment related to climate shocks will be included as part of the structure of the training, capacity building and implementation activities. As a result of these three activities, the capacity in the project area to track climate-related data and respond in real time to climate-induced risks like flooding and drought would be increased through the project, especially with regard to the high level of evaporation and the fact that rainfall levels switch from high and low extremes throughout the calendar year.

Component 2: Agricultural Production (US$ 35M)

41. The fundamental need for Cameroon to increase production and enhance productivity in the Far North (especially with irrigation and particularly of smallholders), reduce vulnerability, boost rural employment, and provide environmental services are addressed in a context of vulnerability to multiple factors. Agriculture production in the Sahel is challenged by historically extreme weather made worse by emerging climate-change trends. Market risks are exacerbated by socio-political instability on the border with Nigeria, Chad and Niger, weak linkages, particularly for smallholders, and poor road infrastructure. Rice is the main irrigation crop and key to regional food security with a significant national market due to import substitution policies. This component will focus on production, linking farmers to markets, and support services. It will finance grants, training, works, equipment, workshops and studies along the following sub-components.

42. The overhauling of SEMRY would need to consider: (i) the privatization of land preparation services (SEMRY-Land would be established as a private, or public-private entity, and would operate on a commercial basis undertaking land preparation for farmers ); (ii) the privatization of commercialization services (SEMRY-Rice would similarly be institutionally devolved to a separate entity to own and operate the existing rice-processing facilities on a PPP or commercial service-basis to farmers ).

43. SEMRY’s marketing and post-processing role extends back more than 60 years. SEMRY provides seed-rice (a single variety), mechanization (in a severely limited capacity), produce-transport, and storage and milling services. The existing mill at Yagoua has capacity for 800 kg/h, and SEMRY has, in July 2018, received two 5 ton/h mills from MINADER. There are no private mechanization operators and SEMRY relies on a limited number of expensive bulldozers for ploughing. Lack of mechanization has led to backlogs and large-portions of the scheme are unfarmed as a result. Other areas are ploughed so late in the season that a second crop in the dry season is not possible. Adequate land-leveling, essential for rice, is poorly achieved.

Subcomponent 2a: Climate Smart Agriculture

44. Climate-Smart Agriculture (CSA) is an approach for reorienting agricultural systems under the new realities of climate change: (i) sustainably increasing agricultural productivity to support equitable increases in incomes, food security
and development; (ii) adapting and building resilience to climate change; and (iii) developing opportunities to reduce GHG emissions from agriculture. Activities will focus essentially on enhancing climate proofing while improving water and agriculture productivity. Examples of these activities are the dissemination of Systems of Rice Intensification (SRI) techniques, water saving approaches such as improved in-field water management, mechanization services particularly for levelling, improved soil management, Urea-Deep Placement (UDP), hybrid seed varieties, Integrated Nutrient Management (INM), Integrated Pest Management (IPM), organic farming techniques, and diversification into higher value horticultural crops with lower water demand. These activities have the potential to increase the soil and biomass carbon sequestration potential in the project area, while SRI may reduce the incidence of direct methane emissions from rice production. Whenever possible the project will tailor its interventions to women farmers and women groups. A grant facility will finance small equipment, inputs, services and/or activities to: (i) promote the adoption of priority technologies; (ii) strengthen producer-based organizations, transfer knowledge and technologies; (iii) improve food safety and quality standards; and (iv) improve handling, packaging and post-harvest management at the farm level. This sub-component may qualify for climate change adaptation co-benefits through preserving using water resources more efficiently during times of drought, improving agricultural output per a given unit of water use. Improved soil management, organic farming, and more efficient use of inputs through UDP, INM, and IPM can also protect groundwater and surface water subject to runoff from pollution from agricultural activities, thus making these sources more resilient to drought and reducing the health risks of climate-induced flooding.

Subcomponent 2b: Agribusiness and linking farmers to market

45. This sub-component will focus on value addition and forward linking farmers to markets under a productive alliance approach. Productive alliances are collaborative arrangement between groups or Producer Organizations (POs) and an agribusiness within particular value-chains for provision in a specified quantity, quality and time. Four elements define the nature of a Productive Alliance (PA), namely: a group of organized producers, a buyer, an investment in production and marketing, and technical assistance. The project will finance outreach and promotional activities to identify POs, commercial partners and private financing entities to form alliances, and formulate business proposals (business plans). In order to become eligible for financing under the project, a business plan will have to be financially feasible, and support one or more productive alliances. The project will provide matching grants to finance a portion of the alliance’s business plan (typically 50 percent) that would be: (i) financed with proceeds from the proposed project; (ii) implemented by POs; (iii) governed by agreements signed between the PO and the project; and (iv) include fixed capital (e.g., plant and equipment, minor infrastructure), working capital and technical assistance expenditures. Examples of business plans to be financed could be the following: the establishment of PO managed collection, dehusking and processing center for rice or cereals, a sorting, grading and packaging facility for fresh vegetables, among other.

