## 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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<tr>
<td>Lesotho</td>
<td>P165228</td>
<td></td>
<td>Lesotho Smallholder Agriculture Development Project - 2 (P165228)</td>
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<tr>
<th>Region</th>
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<td>May 30, 2019</td>
<td>Agriculture</td>
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<tr>
<th>Financing Instrument</th>
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<th>Implementing Agency</th>
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<tr>
<td>Investment Project Financing</td>
<td>Ministry of Finance</td>
<td>Ministry of Agriculture and Food Security (MAFS)</td>
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### Proposed Development Objective(s)

The development objective of the project is to promote commercialization, climate resilience and better nutritional outcomes in Lesotho's agriculture and food system and in the event of an eligible crisis or emergency, provide immediate and effective response.

## PROJECT FINANCING DATA (US$, Millions)

### SUMMARY

<p>| | |</p>
<table>
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<tr>
<td>Total Project Cost</td>
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<tr>
<td>Total Financing</td>
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<td>of which IBRD/IDA</td>
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<tr>
<td>Financing Gap</td>
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### DETAILS

#### World Bank Group Financing

| International Development Association (IDA) | 10.00 |
| IDA Credit                                  | 10.00 |

#### Non-World Bank Group Financing

| Counterpart Funding | 2.00 |

B. Introduction and Context

Country Context

1. **The Kingdom of Lesotho is a small landlocked country in Southern Africa with a population of about two million.** With a gross domestic product (GDP) per capita of US$1,020, Lesotho is one of the poorest countries in the region, and it has one of the highest income inequality levels in the world. Inequality and poverty are increasing with limited employment opportunities, high HIV/AIDS rates and declining earnings among subsistence farmers. An estimated 57 percent of the population lives below the national poverty line and 34 percent fall below the extreme poverty line – with expenditures below minimum food requirements. Lesotho generates income mainly by exporting textiles, water, and diamonds. It is a member of the Southern African Customs Union (SACU), the Southern African Development Community (SADC), and the Common Monetary Area. GDP growth was 2.5 percent in 2016/17, down from a 4.5 percent average over the previous five years. Lesotho is facing a tough fiscal and economic outlook given a sharp decline in SACU revenues and high current account deficits, which require substantial fiscal adjustment to restore macro-economic stability. In addition, political instability, climate vulnerability, and high rates of HIV/AIDS are significantly affecting Lesotho’s potential for growth.

Sectoral and Institutional Context

2. **Agriculture plays a significant role in Lesotho’s economy.** Over 70 percent of the country’s population lives in rural areas and depends, directly or indirectly, on agriculture for employment and livelihood. The sector has the highest potential to increase food security, reduce rural poverty, and generate both on- and off-farm employment opportunities. Main crops include maize, sorghum and wheat which are planted as monocrops on 85 percent of the country’s arable land which comprises 10 percent of Lesotho’s total land area. Livestock contributes 30 percent of total agricultural output, including semi-intensive and intensive production of pigs and poultry, as well as extensive (free range) production of goats and sheep on rangelands in the foothills and highland areas (Johane, 2011). Sheep and goats, which dominate the livestock sector, are reared mainly for wool and mohair.

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3. **Lesotho’s agricultural sector faces several challenges that have made the country heavily dependent on food imports to meet domestic consumption needs.** Despite 70 percent of the rural population engaged in some form of agricultural activity, the sector contributes less than 10 percent to the national gross domestic product (GDP). Most of the rural population is engaged in subsistence farming: rain-fed, undiversified farming (primarily cereal production) and extensive livestock grazing characterize the sector. Productivity challenges in the sector, include, *inter alia*, unfavorable farm structures (average land holding of less than 1.0 ha per family), outdated farm technologies and farm management practices, limited technical expertise, sub-optimal use of inputs, lack of an adequate irrigation and drainage system, weak rural infrastructure, a rudimentary rural advisory system, and limited access to credit and investment capital. In addition, the country has experienced severe land degradation and impacts of climate shocks with regular cycles of drought and intense rainfall which have contributed to massive soil erosion and loss of scarce agricultural land. These challenges have resulted in extremely low agricultural productivity levels: land productivity averaged about USD 70 per hectare per year compared to the regional average of about USD 120 per hectare per year for the period 2008-2013; cereal yields average less than 1,000 kg per hectare, failing to meet the SADC RISDP target of achieving at least 2,000 kg per hectare. Consequently, the country depends heavily on food imports to meet domestic demand, importing about 60 percent of maize and 80 percent of wheat requirements, as well as high nutritious foods such as horticulture and protein-rich livestock products. Low agricultural output and productivity, and heavy reliance on food imports are closely intertwined with food and nutrition insecurity in Lesotho, as poverty remain a primary cause behind malnutrition, the structural challenges in the sector perpetuate the intergenerational transmission of malnourishment. The World Food Program’s report indicates that over 709,000 people are food insecure and in urgent need for food assistance.

