



# Project Information Document (PID)

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Concept Stage | Date Prepared/Updated: 04-Jan-2022 | Report No: PIDC31693

**BASIC INFORMATION****A. Basic Project Data**

Country Georgia	Project ID P175629	Parent Project ID (if any)	Project Name Georgia Resilient Agriculture Irrigation and Land Project (P175629)
Region EUROPE AND CENTRAL ASIA	Estimated Appraisal Date May 16, 2022	Estimated Board Date Jul 07, 2022	Practice Area (Lead) Water
Financing Instrument Investment Project Financing	Borrower(s) Public Debt Management Department, Ministry of Finance of Georgia	Implementing Agency Ministry of Justice, Ministry of Environment Protection and Agriculture	

**Proposed Development Objective(s)**

(1) improve resilient agricultural production in selected project areas; and (2) strengthen national irrigation and land management capacity.

**PROJECT FINANCING DATA (US\$, Millions)****SUMMARY**

<b>Total Project Cost</b>	200.00
<b>Total Financing</b>	200.00
<b>of which IBRD/IDA</b>	200.00
<b>Financing Gap</b>	0.00

**DETAILS****World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	200.00
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Environmental and Social Risk Classification  
Substantial

Concept Review Decision  
Track II-The review did authorize the preparation to continue



Other Decision (as needed)

## B. Introduction and Context

### Country Context

1. **Georgia is an upper-middle-income country with a gross domestic product (GDP) per capita of US\$4,275 in 2021 and a population of about 3.7 million people.**<sup>1</sup> The country's economy has grown at an average annual rate of 5 percent between 2005 and 2021 despite numerous upheavals including the global financial crisis of 2007-08, the conflict with the Russian Federation in 2008, the drop in commodity prices since 2014 that has affected key trading partners, and more recently COVID-19-related economy contraction in 2020.
2. **Georgia experienced an economic decline of about 6 percent in 2020 because of the COVID-19 pandemic which forced the country's economy into shutdown, but this was followed by a rebound in the economy.** The country's current account deficit widened significantly to 12.2 percent of GDP in 2020 from 5.5 percent of GDP in 2019. This was driven by lost income from tourism and weak imports. The COVID-19 lockdown measures also led to severe job and income losses with the unemployment rate reaching 20.4 percent in the fourth quarter of 2020. In March 2020, the Government of Georgia (GoG) announced a State Program for Maintaining Prices of Basic Consumer Food Products to ensure enough stocks for the country due to the coronavirus outbreak.
3. **Georgia has implemented recent economic reforms which have facilitated a decrease in the poverty rate from 37.4 percent in 2007 to 19.5 in 2019 and improved the income and living conditions of the country's bottom 40 percent.** However, a fifth of the general population remains in poverty. Although inequality declined after 2010, with a Gini Index of 36.4 in 2021, Georgia still has one of the highest levels of income inequality in the region. The incidence of poverty and inequality is higher in rural areas than in urban areas.
4. **Agriculture in Georgia is on a path of structural transformation.** As in other countries in the region, while the sector continues to grow in absolute terms, the relative contribution of primary agriculture to the economy is diminishing, with other sectors generating greater value-added. The structural transformation process typically includes increased value added for agriculture-related industries. Indeed, between 2010 and 2019, value added in food production increased from 222.9 m GEL to 401.8 m GEL in real terms (GeoStat, 2021).
5. **Climate change is a threat to Georgia's development, particularly agriculture. It is worsening the already arid conditions of Eastern Georgia, increasing flow variability in rivers, and has resulted in a higher incidence of destructive natural disasters in the last 20 years.** Current trends of climate change impacts in Georgia, such as increasing temperature, eroding soils, and intensifying floods, frost, and hail in addition to new pests and diseases, are expected to reduce yields in key agricultural regions. The semi-arid Eastern part of the country, hosting 90 percent of the irrigated area, is already exposed to wind erosion that threatens soil resources. The latter combined with the decline in river flow and the small number of operational reservoirs, lead to more frequent scarcity and inability to provide farmers with sufficient water. Overall, Georgia faces significant disaster risk levels and is ranked 91<sup>st</sup> out of 191 countries by the Inform Risk Index.<sup>2</sup> The incidence of destructive natural disasters such as landslides and mudflows has increased considerably in the last 20 years<sup>3</sup>. The annual risk exposure to the population's wellbeing from climate change is estimated to be equivalent to between 1.5 and 6.6 percent of Georgia's national gross domestic product (GDP), i.e.,

<sup>1</sup> National Statistics Office of Georgia (GeoStat), 2021

<sup>2</sup> European Commission (2019). INFORM Index for Risk Management. Georgia Country Profile.