Subcomponent 2c: Farm Service Centers

46. The project will finance a TA to promote a local network of private, retail supply and farm service businesses Farm Service Centers (FSCs) throughout the project area. An enterprise-based delivery of farm supplies and services, FSCs will be one-stop-shops that provide smallholder farmers with agricultural inputs, services and technologies that will help production and linkages to markets. This highly adaptable model has already been proven successful in several countries worldwide and in the region, notably in Senegal and Ethiopia. One of the key limitations identified in the Logone schemes is a lack of options for mechanization for land-preparation and levelling. Practical solutions will be explored and introduced where viable. This will include the linking of multiple small- and medium-scale mechanization service providers, with small farmers using highly efficient cell-phone based registration systems, and ‘Mobile Money’ – the latter deeply penetrated into Cameroon’s rural areas.

47. Grants will be provided, and applications reviewed and ranked on a competitive basis to evaluate technical capacity, proposed business plan, and potential impacts for future mechanization contractors, and other service providers. FSCs can be privately owned or owned by cooperatives or other types of producer’s associations. In addition,
this subcomponent will promote mechanization providing on-demand tractor services for smallholder farmers who are relying on expensive and often unavailable SEMRY mechanization services through low-cost “Smart Tractor owners”. These would pair better with local tractor owners with farmers in need of tractor services. Indian experiences show that full ‘uberization’ of such services is often not practical or viable due to low literacy, trust issues, or lack of smartphone rather than more simple cellphone penetration. Intermediate levels of sophistication can be successful however where cellphone capability for smart-money and direct linking of farmer to operator is combined not with relatively abstract Uber-type applications, but with local registration centers (at local shops, or in VIVA Logone at FSCs). A registration and subsequent on-phone booking system (voice, or SMS) will allow farmers to request, schedule and prepay for tractor services, from the nearest available Smart Tractor owners, paid with mobile money. The subcomponent will provide grants, studies and consultant services.

Component 3. Project implementation, knowledge sharing and Environmental and Social safeguards (US$ 15M)

48. The project will continue to use the PIU of the PULCI for the day-to-day implementation of the project covering technical, administrative, social and environmental safeguards as well as contract supervision roles, in compliance with World Bank procedures. In addition, the strengthening of SEMRY and a gradual transfer of responsibilities to SEMRY will be at the core of project implementation; for this purpose, an audit and strategic plan of SEMRY will be elaborated by a Technical Assistance (TA). The project will focus on the implementation of the recommendations of the TA. Furthermore, an arrangement (South-to-South) between SAED (Société d’Aménagement et d’Exploitation des terres du Delta et de la Vallée du fleuve Sénégal) in Senegal and SEMRY is envisaged in order to help SEMRY modernize and assume their responsibilities. As this project will be implemented in one of the poorest region of Cameroon, where basic public services are poor, this project will finance activities to enhance the level of access to basic services for the local population, through the construction of water supply networks, and on-site sanitation or other basic facilities, expressed by local communities.

SAFEGUARDS

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

The project is located in the Sudano-sahelian zone of Cameroon, it is presumably the driest zone of the country. It is bounded to the South by the Doba basin, to the North by Lake Chad basin, to the East by Doseo and Salamat basins, and to the North West by the Mandara Mountains and the Southeast by the Kaele dome. The project lies in the tropical savannah climate zone with Sahelian traits, which are typically low precipitations ranging between 600 mm and 1200 mm/year. The wet season spans the May to September period, with heavy rains from July to August, followed by a cold season (October to January) and a warm dry season (February to April). Temperatures range from 15°C to 35°C. The Far North Region is currently home to the largest number of mammals in the Waza National Park, located nearly 100 km from Yagoua. The Far North region has a wetland (the Waza-Logone floodplain) and three national parks (Waza, Kalamaloue, Mozogo goro) where poaching poses a management problem. The majority of inhabitants depends on agriculture and livestock for their livelihoods. The project area in Yagoua is flood- and drought- prone. Flooding causes erosion and soil displacement, while drought dries up the soil and renders it unfit for farming.