4. **Climate change poses a major development challenge in Lesotho and the agricultural sector remains highly vulnerable to the impacts of climate change and variability.** The Inter-Governmental Panel on Climate Change (IPCC) categorizes Lesotho as one of the countries highly vulnerable to the impacts of climate change. Vulnerability in Lesotho is characterized by high population pressure on the available land and natural resources, fragile and substantially degraded soils, high level of food insecurity and poverty and lack of infrastructure which hinder the capacity of local population to adapt to severe weather conditions (Dejene et al.,2011). The country has a temperate climate with subalpine characteristics and experiences regular droughts, floods, frosts, snow, hailstorms, and strong winds. The El Niño-Southern Oscillation (ENSO) phenomenon particularly affects climate variation in Lesotho (MEMWA, 2013). High intra-seasonal and inter-annual rainfall variability, with frequent droughts, have affected soil fertility and led to a steep decline in productivity and output. Maize yields, for example, have fallen from more than 1.5 metric tons/ha in 1977 to only 170 kg/ha in 2011. Chronic droughts have also negatively impacted the livestock sector, resulting in rangeland degradation and limiting the carrying capacity of pastoral land. The drought of 2015-16 growing season was the most severe on record putting over 534,000 people at risk of food insecurity. The erratic weather patterns, land degradation, and severe weather events threaten the sector’s productive potential and changing climate may compel Lesotho to become more dependent on food imports unless efforts are made to mainstream climate change issues in agriculture.

5. **Irrigation is critical for mitigating climatic risks and increasing productivity and commercialization in Lesotho’s agricultural sector.** Less than one percent of crop production in Lesotho is under irrigation and almost all smallholder farming is rain-fed. Of the total agricultural land of 2.3 million ha, (Lesotho has an irrigable land estimated at about 25,000 ha (World Bank, 2017)) only 0.05 percent of the total agricultural land was under irrigation in 2014 despite the abundant water resources and the great potential of the country’s highlands for water supply. This is primarily

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due to severe deterioration of irrigation infrastructure and slow progress with the reform of water resource management policies and institutions. Many pump stations no longer work, existing headworks and water harvesting reservoirs have silted up due to lack of public funds for cleaning. No regular maintenance of the on-farm irrigation systems due to ill-defined property rights over this infrastructure. The institutional capacity to assume these responsibilities is weak at local level, due to absence of the proper community-based irrigation management system and poor links between these communities and the local public institutions responsible for water management. Limited budget resources and an outmoded policy and institutional framework hamper government’s ability to respond to these constraints at national level. Combating the effects of climate change and increasing productivity towards food security and commercialization will require sustained efforts to provide adequate, reliable and timely delivery of irrigation for crop production as well as establishment and maintenance of productive pastures and rangelands.

6. Recognizing the significant role of agriculture in Lesotho’s overall economic development, the Government of Lesotho (GoL) is undertaking critical measures to develop the sector as laid out in its various strategies and programs. National policies deployed to effect and shape actions in agriculture and related sectors highlight the political, institutional, economic, environmental and social challenges of the sector and propose pathways to address the shortcomings. For instance, the National Strategic Development Plan (NSDP) sets the policy framework for the implementation of the Comprehensive Africa Agriculture Development Program (CAADP) process and identified four priority areas for agriculture development agenda. The agriculture sector priority areas include: (i) Reducing vulnerability and managing risk; (ii) Promoting commercialization and diversification in agriculture; (iii) Strengthening capacity of farmers and institutions for increased and optimal agricultural performance; and (iv) Sustainable natural resource management. Recently, the Lesotho Zero Hunger Strategic Review (LZHSR) was commissioned to address the challenges that may inhibit Lesotho from achieving zero hunger by 2030. Framed within the framework of Sustainable Development Goal number 2 and aligned to the Africa Union Commission’s Agenda 2063 on ‘The Africa we Want’, the LZHSR pillars include access to adequate food and healthy diets all year round, end to malnutrition and all its forms, sustainability of food systems, doubling of smallholder productivity and income, and eliminating food loss and waste.

7. In response to the need for improved water resource management, the Government of Lesotho has begun a reform of the water sector to promote a more sustainable and productive use of water resources. These reforms established the current legal framework and institutional arrangements for the sector. In accordance with these reforms, the Ministry of Water Affairs (MWA) is responsible for policy guidance and oversight of sector institutions, and the Office of the Commissioner of Water (CoW), which sits under the MWA, is responsible for developing national water strategies and plans for coordinating water management activities. However, the proposed reforms did not affect the operations, maintenance and management functions of the irrigation sector. The irrigation sector, so far remains with its existing institutional setup and ineffective structural links at sub-national level. The recent government attempts to decentralize the system at sub-national levels was not successful.

8. Effective continuation of this reform program will require substantial further support from the international community and the Bank is currently supporting the development of an irrigation masterplan. The Government lacks the means to fund public investments from its own resources and needs further technical support for policy and legislative reform and capacity building of national and sub-national institutions. In most arable areas, assessment and surveys consistently show that high agricultural potential remains unfulfilled due in part to deteriorating on-farm or absence of off-farm irrigation infrastructure and lack of adequate management systems both at irrigation service provider and the farm levels. In this context, the Bank is supporting the development of an irrigation master plan under the ongoing SADP-1. The aim of the masterplan is to assist the Government in its efforts with defining strategic priorities for improving the irrigation sector in terms of alignment with agriculture growth potential, improving resource utilization (labour, water, economic environmental), water delivery service, and institutional and financial sustainability. The masterplan will
identify a pipeline of high priority irrigation investments for support from donors, government, private sector and other non-state actors.