<sup>3</sup> World Bank (2017) Disaster Risk Finance Country Note – Georgia.



between US\$238 million and US\$1.04 billion annually. Climate change hampers the ability of communities to fight poverty, especially since it disproportionately affects the poorest and most marginalized groups.

#### Sectoral and Institutional Context

6. **Agriculture is an important sector of Georgia’s economy in terms of GDP contribution, employment generation, and foreign exchange earnings.** The sector’s contribution to the national economy during the last five years on average has been 7.8 percent. In 2020, agriculture was one of the sectors of the economy that was least affected by the COVID-19 pandemic<sup>4</sup>. Approximately 41 percent of the total population live in rural areas, and the majority of those living in rural areas rely partly on agriculture for their livelihoods. Agriculture provides 19.1 percent of total employment.<sup>5</sup> Although Georgia has been a net importer of agricultural food products, from 2010 to 2020 the international trade balance of Georgia demonstrated improvement: the value of exports of agricultural food products, especially high value commodities such as wine, hazelnuts, and fruit and vegetables, more than doubled while imports increased by only one percent.
7. **The Ministry of Environmental Protection and Agriculture (MEPA) has recently adopted the Agriculture and Rural Development Strategy of Georgia 2021-2027.** The strategy is based on sustainable development principles and aims to “diversify and develop economic opportunities in rural areas and improve social conditions and quality of life.” The following strategic goals have been identified: (a) development of competitive agricultural and non-agricultural rural sectors; (b) sustainable use of natural resources, ecosystem conservation, and climate change adaptation; and (c) development of efficient systems in food/feed safety, and veterinary and plant protection. Achieving sustainable growth will require targeted investments in the agriculture sector, including investments in the management of land and water, which are finite resources and key factors of production. Resolving agriculture and food system constraints will require simultaneous and complementary interventions in irrigation and land management, the timing of which is urgent given the rapidly increasing effects of climate change and the need to adapt and mitigate risks.
8. **Notwithstanding domestic and export market opportunities, the performance of the agricultural sector remains below potential.** According to the most recent agricultural census conducted in 2014, the share of commercialized farms producing higher value crops for export remains low. Almost 80 percent of rural farmers operate less than one hectare of agricultural land, 14.9 percent operate one to two hectares, 4.3 percent operate two to five hectares, and only 1.3 percent have five hectares or more<sup>6</sup>. Most smallholdings produce primarily for subsistence purposes and lack direct commercial potential. Due to a lack of access to improved technology, productivity is low and stagnant for most crop and livestock products – both in absolute terms and relative to comparator countries. For many farmers, the combination of small farm size and low farm productivity means that agricultural incomes are too low to survive on farm earnings alone. Non-farm wages and income transfers are the major sources of rural household income. To enhance the performance of small farms, a combination of agriculture technology support and market facilitation is required, while improved access to land and water would enhance their viability and resilience.
9. **Agricultural structural transformation is driven by interrelated processes in improved productivity, changes in composition of production (from low-value staple commodities to higher-value products) and commercialization** (Raian and others 2016). In the agriculture sector overall, forward and backward linkages with input industries and the agro-processing sector are weak, and their improvement would have a positive impact on agriculture modernization, value chain development and competitiveness. Despite the apparent limitations of smallholder farms, a small but increasing number of medium-sized and larger commercially oriented producers and agri-business enterprises are driving the development of export-oriented value chains (World Bank 2020c), which would signal a potential for further

<sup>4</sup> Preliminary estimates show that while the country’s economy contracted by 6.2 percent, agricultural share in total GDP increased by one percentage point from 7.4 to 8.4 percent in 2020.