B. Borrower’s Institutional Capacity for Safeguard Policies

Cameroon has a comprehensive Environmental and Social Impact Assessment (ESIA) law and regulations as well as occupational safety regulations. The framework law No 96/12 of 5 August 1996 on environmental management highlights in its article 17 the principle of environmental impact assessment. Two forms of public participation-stakeholder
engagement are required for ESIA by law: public consultations during the assessment stage and public hearings during the review stage.

Relatively mature central ESIA authorities (Ministry of environment, interministerial Committee on the Environment) and decentralized ESIA authorities (municipalities, Divisional Committees for technical and administrative supervision of ESMP and ministry of environment decentralized units) are in place but understaffed and have limited financial resources. The Ministry of Environment is also responsible for monitoring the implementation of the ESIA in specific projects. However, in practice, there is often no regular follow up from the Ministry, due to the lack of available financial resources and professional capacity. Consequently, it is rare that mitigation measures are taken, or penalties are imposed on projects that do not comply with ESIA rules and recommendations or which otherwise impact negatively on the environment.

Safeguards instruments will assess client capacity and bridge potential capacity needs. Safeguards instruments to be prepared will ensure clear links for follow up from ESIA → ESMP → civil works contracts → TOR of supervising engineers → firms assisting client with E&S monitoring → TOR of PIU E&S staff → Bank task team implementation support plans. SEMRY does not have a dedicated Safeguards Unit and the PIU will rely on the two dedicated safeguards specialists (Environment and Social) from the PULCI Project.

C. Environmental and Social Safeguards Specialists on the Team

Charlotte Noudjieu Cheumani, Social Specialist
FNU Owono Owono, Social Specialist
Cyrille Valence Ngouana Kengne, Environmental Specialist

D. Policies that might apply

<table>
<thead>
<tr>
<th>Safeguard Policies</th>
<th>Triggered?</th>
<th>Explanation (Optional)</th>
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<tbody>
<tr>
<td>Environmental Assessment OP/BP 4.01</td>
<td>Yes</td>
<td>The project is classified Category B because the main environmental impacts will be similar to basic construction work impacts, but the environmental downstream cumulative impacts will go beyond the direct project command area. Downstream impacts from previous and future investments; risks of pest problems; occupational safety risks; grievances related to canal and open drain crossings and social challenges associated with integrated water management are expected and need to be properly assessed and addressed. To mitigate the above-mentioned potential risks and impacts and as part of safeguards requirement for the implementation of the Valorization of Investments in the Valley of the Logone, an Integrated Pest Management (IPM) and an ESIA, including some standalone cumulative impacts report will be prepared. For the subprojects which are not identified before appraisal, an ESMF will be prepared and it shall describe the roadmap for preparing sites specific ESMPs. All environed assessment will be of the</td>
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The purpose of (i) assessing the environmental, labor, occupational health safety issues and problems related to use of agro-chemicals, (ii) understanding the status of current use of agro-chemicals, (iii) assessing the level of awareness of farmers in handling and management of pests and pesticides and the types of pesticides used, and (v) provide recommendations. Specific attention will be paid to cumulative impacts because there are eight other projects in the project area, namely; (i) Project to develop the road-dike along the River Logone; (ii) Flood Control Programme (PULCI I); (iii) Douala-N’Djamena Railway Project; (iv) Project to construct 4 Pumping Stations, 4 Storage Basins and 4 Irrigation Schemes in Chad; (v) Project to rehabilitate the Magada-Yagoua Road and create a Bypass. Its purpose is to divert traffic from downtown Yagoua; (vi) Magada Junction-Yagoua Road Re-profiling Project; (vii) Project to build 500 Social Housing Units in the Town of Yagoua; and (viii) Market Construction Project in Zébé.