9. **Commercial horticulture offers strong opportunities to transform Lesotho’s agricultural sector and rural economy and the Government of Lesotho has identified horticulture as a priority sector for development.** Changes in consumption patterns with a rising demand for fruits and vegetables in global markets due to demographic changes and population growth, rising incomes, increased urbanization and increased popularity of healthy diets are creating new opportunities for Lesotho’s agricultural producers and processors. The foothills and lowlands of Lesotho are major fruit tree production areas with peaches, apples, plums, apricots and cherries dominating production. The high altitude of the country enables Lesotho’s fruits to be harvested 2-3 weeks earlier than in South Africa’s Western Cape province (the main center for fruit production) resulting in price premiums.\(^5\) Vegetables grown in a controlled environment require short production cycles (2-3 months) allowing for multiple cash flows in a year. There is growing interest among farmers to diversify from cereal production to high value crops: two South African companies, Alpha Farms and Denmar estates have already partnered with Basotho farmers to produce deciduous fruits for Lesotho, South Africa and the EU markets. In fact, Lesotho can capitalize on its proximity to South Africa to develop its own industry. South Africa boasts a growing domestic market for fruits and vegetables. Its domestic private consumption expenditure on fruits and vegetables has more than doubled over the past decade and its supermarkets are leading the expansion of modern retail across sub-Saharan Africa. Lesotho farmers can exploit this market and could benefit from attracting South African investors to its horticulture industry: its abundant water resources as well as labor can make it an attractive investment destination. Overall, vegetables and fruit production present the country with good potential for generating employment in rural areas given the labor-intensive nature of the subsector; improving incomes as fruits and vegetables are high value crops fetching higher prices than cereals (it is estimated that per hectare revenue for commercial fruit orchards can reach US$30,500 after the fifth season, the comparative income for subsistence production of maize in Lesotho is US$220); creating economic opportunities for women in agricultural production and especially value-added processing activities - women are heavily involved in the value-added segment of the value chain through the production of, *inter alia*, jams, juices, pickles; and providing opportunities for young farmers to be gainfully employed in this remunerative value chain.

10. **Development of the horticulture value chain also has significant implications for improving nutrition levels in Lesotho.** Malnutrition in Lesotho is closely linked with poverty. 41 percent of all families spend more than half their incomes on food and almost half of all children under 5 are stunted in the lowest income quintile compared to 10 percent of children in the highest. Nevertheless, limited dietary diversity affects all children: only 23 percent of children in Lesotho have minimum dietary diversity and 11 percent of the children have a minimum acceptable diet. General dietary diversity has also seen a decline, with the percent of calories from non-staples decreasing from 22 percent in 1990 to 19 percent in 2008, and fruits and vegetable availability was estimated at 128 g. in 2013 (compared with the WHO recommended daily intake of 400 g.). Increased horticulture production in Lesotho would thus contribute to improved nutrition through (a) increased availability of fruits and vegetables; and (b) through improved incomes to better access a diverse diet.

11. **The horticulture subsector is facing several challenges that prevent it from meeting its productive potential.** Several factors constrain horticultural growth and development and the industry is still in its infancy. The subsector faces an array of inter-dependent challenges, including, *inter alia*, the lack of a functioning land market, shortage of irrigation, lack of access to finance, lack of specialized skills for production and processing among farmers and processors, weak linkages within the value chain as well as extreme climatic risks. Given the low level of domestic production, Lesotho remains a net importer of fruit and vegetables. Imports of fruits have grown by 16 percent between 2010 and 2016 while

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\(^6\) Ibid

imports of vegetables increased by 31 percent over the same period (UNCOMTRADE). All imported fruits and vegetables come from South Africa. Lesotho’s exports of horticultural products are negligible.

Relationship to CPF

12. The proposed project is aligned with the World Bank twin goals to reduce poverty and promote shared prosperity. By strengthening farmer knowledge and the use of improved technologies, improving water resource management and rehabilitating irrigation infrastructure, the project will facilitate increased crop production and market access. This will contribute to improving farm incomes, promoting food security and reducing poverty in rural areas. These outcomes are aligned with the current Country Partnership Framework (CPF) for FY16-20, which aims to promote: (i) public sector efficiency and effectiveness; and (ii) private sector jobs creation through “Improving smallholder and MSME productivity in agriculture” and “Increase water supply for agriculture”.

C. Proposed Development Objective(s)

13. The development objectives of the project are to promote commercialization, climate resilience and better nutritional outcomes in Lesotho’s agriculture and food system and in the event of an eligible crisis or emergency, provide immediate and effective response.

Key Results (From PCN)

- Farmers adopting improved agricultural technologies (disaggregated by gender) (Core Indicator)
- Increased sales of horticultural production by farmers supported by Aggregators
- Women adopting practices generating improved nutritional outcomes
- Area provided with improved irrigation services (Core Indicator)

14. The project will develop indicators for gender and citizen engagement during project preparation and reflect them in the PAD.