<sup>5</sup> Geostat. 2020. Based on International Labour Organization (ILO) methodology.

<sup>6</sup> World Bank. 2018. Georgia – Maximizing Finance for Inclusive Development of Agri-Food Value Chains; Synthesis Report.



development. In recent years, MEPA has started to support the agriculture sector in a more holistic manner. The Rural Development Agency (RDA, an implementing agency under MEPA), has developed a number of initiatives that support farm commercialization and agribusiness development, including the agriculture credit support program and the “Plant the Future” program. An opportunity may exist through the proposed operation to further develop institutional capacity within MEPA to deliver catalytic support to farmers and value chain actors.

10. **The further development of irrigated agriculture would provide an opportunity to increase farmer incomes.** Moreover, support to the development of commodity value chains would enable farmers to add value and access markets, which would also enhance the performance of the domestic food system and contribute to meeting demand in regional export markets. This would require an integrated development approach that encompasses the entire chain, from efficient water supply, irrigation technology, crop production technology adoption, product aggregation and quality control, marketing and logistics infrastructure, and support to agribusinesses.
11. **Following the collapse of the former Soviet Union, the actual irrigated area in Georgia declined significantly, leaving unused a large portion of the irrigation schemes that were then in operation.** Between 1988 and 2010, the area under irrigation shrank from 386,000 hectares during the Soviet period to 24,000 hectares in 2010<sup>7</sup>. The main reason for the decline was economic. With the lack of public resources to sustain the prevailing operations’ model of large infrastructure, the latter gradually degraded. This undermined the financial viability from farmers’ perspective. The poor performance of the sector combined with the characteristics of farming systems, land reforms, the transition to a market economy, and the loss of markets with traditional trading partners have also contributed to a significant reduction of the irrigated area<sup>8</sup>. Although, the irrigation “technical” potential is estimated to be 725,000 hectares<sup>9</sup>, only about 17 percent of total potential is equipped with irrigation today.
12. **Starting from an irrigated area of about 50,000 hectares in 2017, the Irrigation Strategy for Georgia 2017-2025<sup>10</sup> sets out a vision to modernize irrigation infrastructure and boost the area of irrigated land to 200,000 hectares by 2025.** The Irrigation Strategy identifies guiding principles to develop irrigation, including: (a) emphasis on improving the production environment for higher-value crops and higher-value-added products, (b) critical need to extend and improve the quality of irrigation infrastructure, focusing on rehabilitation and modernization of existing schemes, (c) importance of modernizing management systems, (d) importance of establishing self-governing local level institutions to manage retail water distribution and local facilities maintenance. Overall, the objective of increased arable land under irrigation has the potential to make a significant economic contribution to the country by improving crop yields for irrigated farms, increasing employment opportunities for farming communities, and increasing the contribution of agriculture to Georgia’s GDP (currently agriculture makes up 8 percent of the Georgian GDP). Assisted by the current GILMDP (Georgia Irrigation and Land Market Development Project, P133828), a law enacted in 2019 supports the establishment – on a voluntary basis - of Water User Organizations (WUO) to manage the local irrigation facilities and to deliver to the farmers’ plots bulk water received from the irrigation agency. This change was justified by the classic expectation that, when farmers participate (technically, institutionally) in the management of irrigation schemes, over time, this leads to increased sustainability of the infrastructure, improved water distribution, and, as a result, a higher willingness to pay for irrigation tariffs. The irrigation strategy’s objectives are consistent with those of the Agriculture and Rural Development Strategy of Georgia (2021-2027) mentioned before. The transition to high-value crops is a key driver of increased financial resources that can finance sustainable irrigation O&M (Operations and Maintenance).
13. **The government has been steadily investing in irrigation and intends to scale up the effort by improving investment planning.** Thus far, the irrigation sector has been receiving a large share of public capital investment in agriculture (between 2012 and 2019, spending on irrigation and drainage systems, albeit modest in absolute terms, has

<sup>7</sup> Irrigation Strategy for Georgia, 2017-2025. MEPA 2017.