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<tr>
<th>Performance Standards for Private Sector Activities OP/BP 4.03</th>
<th>No</th>
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<tr>
<td>Natural Habitats OP/BP 4.04</td>
<td>Yes</td>
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<tr>
<td>This policy is triggered because downstream impacts may affect a wetland, which is the Waza-Logone floodplain. In addition, the Far North region has three national parks (Waza, Kalamaloue, Mozogoro) where poaching poses a management problem. However, none of these protected areas are close to the project site.</td>
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<td>Forests OP/BP 4.36</td>
<td>Yes</td>
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<td>The project does not support commercial forest exploitation. However, downstream forests of the Waza plain may be affected due to the presence in the project area of influence. Mitigation measures will be part of the ESMP.</td>
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<td>Pest Management OP 4.09</td>
<td>Yes</td>
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<td>Major interventions are planned to enhance agricultural productivity and this may lead to an increased use of pesticides and other agrochemicals. An Integrated Pest Management Plan (IPMP) will be prepared, consulted upon and disclosed before appraisal.</td>
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<tr>
<td>Physical Cultural Resources OP/BP 4.11</td>
<td>Yes</td>
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<td>Previous studies in the Region revealed local significant heritage places such as graveyards. Mitigation measures will be incorporated into the disclosed ESMP including provisions for a detailed Cultural Heritage Management Plan. A comprehensive chance find procedure will be prepared as part of the</td>
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<tr>
<td>OP/BP</td>
<td>Policy Name</td>
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<tr>
<td>4.10</td>
<td>Indigenous Peoples</td>
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<td>4.12</td>
<td>Involuntary Resettlement</td>
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<td>4.37</td>
<td>Safety of Dams</td>
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<tr>
<td>7.50</td>
<td>Projects on International Waterways</td>
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ESIA reports, embedded in the overall ESMPs, to that end.

**Indigenous Peoples OP/BP 4.10**
No

There are no Indigenous Peoples in the project areas.

**Involuntary Resettlement OP/BP 4.12**
Yes

Concerning the component 1 (Regional Water Security and Governance) especially component 1a (Bulk Water Services, to fully equip 12,000 ha), the activities linked to the rehabilitation of existing secondary and tertiary canals, linked to land leveling and drainages, will require economical displacement of producers inside the rice perimeters concerned and temporary livelihood loss if modernization activities are implemented during cropping seasons. Then, there will be no physical displacement of persons. For this purpose, SEMRY will prepare a Resettlement Action Pan (RAP), and Social Assessment of the project including the evaluation of all potential producers in the perimeters concerned by the modernization. It will develop the Grievance Redress Mechanism (GRM) for the project and include in all the contractual documents a section on Gender Based Violence (GBV) with proposed mitigation measures, and a section in code of conduct to manage the question of labor influx. In addition, SEMRY will have to identify the precautionary measures for the management of migrant influx in the project area, identify measures to ensure security around the perimeters. No involuntary resettlement is expected under component 2 (negative list).

**Safety of Dams OP/BP 4.37**
Yes

The project triggers: OP/BP 4.37 on Safety of Dams because the operation of secondary and tertiary schemes to be rehabilitated and constructed will rely on the performance of Maga reservoir. In addition, SEMRY will continue dike operation and maintenance. Failure to maintain works properly may render the flood protective system inoperative during periods when protection is needed. As well, neglect of maintenance will mean significant capital expenditures in the future to rehabilitate a deteriorated structure. SEMRY will provide a written safety plan and monitoring data (daily readings of reservoir and river level; records of walk over inspections - monthly in the dry season, weekly readings of controlled inflows through the can sluices and outflows) and records of all remedial or preventive works undertaken.

**Projects on International Waterways OP/BP 7.50**
Yes

This policy is triggered as the Logone river is part of the Lake Chad basin with multiple implications.
upstream and downstream. The Government of Cameroon (GoC) will notify the riparian countries before appraisal through the CBLT commission.

| Projects in Disputed Areas OP/BP 7.60 | No | The project intervention areas are not under dispute. |

E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Sep 15, 2019

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

The project will use the opportunity of the current PULCI project, with the dedicated experimented staff (one environmental and one social development special) to launch by November, 2018 the safeguard-related studies that may be needed; funds have been secured in the PULCI project to finance these studies.

CONTACT POINT

World Bank
Juan David Casanova Anoll, Norman Bentley Piccioni, Pierre Francois-Xavier Boulenger
Sr Water Resources Mgmt. Spec.

Borrower/Client/Recipient
Ministry of Economy, Planning and Regional Development (MINEPAT)
Eloma Janvier OUM
Directeur General
janoeloma1@yahoo.fr

Implementing Agencies
SEMYR (Société d’Expansion et Modernisation de Riziculture de Yagoua)
Laoumaye MERHOYE
PULCI Coordinator
laoumayemerhoye@gmail.com
FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: http://www.worldbank.org/projects

APPROVAL

Task Team Leader(s): Juan David Casanova Anoll, Norman Bentley Piccioni, Pierre Francois-Xavier Boulenger

Approved By

Safeguards Advisor: Maman-Sani Issa 12-Oct-2018
Practice Manager/Manager: Maria Angelica Sotomayor 15-Oct-2018
Country Director: Elisabeth Huybens 24-Jan-2019