D. Concept Description

15. Project Design. The design of the proposed project will be informed by the ongoing SADP-1 as well as the Bank-supported Climate Investment Plan (CSIP). The CSIP will help the Government of Lesotho in its efforts with mainstreaming climate change issues in agricultural development and realizing its international climate commitments. The objective of the CSIP is to identify and prioritize key policy actions and investments towards building a productive, climate-resilient and low-emissions agriculture sector. The CSIP is a robust, multi-stakeholder process that includes the development of a normative vision and climate smart agriculture (CSA) goals (table 1) for Lesotho followed by scenario development and modeling to define specific pathways to achieve the proposed vision and goals.

Table 1: Lesotho CSA Vision as developed through the CSIP

<table>
<thead>
<tr>
<th>CSA Pillar</th>
<th>Vision</th>
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<tr>
<td>Productivity</td>
<td>By 2050, increase yields and profits by a factor of 2.5 by diversifying from maize production to other agricultural commodities, while enhancing food and nutrition security.</td>
</tr>
<tr>
<td>Resilience</td>
<td>By 2050, have a resilient and diversified agricultural sector with improved and sustainable capacity to respond to climate variability and land degradation</td>
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<td>------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Mitigation</td>
<td>By 2050, Lesotho will increase agricultural productivity, while simultaneously maintaining low greenhouse gas footprint</td>
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16. The CSIP demonstrates that despite low agricultural productivity and high influx of food imports, the situation could be reversed if farmers would commit to diversifying their production and prioritizing commercialization with appropriate support from policy makers. Much of Lesotho’s agro-ecology is unsuitable for competitive maize production with the cost of maize production in-country higher than the cost of importing from South Africa. Diversification from maize to other commodities (such as high value horticulture) is therefore a key recommendation under the Plan. Other strategies for promoting a climate-resilient agricultural sector identified by the Plan include promotion of biofortified crops, commercialization and strengthening of value chains, and knowledge development and capacity building for implementation of CSA practices. While the CSIP final report is being prepared, the findings of the Interim Report (based on recently completed field work) will help guide the design of the proposed project activities. By providing support for: (i) the development of the horticulture subsector and incentivizing a shift from cereal production; (ii) improving irrigation delivery and management services; and (iii) training in proven CSA technologies to the farming community, the proposed project strives to align with the recommendations of the CSIP in building a productive, resilient and low-emissions agricultural sector in Lesotho.

17. **Geographic Scope.** The proposed project will be undertaken at the national level with respect to technical assistance activities, such as national awareness campaigns and farmer training, and in select high-priority districts with respect to investments, such as irrigation and horticulture development.

18. **Project Beneficiaries.** Direct beneficiaries will include smallholder farmers (producers) and off-takers (aggregators/agro-processors). Agricultural producers will benefit from increased access to improved irrigation delivery as well as high quality inputs and training in improved agronomic practices (including climate smart agricultural practices) which is expected to result in improved productivity and increased opportunities for market access. The proposed project would benefit processors/agri-enterprises with a reliable supply of quality produce as well as improved post-harvest management and infrastructure which will increase market opportunities – both for domestic and export markets. Other beneficiaries include staff from the extension service whose knowledge and capacity would be strengthened to deliver technical assistance to the farmers and processors.

19. **Project Cost.** The total project cost is estimated at US$14.0 million. This includes an IDA financing of US$10.0 million, Japanese Policy and Human Resources Development (PHRD) grant financing of US$2.0 million and a beneficiary contribution of US$2.0 million. In addition, IFAD has expressed interest in co-financing the proposed project in the amount of US$4.9 million and if IFAD funds become available, the total project cost will be revised upwards accordingly. In this context, Bank’s fiduciary and safeguards policies will apply to all IFAD-financed activities.

20. **Project Duration.** The proposed duration of project implementation is estimated at six years to enable satisfactory implementation of proposed activities and achievement of the PDO.

21. **Project Components.** The central design of the project would be two-fold: (i) increasing commercialization, including support for nutrition-sensitive agriculture; and (ii) promoting climate smart agriculture and improving resiliency to climatic risks. The following four components are envisaged under the project:
22. **Component 1: Increasing Agricultural Marketing Opportunities (US$4.0 million).** The objective of this component is to support Lesotho’s agricultural sector towards increased commercialization of smallholder agriculture, with a special emphasis on horticulture value chain development. The main beneficiaries will be small- and medium-sized agro-based businesses and farmer/farmer associations having the potential to expand their market-related activities. This component will invest in the following activities:

23. **Subcomponent 1.1. Support for Horizontal Alliances.** The project would provide support for the formation of producer organizations (POs), with special attention to forming POs among women and youth. New and existing POs will receive training and capacity building based on a needs assessment to identify gaps in assets and skills. Capacity building will likely include basic accounting and financial management, corporate governance, business plan management, etc. This assistance should help producers and their organizations to manage their businesses and improve their marketing skills in ways that enable them to effectively enter into vertical alliances (such as with aggregators as described under Subcomponent 1.2). The project will facilitate the formation of POs through hiring a local NGO that has extensive experience with group dynamics and familiar with the culture and ethos of Basotho farmers.