<sup>8</sup> Food and Agriculture Organization (FAO) 2019.

<sup>9</sup> FAO 2019.

<sup>10</sup> The preparation of the Strategy was assisted by World Bank funded Georgia Irrigation and Land Markets Development Project (GILMD) Project (P133828).



increased seven-fold) which, invested in the rehabilitation of some existing irrigation schemes, has expanded the irrigable area from 88,000 hectares in 2015 to about 130,000 ha in 2020. In 2020, GA (Georgian Amelioration Limited Liability Company) has identified 119 schemes in East Georgia requiring some degree of repair / rehabilitation; this corresponds to a cumulative initial command area of 205,000 ha. The distribution of the irrigation schemes is wide as the area of 62 of the 119 schemes is below 500 ha, 50 between 500 and 5000 ha, 14 above 5000 ha<sup>11</sup>. The size of schemes is probably a key factor when prioritizing rehabilitation of public schemes because small schemes (below 500 ha) are simpler to design, faster to build (usually only a partial rehabilitation is done), and easier to operate. However, available information suggests that in most of them, staple low value crops are grown. Although there is a high variability, in aggregate, the currently irrigated area as defined by GA represents only half of the irrigable area<sup>12</sup>. This is partly because, due to budget constraints, most rehabilitation operations conducted by the government so far have been partial, focusing on primary canals without really improving secondary and tertiary canals. Yet, because they are closer to farmers' fields, improving their condition makes a difference in irrigation water supply, including flexibility in times of scarcity. In contrast, GILMDP finances the entire rehabilitation and modernization, including through provision of pressurized water in one of the two large irrigation schemes targeted (some 12,000 ha in total).

14. **From reservoir storage to individual irrigation in farmers' fields, the irrigation sector is extremely vulnerable to the effects of climate change and the ability to cope with this situation is limited.** With frequent early snowmelt due to climate change, droughts are very frequent during the irrigation season, including, at times, for the large schemes that are supplied by one of the only 8 dams in operation. To improve water security, with the support from GILMDP, the government is currently financing a pre-feasibility study of 25 dams (including 13 existing in need of rehabilitation), which will provide insight in how and where to prioritize investments in water storage. Even for existing reservoirs, there is limited ability to predict the inflow and, therefore, to match the demand, including, if needed, to apportion the available water. This is essentially due to limited and outdated hydrometeorological data<sup>13</sup> and the absence of tools and methods (including remote-sensing based water accounting). This also reduces the capacity to incorporate the other water needs, including environmental flows. Within the irrigation domain, there are no formalized rules to equitably allocate water in case of scarcity despite their high frequency. Encouraged by financial assistance from the government, water-efficient farm level irrigation systems are developing but remain at a low level. These are notably sprinkler and drip kits for horticultural crops on relatively small areas. Between 2015 and 2020, the area equipped with drip irrigation supported by the "Plant the future" program increased from 720 to 2,700 hectares and many farmers install drip even without subsidies.
15. **GA provides irrigation water to all farmers, but the reliability of the service is uneven and often poor.** GA is a State-Owned Enterprise supervised by MEPA that, for over 10 years. With some 1500 employees, it has been providing water services (to irrigation, drainage, and fisheries as well as some hydropower reservoirs) against an annual payment individually billed to the end users. GA is also entrusted by the government with the responsibility to rehabilitate small to medium irrigation schemes using State budget. This implies inhouse screening and procuring consulting services and works. A survey carried out as part recent analysis of the irrigation sector<sup>14</sup> revealed that most stakeholders, including but not only farmers, considered that GA was not delivering irrigation services in a timely and operationally efficient manner. The limited capacity, notably in terms of an insufficient and ageing skilled labor, was mentioned as a major cause. The limited and outdated management information system GA uses does not allow it to properly implement its key functions, including O&M, asset management, billing, and commercial activities. The relationship between the State and GA is essentially one where the State entrusts GA with irrigation investments (capital expenditure) and unconditionally covers GA's financial operational gap annually, not against any explicit objectives to be fulfilled by

<sup>11</sup> Constraints to sustainable, efficient, and resilient irrigation systems in Georgia – What is the way forward? - Policy note, BRL, Sept 2021 (draft)

<sup>12</sup> GA data.

<sup>13</sup> From 150 stream gauging stations during the soviet period, according to the Georgian National Environmental Agency, currently, only about 50 gauging stations are still in operation.

<sup>14</sup> Constraints to sustainable, efficient, and resilient irrigation systems in Georgia – What is the way forward? - Policy note, BRL, Sept 2021 (draft)



GA. There are significant margins to improve accountability. Neither GA nor an outside entity measures its performance according to objective indicators. In September 2021, MEPA has sought the support from the Bank to carry out a strategic assessment of GA (none has been carried out in recent years). This exercise would provide an objective evaluation of the service delivered by GA, of the underlying causes, of how it operates and, as a result, identify key problems and constraints. This would then serve as material for the government to set evidence-based directions for an improved performance of GA but also of the irrigation sector as a whole, which lacks strategic vision. The study will in particular examine the performance of the irrigation delivery in tertiary canals and beyond. Although it is the responsibility of GA, it is not well known, notably if, where, and under which conditions some farmers actually handle O&M of the local network<sup>15</sup>.

**16. The State budget covers around 80 percent of GA operational costs<sup>16</sup> while only 20 percent comes from water users' contributions.** Three main causes explain GA structural dependency on subsidies: (a) inefficiency to adequately carry out its functions, (b) a difficulty for the State to increase a currently very low irrigation tariff<sup>17</sup>, and (c) the fact that, like many irrigation agencies around the world, GA plays non-commercial yet important roles as engine of rural development and integrated water resources management, notably through reservoir operation. These are public services that are hard to quantify and cannot be financed by those who benefit from them. The current irrigation tariff (75 GEL or approximately US\$23 per hectare irrigated annually) has been used for over 10 years and is recognized as particularly low. In addition to keeping GA dependent on State money, such a low price does not incentivize farmers to use water efficiently. As indicated in the Irrigation Strategy, to increase the cost recovery ratio of irrigation service provision, the government is considering raising the irrigation tariff. MEPA, GA, and the Georgian National Energy and Water Supply Regulatory Commission (GNERC) are jointly working at calculating a two-part tariff (volumetric and fixed) that GA would charge future WUOs and is using the case of the two irrigation schemes that are being modernized as basis to calculate the cost of provision. This is useful to familiarize GA and GNERC with the methods to calculate costs. However, considering that there aren't any WUOs at present, a substantial improvement of the cost recovery ratio today can only come from a countrywide progressive increase of the current tariff applied to users. This is an ambitious and delicate process that requires to consider three factors: the actual cost of service provision (which is only roughly known), farmers' willingness, and farmers' ability to pay. It also requires political will and a sufficiently long-term perspective. It also requires an effectively inclusive dialogue with water users<sup>18</sup>, unlike the unilateral top-down increase that was done in the past.

**17. A 2017 study suggests that improvements in irrigation service provision resulting from infrastructure rehabilitation can raise the ability to pay a higher tariff is substantial.**

A study carried out in 2017<sup>19</sup> assessed farmers' ability to pay for irrigation services after rehabilitation. It was determined by estimating the incremental tariff (GEL / hectare) as a percentage of the increase in net farm income gained from scheme rehabilitation. The results of this analysis indicate that the percentage is 30 percent, 27 percent and 24 percent for medium/large, small, and marginal farms, respectively for an incremental tariff of GEL 375 per hectare, that is a five-fold increase compared with the prevailing GEL 75 / hectare. Even though this would need to be fine-tuned it shows that the ability to pay a higher tariff is substantial, especially when, in addition to a reliable irrigation service, farmers benefit from measures to support productive investments, spread greener practices that are less input intensive, and facilitate access to markets.

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<sup>15</sup> The unclear delineation of the responsibility between farmers and the State agencies (LTDs) and the financial resources allocated was one of the important statements made in the ICR of the IDCDP in 2010 (Report No: ICR00001136)

<sup>16</sup> Annual and periodical operation and maintenance. This excludes the State resources used for investment.