24. **Subcomponent 1.2. Horticulture Value Chain Development.** The objective of this subcomponent is to promote the development of the horticulture subsector by strengthening backward and forward linkages in the value chain of the subsector. The overall aim is to improve productivity, quality, value addition, and market linkages within the subsector to enhance its competitiveness towards reduced imports and increased exports as well as job creation, improved beneficiary incomes and increased economic opportunities for women and youth in the rural sector. It would serve to encourage farmers to diversify from cereal production to high value crops production, i.e. fruits and vegetables.

25. The sub-component seeks to leverage private investments in the sector for the development of a more commercially oriented horticulture sector. It will target support to commercial and semi-commercial agro-enterprises to drive their operations towards more lucrative domestic and export markets while simultaneously providing small holder farmers opportunities for increasing agricultural productivity for improved livelihoods.

26. The project will provide matching grants to qualifying aggregators i.e. private collection centers and agro-processors (any entity procuring and/or handling horticultural produce), who will promote and strengthen backward integration strategies through the provision of supply contracts for high quality inputs and extension services to smallholder farmers (individual as well as producer groups), thereby enabling them to enhance their productivity and product quality and be guaranteed a market for their produce. Any surplus production through aggregator support, over and above the contracted amount, could be sold elsewhere for additional income.

27. Downstream, the sub-component will exploit the value addition potential of the subsector through support for improved postharvest management by increasing aggregators’ capacity for handling and processing, including rehabilitation or upgrading of product sorting, processing, storage, conservation / preservation infrastructure facilities as well as packaging and labeling. Aggregators would thus also benefit from increased intake and assured supply of fresh produce from farmers (upstream) and increase their supply of fresh produce and processed products to domestic and export markets (downstream).

28. Component design is thus expected to foster the integration of a greater number of smallholder producers that dominate Lesotho’s rural landscape in the performing and remunerative horticulture value chain, incentivize contract farming, encourage farmers to establish producer groups and strengthen horizontal alliances. By creating and establishing trusted commercial partnerships between farmers and private agri-businesses, the project is also expected to build and deepen sustainable vertical alliances in the value chain.
29. **The Matching Grant Scheme.** Potential aggregators will be invited to prepare business plans and submit applications to enhance and expand their operations. The maximum size of a grant and percentage of beneficiary contribution would be agreed upon during project preparation. The submitted business plans will be reviewed, evaluated and scored against clearly defined criteria. The project will establish an independent Evaluation Committee to screen aggregators’ applications for project support based on clearly defined evaluation criteria. The criteria will be detailed in a Grant Manual which will be prepared in a manner satisfactory to the Bank. The Grant Manual will specify implementation arrangements of the Matching Grant Scheme and include appropriate technical, fiduciary, environmental and social safeguards provisions to ensure that the grant funds will be used for intended purposes only. It will also include the Bank’s Anti-Corruption Guidelines and consequences should the agreed commitments fail to be met. Any changes to the Grant Manual during project implementation will require prior Bank approval. The PMU will be responsible for administering the Grant Scheme.

30. This activity will be undertaken on a pilot basis. Other value chains may be included for project support should there be a demand for such support. Additionally, the project will also explore opportunities to support the operationalization of the horticulture market center established by the Government of Lesotho in 2017.

31. **Sub-component 1.3. Improved Nutrition (US$2.0 million funded by PHRD grant).** The objective of this sub-component is to promote the uptake of horticulture products among households through (a) increased dietary awareness and (b) in-household production of high-nutritious food products. To achieve this, the project will finance a national level public awareness campaign to disseminate the benefits of dietary diversity and to promote consumption of fruits and vegetables. As there are multiple on-going initiatives in Lesotho to promote dietary behavioral change and improved nutrition, this activity will be closely coordinated with other national campaigns to ensure alignment and avoid duplication. Nevertheless, a key objective of the campaign is to encourage consumption of the high-nutritious commodities financed under Component 1.2, so to support the production-consumption linkage within Lesotho’s agro-food system.

32. Further, this sub-component will finance a small pilot to increase in-household production of nutrient-dense foods. Primarily targeting women in one of the project areas, this pilot will finance high-nutrient production in kitchen gardens as well as small-scale processing of rejected produce from under component 1.2. The project will finance technical assistance in small-scale nutrition-sensitive production, processing, and local marketing, as well as micro-grants for investments in small-scale processing equipment (e.g. dryers, canning equipment) and input-capital for kitchen gardens. As a pilot, the intervention will be limited in scope and the results will focus on (i) impacts on diversified food production, and (ii) the reduced loss of rejected produce from under Component 1.2 (i.e. decreased high-nutritious food loss & waste, FLW). The exact location will be determined during project preparation.

33. **Sub-component 1.4. Improvement of Technical Knowledge and Skills for Improved Agronomic Practices and Climate Smart Agriculture.** This subcomponent will support the following activities to increase knowledge and capacity for improved production among smallholder farmers and processors as well as training of trainers to ensure the provision of advice and training on a continual basis to the farming community towards project sustainability:

34. **Subcomponent 1.4(a). Farmer Training.** The subcomponent will provide training to farmers on improved agronomic practices, including climate-smart agricultural production and processing technologies and practices with the view to increasing their capacity for achieving the triple wins of increased productivity, enhanced resilience and reduced GHG emissions. Farmers will be trained in a menu of modern technologies tailored to their agro-ecological context and will include, *inter alia*, measures to control soil erosion, practices for retaining/increasing soil moisture content, integrated soil fertility and land management practices such as crop-livestock integration (e.g., manure management, use of crop
residues as feed), conservation tillage, use of drought-tolerant crops, intercropping, works for land terracing and drip irrigation. The training will be provided by private service providers contracted under the project as well as local and national extension staff. Additionally, the project will support study tours, regional exchange visits, etc. for farmers and processors so that they could learn from the experiences of producers and processors in other countries.

35. **Subcomponent 1.4(b). Strengthening Capacity of National and Local Extension Staff.** The project will enhance the knowledge and skills of national and local extension staff to increase their effectiveness in the delivery of agricultural services to the farming communities. The project will support technical training in good agronomic practices, climate-smart technologies, etc. The project will also finance study tours and regional exchange visits so that extension staff could learn from the experiences of other countries in the region.

36. **Component 2. Rehabilitation of Irrigation Infrastructure and Technical Assistance for Policy and Institutional Reform in the Irrigation Sector (US$5.0 million).** This component will finance rehabilitation of irrigation infrastructure and provide technical assistance to the Ministry of Agriculture and Food Security (MAFS) and its relevant departments to support irrigation sector reform. The aim is to increase productivity in areas of high agricultural potential through improved access to irrigation. Component design will seek to complement and enhance the impacts of other World Bank-supported operations in the water sector of Lesotho, such as the Lowlands Water Management Project, currently under preparation. Where feasible, the rehabilitation of existing irrigation infrastructure and provision of technical assistance will be in districts where the ongoing SADP-1s active to deepen project benefits.

37. Given the critical need for irrigation to reduce farmers’ dependence on rain-fed agriculture, increase agricultural productivity and commercialization, and promote climate resiliency in the Lesotho’s agricultural sector, the Government has requested Bank support for irrigation under SADP-2 in parallel with the development of the Irrigation Masterplan. As the Masterplan is expected to take about twelve months for completion (the contracting process for an international firm is currently underway), the first set of irrigation investments under SADP-2 will seek to support “no-regret” investments, i.e. focus exclusively on areas with evidence-based high potential for increasing agricultural productivity and fostering commercialization. These will also be guided by the preliminary analyses and findings of stages one and two of the masterplan work, i.e. “strategic direction setting” and “situation analysis” which together should provide a robust overview of the irrigation physical and institutional baseline, challenges and opportunities. Irrigation support in subsequent years would be informed by the findings of the Irrigation Masterplan.

38. The component will support the following activities:

39. **Sub-component 2.1: Rehabilitation of Irrigation Infrastructure.** This sub-component will finance minor rehabilitation works, the purchase and installation of on-farm pipeline systems and irrigation auxiliaries, irrigation canal and head work repair, provision of pressure pipes and network repairs. The project will also finance the rehabilitation of existing strategic pump stations and construction of water harvesting and distribution reservoirs and where feasible also establishment and repair of existing vertical wells (boreholes).

40. **Sub-component 2.2: Develop and Strengthen Irrigation Institutions.** The project will assist the government to: (i) establish independent, financially-autonomous irrigation service providers responsible for the management and maintenance of the off-farm irrigation infrastructure and for water delivery to Water User Associations (WUAs); (ii) support the transition of existing national- and district-level institutions to the new institutional framework; and (iii) establish and strengthen the capacity of these institutions through provision of technical assistance, goods, works and training. Support to these institutions will also include the introduction of pilot WUAs where possible and an outline of
the new roles and responsibilities and recommendations on how to shift from the current institutional structure to the new one.

41. **Component 3: Project Management, Coordination, Monitoring and Evaluation (US$1.0 million).** This component would support overall project management, coordination, monitoring and evaluation (M&E) of project activities. The existing Project Management Unit (PMU) within MFS will be responsible for overall project implementation including fiduciary aspects (including audits); knowledge management/communication (including public awareness campaigns); grievance redress mechanism; citizen engagement; and monitoring implementation of safeguards related measures. The capacity of the existing PMU would be enhanced through the hiring of an irrigation specialist, project accountant as well as a full-time environmental and social safeguards specialist.

42. The component would finance PIU staff related costs (training, etc.), goods, equipment and vehicles, incremental operating costs, assessments and studies as necessary for preparation of future projects and operations, and other eligible expenses associated with the overall implementation of the project. Support would also be provided for undertaking social/results/impact surveys at project midterm as well as completion. Additional periodic surveys will also be supported for improved project implementation, for e.g. to assess and improve women and youth participation in the project.