<sup>17</sup> This situation is frequent in numerous countries because it is a politically sensitive topic.

<sup>18</sup> Since part of GA's operational costs are incurred to provide a service to other users than irrigation, they should be part of the equation.

<sup>19</sup> MEPA, John Roe, Farmers' Ability to Pay for Irrigation Services, 2017.



18. **Learning from past experience, guided by a recent policy and legal framework, and implementing a pilot to establish WUOs in the two irrigation schemes financed by GILMDP, MEPA is making progress in setting up a decentralized irrigation service delivery model in view of its expansion.** Georgia already experimented with establishing WUO in the past as part of an objective to improve local O&M in public irrigation schemes. After the independence of the country, around 200 Amelioration Service Cooperatives were created on a command area of 200,000 ha. They failed and management was transferred to Village Councils. Thanks to the support of the World Bank-financed IDCDP <sup>20</sup>(2001 – 2009), 259 Amelioration Associations (AA, equivalent of WUOs) were established but the Government closed all AA related activities in 2006 as part of an ideologically driven push to privatize public services. All AA were formally dissolved in 2010. Local organizations in charge of O&M of irrigation schemes were thus introduced several times but have not sustained over a longer period. Lack of training of WUO members and of financial resources to support them and political instability were key reasons for mixed results<sup>21</sup>. In recent years, supported by the ongoing GILMDP, the government has taken positive steps by approving the 2017 Irrigation Strategy and the Law on Water Users' Organizations (WUOs), where GA assumes the role of bulk water supplier to local level organizations, which operate local facilities and supply individual farms. The law provides that the actual establishment is voluntary. In the Kvemo Samgori and Zeda Ru irrigation schemes, a dedicated WUO Support Unit made of GA staff at central and regional offices has been carrying out an active awareness and training campaign on WUO establishment. Had there not been a year interruption due to COVID-19, this program would be more advanced. The rationale underpinning the establishment of WUO as described in the Irrigation Strategy is that, when farmers benefit from an improved irrigation service (in a modernized irrigation scheme), they would be incentivized to work collaboratively to maintain a high level of service and, consequently and derive higher agricultural benefits. As a result, they are more likely to pay for a higher irrigation tariff. For the State, delegating O&M to WUOs is considered a way to reduce costs by dealing with a limited number of entities rather than numerous individual clients.
19. **Well-functioning agricultural land markets are important for development of the commercial agriculture in Georgia.** Most of the agriculture in Georgia is subsistence-based, and very few investments are made to convert it into commercial agriculture. Foreign Direct Investment (FDI) into the agriculture sector was on average less than 5 percent annually between 2010 and 2020 according to GeoStat. The land administration sector context is not conducive to commercial agriculture development, as only around 50 percent of agricultural parcels are registered by the National Agency of Public Registry (NAPR). Out of those registered, 65 percent is in State ownership and management. State land leases system requires improvement, and absence of transparent land valuation methodologies and low taxation and tax recovery rates do not encourage private and public owners to optimize their land use. According to GeoStat land sector contributes by only 0.1 percent to the State annual budget. According to the team's estimations, loss to the national budget due to the inefficiencies of the agricultural land markets related to the sub-optimal use of agricultural land and under-collected land taxes represent between US\$10 to US\$20 million annually. Therefore, continuation of the land policy reform, support of systematic land registration roll-out, sustainable land management and consolidation, strengthening of land valuation and taxation framework and practices should remain among key governmental priorities to facilitate the development of commercial farming. NAPR currently successfully implements the land market development component of the GILMDP, which includes systematic land registration activities conducted predominantly around irrigation schemes rehabilitated by the Project, upgrade of the National Integrated Property Registration (IPRS) system including digitalization of the systematic registration process, and support to the legislative and regulatory reforms in the land sector. The GILMDP also supports the National Agency for Sustainable Land Management and Land Use Monitoring (LA) under MEPA to progressively build its capacities for land management including land consolidation and land valuation. Developing land markets and enhancing land tenure security appear critical in enabling professional farmers accessing: (i) adequately sized agricultural land suitable for sustainable and successful operations, and (ii) finance/credit, needed for their seasonal operations and longer-term investments (including for national and foreign agribusiness investors).
20. **Gender inequalities exist in the country and the participation of women in agricultural activities is lower than that of men, and women are more involved in low-income activities, such as subsistence agriculture (MEPA,**

<sup>20</sup> IDCDP (Irrigation & Drainage Community Development Project) (P055068)

<sup>21</sup> IDCDP Implementation Completion Report, 2010 (Report No: ICR00001136)





2019). Whereas female landowners or co-owners represent 40 percent their parcels on average are on average 60 percent smaller than those owned by the men. Moreover, the percentage of female water users (i.e., landowners who have irrigation service contracts) is just 3.7 percent. These two phenomena combined depict a significant gender gap with respect to access to irrigation, and management and ownership of assets. Next, the contribution of women to agricultural production, which remains invisible and under-recognized, is another significant gender gap in Georgia. A report by the UN (United Nations) Food and Agriculture Organization (FAO) on “Gender, Agriculture and Rural Development” states that 59 percent of self-employed women involved in small family farming remain unpaid<sup>22</sup>. Even though women provide a significant share of the labor, women and men do not share the benefits produced by irrigated agriculture in an equitable manner. The often overlooked contribution of rural women to agriculture is that their work is largely associated with family responsibilities and remains unpaid, and women employed in all sectors of agriculture have less pay than men. On average, work by Georgian women make up 75 percent of men's income (MEPA, 2019). In addition, while the Constitution guarantees equal rights for men and women (including in inheritance of property), women in Georgia (particularly rural women) often represent secondary heirs with fewer rights. This has been attributed to their limited involvement in economic decision-making within the family due to cultural reasons and a lack of awareness about their rights. According to UN WOMEN (United Nations Entity for Gender Equality and the Empowerment of Women), gender equality is insufficiently mainstreamed in Georgia in relevant regional and village level policies, there is a lack of synergy between gender equality policies and the sectoral agricultural and regional development policies. Ministries lack gender-sensitive outreach strategies and often do not collect gender disaggregated data to allow for an analysis of the different needs of women and men. There is also lack of understanding of gender equality and gender mainstreaming among staff of central agencies.

21. **The World Bank has been supporting the rural development and resilience agenda through the ongoing GILMDP project and various ASA (Advisory Services and Analytics) activities, including the recent Georgia Agricultural, Land, and Water Policies to Scale up Sustainable Agri-Food Systems ASA (P175705).** The GILMDP aims to (i) improve delivery of irrigation and drainage services in selected areas; and (ii) develop improved policies, procedures and systems as a basis for a national land management program. The ASA activities focused on the identification of constraints and opportunities to achieve sustainable and efficient agri-food systems through three complementary sector lenses that informed the integrated approach to the proposed project, as outlined above.

#### Relationship to CPF

22. **This Project is fully aligned with the CPF as it is focused on fostering green, resilient, and inclusive agricultural growth in Georgia developing vital sectors of the economy that will both adapt to and mitigate against risks from climate change.** This Project is also designed to balance infrastructure funding (irrigation schemes, reservoirs, and dams) with investment in human capital development as it is recognized as the foremost important asset to enable agricultural communities to prosper despite growing risks to food production, water, and land management.
23. **The project is aligned with the CPF’s overarching goal of growth-oriented productivity, reduced exposure to vulnerability to the risks from climate changes and environmental risks to the agriculture sector in Georgia.** The project addresses policies and institutional performance reforms for enhanced service delivery in irrigation management and land administration. The project has the attributes of a “complex, multisectoral engagement with the potential for greater impact in promoting inclusive growth”, which the CPF intends to tackle in Georgia. More specifically, the project will contribute to:

**Focus Area 1: Enhance Inclusive Growth and Competitiveness / 1.1 Support agricultural modernization and access to markets**, which explicitly aims to (a) improve access to irrigation services, develop the land registration system for more secure land tenure, and (b) provide a support to high-value irrigated agriculture, horticulture production, and to accelerate adoption of “climate-smart” agricultural practices.