43. **Component 4: Contingency Emergency Response Component. (US0.0 million).** A Contingency Emergency Response Component (CERC) with zero allocation will be created to allow the Government of Lesotho to respond quickly in case of an eligible emergency. Should an eligible emergency occur, the inclusion of this component would provide a conduit for the use of uncommitted funds from the unallocated expenditure category and/or allow the government to request the Bank to re-categorize and reallocate financing from other Project components to partially cover emergency response via implementation of key activities by the appropriate agencies to respond to the emergency. The CERC could also be used to channel additional funds should they become available as a result of an eligible emergency.

**SAFEGUARDS**

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

The Project is being prepared as a follow on to the ongoing Smallholder Agriculture Development Project (SADP). It will scale up SADP by increasing the geographical coverage to include all the ten districts in Lesotho—Teyateyaneg, Butha-Buthe, Leribe, Mafeteng, Maseru, Mohale’s Hoek, Mokhotlong, Qacha’s Nek, Quthing and Thaba-Tseka. Lesotho is predominantly mountainous, with the highlands and mountain zones covering approximately 59 percent of the total land area. This land is mostly characterized by steep slopes with fragile soil formations which are extensively degraded. The highlands cover approximately 15 percent of the country, while the lowlands and Senqu (Orange) River Valley make up approximately 17 percent and 9 percent of the country, respectively. The cultivable land is largely confined to the lowlands and highlands along the Western border and the Senqu River valley in the south, the latter being densely populated and resulting in much pressure on natural resources. Land degradation in various forms is a dominant landscape feature in the country, and inherent infertile soils affect the productivity of both arable and rangelands. Lesotho is highly susceptible to climate-related events such as frost, drought, strong winds, snow, hailstorms and floods, all of which have a devastating effect on agricultural productivity, including crop failure and increased incidences of invasive plants and infestation by pests. Specific geographical locations for the proposed sub-projects have not been identified yet but will be selected on a demand-driven basis during the implementation of the Project. Site-specific environmental and social assessments will be carried out during implementation and biophysical characteristics comprehensively described. The designs of the sub-projects will also incorporate climate resilience engineering measures and take into consideration the various environmental conditions which could exacerbate impacts on the natural
B. Borrower’s Institutional Capacity for Safeguard Policies

SADP-2 will be implemented by the Project Management Unit (PMU) under the MAFS that is currently implementing SADP-1. The PMU has demonstrated limited capacity in assessing environmental and social (E&S) risks and impacts, developing appropriate mitigation measures and implementing and monitoring E&S aspects of the project. Currently, it does not have full-time and qualified E&S safeguards specialists to oversee the monitoring and implementation of safeguards. Before SADP2 appraisal, the PMU will be required to prepare a comprehensive Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) and carry out stakeholder consultations in line with both the Lesotho Environmental Impact Assessment (EIA) law and regulations and the World Bank Safeguard Policies. During preparation of the ESMF and RPF, the project team will re-assess in more detail the staffing and capacity of the PMU and will build measures to address these in project design. The ESMF and RPF will provide clear procedures and methodologies for carrying out site-specific E&S assessments, review, approval and implementations of physical investments (sub-projects) to be financed by SADP-2. During implementation, the PMU will be responsible for carrying out site-specific E&S impacts assessment for each sub-project including the associated Environmental and Social Management Plans (ESMPs) and Resettlement Action Plans (RAPs) according to procedures outlined in the ESMF and RPF. The site-specific ESMPs and RAPs will be included in the bidding documents for any civil works to be implemented. The PMU will ensure that all the mitigation measures recommended in the site-specific ESIAs and RAPs are implemented, monitored and reported in progress reports submitted to the Bank. The Bank will also work with the PMU in recruiting full-time dedicated and qualified E&S specialists whose responsibilities will be to screen sub-projects, determine the level and degree of E&S risks and impacts, prepare site-specific ESMPs and RAPs, and ensure that mitigation and management measures are implemented, monitored and reported in progress reports. The E&S specialists would also train/re-train PMU staff and district agriculture officers in the implementation of appropriate mitigation measures for types of impacts expected.

C. Environmental and Social Safeguards Specialists on the Team

Majbritt Fii Flynn, Social Specialist
Mantsesebo Moipone Amelia Ndlovu, Social Specialist
Ntaoleng Celestina Mochaba, 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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</thead>
<tbody>
<tr>
<td>Environmental Assessment OP/BP 4.01</td>
<td>Yes</td>
<td>The environmental risks of the Project are moderate given the potential adverse but manageable impacts likely to be generated from the construction and operation of small-scale irrigation and drainage schemes, and the weak capacity of the Project Management Unit (PMU) to manage and monitor environmental aspects of the Project. The project will finance minor rehabilitation works, the purchase and installation of on-farm pipeline systems and irrigation auxiliaries, irrigation canal and head work repair,</td>
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provision of pressure pipes and network repairs. The project will also finance the rehabilitation of existing pump stations and construction of water harvesting and distribution reservoirs and where feasible also establishment and repair of existing vertical wells (boreholes). The total command area (hectares) for rehabilitation of the on-farm irrigation infrastructure is not known, but will be determined from the recommendations of the Irrigation Master Plan currently being developed with full participation of key stakeholders, including smallholder farmers who will directly benefit from the Project. Key environmental impacts associated with the construction and operation of irrigation schemes include (a) changes to the low flow regime of rivers which may have significant negative impacts on downstream users, (b) changing hydrological regime associated with irrigation schemes may alter the capacity of the environment to assimilate water soluble pollutants, (c) excessive use of both natural and chemical fertilizers may result in excess of nutrients which might have impacts on water bodies and human health, (d) areas with water tables that have a low hydraulic gradient are at risk from salinization, (e) reduction in low flows and flood flows may alter the river morphology, reducing the capacity to transport sediment and thereby causing a buildup of sediments in slower moving river reaches, (f) irrigation schemes may fail if the sediment load of water supply is higher than the capacity of the irrigation canals to transport sediment loads, (g) irrigation schemes may have ecological impacts, particularly in wetland areas affecting natural habitats.

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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>The policy is triggered. Reduction in natural river flow and discharge of polluted return flows from irrigation schemes, have potential impacts to habitats both within and alongside rivers. Significant changes to low flows (+/-20%) will alter micro-habitats particularly wetlands.</td>
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<tr>
<td>Forests OP/BP 4.36</td>
<td>No</td>
</tr>
<tr>
<td>The Project will not support sub-projects located within forested areas or plantations as defined under OP 4.36. Therefore, the policy is not triggered.</td>
<td></td>
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<tr>
<td>Pest Management OP 4.09</td>
<td>Yes</td>
</tr>
<tr>
<td>The Pest Management Policy is triggered as agro-chemicals will be used for irrigation subprojects.</td>
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</table>
on observations from the ongoing Smallholder Agriculture Development Project, the risk of pesticide use is considered low to moderate due to the small quantities of pesticides currently being used in the sub-projects. An Integrated Pest Management Plan (IPMP) will be prepared to provide guidance on the sustainable application of fertilizers and pesticides taking into consideration the soil type and slope to ensure protection of both surface and ground water.

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<tr>
<th>Physical Cultural Resources OP/BP 4.11</th>
<th>Yes</th>
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<tr>
<td>The policy is triggered given the likelihood of chance finds in conjunction with earth works and/or an encounter of graveyard sites from the experience implementing infrastructure projects in Lesotho. The ESMF will include Chance Find Procedures (CFP) as well as measures to screen for and manage potential impacts on cultural heritage or property that could be affected by project activities.</td>
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<tr>
<th>Indigenous Peoples OP/BP 4.10</th>
<th>No</th>
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<tbody>
<tr>
<td>The policy will not be triggered as there are no indigenous peoples in Lesotho according to the African Commission on Human and Peoples’ Rights and the UN.</td>
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<tr>
<th>Involuntary Resettlement OP/BP 4.12</th>
<th>Yes</th>
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<tr>
<td>OP 4.12 will be triggered. The project will likely expand the irrigation service area; however, this will only be confirmed once the Irrigation Master Plan has been prepared and investments to be supported under SADP-2 are identified for support during project implementation. At this stage while it is unknown whether there will be any land acquisitions as a direct result of the project, there might be restricted access to resources (whether related to private or communal resources) related to rehabilitation of irrigation infrastructure and therefore Involuntary Resettlement OP 4.12 is triggered to address any adverse impacts. Since the exact location of these structures is not known, a Resettlement Policy Framework will be prepared, consulted and disclosed prior to appraisal. The Resettlement Policy Framework will guide the preparation of Resettlement Action Plans. The Resettlement Policy Framework will guide the PMU in avoidance, minimization and mitigation of any potential resettlement impact.</td>
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<tr>
<th>Safety of Dams OP/BP 4.37</th>
<th>Yes</th>
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<tr>
<td>This policy has been triggered as a precautionary measure. At this stage, there is insufficient information to determine whether irrigation schemes and drainage canals would rely on water from existing dams or new small dams would need to be supported</td>
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under the project. An exclusion clause will be included in the ESMF indicating that the project would not support activities that are high risk and trigger a full environmental assessment.

<table>
<thead>
<tr>
<th>Project Category</th>
<th>Value</th>
<th>Details</th>
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<tbody>
<tr>
<td>Projects on International Waterways</td>
<td>TBD</td>
<td>The policy is marked TBD during the preparation of the Project given the insufficient information to confirm whether the scope of the irrigation schemes and drainage canals would adversely affect the quality or quantity of water flow within shared waterways.</td>
</tr>
<tr>
<td>Projects in Disputed Areas</td>
<td>No</td>
<td>The project will not finance activities located in any known areas under territorial dispute as defined in OP 7.60. Therefore, the policy is not triggered.</td>
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</table>

### E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Mar 18, 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

A comprehensive Environmental and Social Management Framework (ESMF) which will also include the Integrated Pest Management Plan (IPMP) will be prepared. In addition the Resettlement Policy Framework (RPF) will also be prepared. Both documents will be developed by a reputable and qualified Consulting firm(s), consulted upon and disclosed prior to appraisal. Additionally, a comprehensive Social Assessment will be carried out as part of the ESIA.

IFAD funds are likely to become available in September 2019. The Bank’s safeguards policies will apply to all IFAD-financed activities under the project.

### CONTACT POINT

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**Borrower/Client/Recipient**

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Approved By

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