<sup>22</sup> See <https://www.fao.org/3/CA0577EN/ca0577en.pdf>



**Focus Area 3: Build Resilience / Objective 3.3: Enhance management of natural resources and climate risks.**

The Project will address vulnerabilities and build resilience in the rural economy, particularly in the Eastern part of the country that is exposed to droughts. One of the key objectives will be to reduce the inadequacy between the water resource and the irrigation requirements and to mainstream equitable and efficient water scarcity management processes, focusing on reducing agricultural households' exposure to climate risks as well as enhancing efficient and reliable irrigation service delivery by the leading service provider of irrigation and drainage services in Georgia.

24. **The project directly aligns with the forthcoming World Bank Group Corporate Climate Change Action Plan strategy for 2021-2025, which will present a paradigm shift of the World Bank towards a Green Inclusive Resilient Development (GRID) approach, which is an interlinked approach to responding to the triple crises of poverty, climate change, and inequality.** It aims to enhance the resilience of agriculture in drought-prone region of Georgia by supporting an integrated approach of enhancing irrigation service delivery from infrastructure, institutions, and incentives by bundling interventions in water, land, and agriculture at the national policy scale as well as at the farm-scale. These interventions are aligned with improved land use management and promoting higher value climate smart agricultural practices in target areas where irrigation schemes will be rehabilitated ensuring an integrated approach focusing on greener, more resilient, and inclusive development of the agriculture sector in Georgia.

### C. Proposed Development Objective(s)

25. **The proposed Project development Objective** is to: (1) improve resilient agricultural production in selected project areas; and (2) strengthen national irrigation and land management capacity.

#### Key Results (From PCN)

26. **The success of the project** will be monitored against achievement of the following key results indicators:
1. Increase in crop yield or production of select crops (Outcome 1, OD1)
  2. Number of farmers (of which female) adopting at least one CSA practice (Outcome 1, OD2)
  3. Area provided with new/improved irrigation services; (CRI, Outcome 1, OD3)
  4. Georgian Amelioration reform and improvement plan<sup>23</sup> developed and under implementation (Outcome 2, OD1)
  5. Complete National Land Balance Inventory for all agricultural land in Georgia (percentage of total potential area) (Outcome 3, OD1).
27. **The first key result** will measure changes in value of production reported by targeted smallholder farmers funded by the project's grant facility and advisory support (For selected crops, measured and reported through beneficiary surveys).
28. **The second key result** will measure the number of agricultural stakeholders who have put in practice at least one CSA practice (in a typology to be established)
29. **The third key result** will capture irrigation systems benefiting from structural improvements (works, design) resulting in improved conditions of water delivery as well as proof that an improved management structure actually operates.
30. **The fourth key result** will be measured by the preparation and signing between GA and its governance body of GA's yearly performance-based action plan.
31. **The fifth key result** will be measured by the complete National Land Balance Inventory for all agricultural land in Georgia (percentage of total potential area).

### D. Concept Description

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<sup>23</sup> KPI on improved performance to be defined during preparation



32. **The proposed project has a strong focus on climate resilience and rural livelihoods through a holistic and integrated approach, building on lessons learned from the ongoing GILMDP.** The biggest concern facing the agriculture sector is increased weather volatility, rendering farm households more vulnerable to shocks associated with climate change. Besides, an underperforming irrigation sector prevents reliable water delivery. A second important concern is a lack of integration of farmers into commercial value chains. Learning from GILMDP (that did not support agriculture production nor value addition), the project will operate at two levels. First a package of integrated interventions in and around selected irrigation areas, where the infrastructures should be modernized, in which farm commercialization, value addition, and environmental and climate sustainability would complement enhanced irrigation and land management interventions centered respectively on (a) continuation and improvement of the WUO pilot using participatory multistakeholder methods; and (b) adoption and implementation of sustainable land and water management policy and strategy at national level and effective implementation in the selected areas. The package would increase farm profitability and ultimately incentivize farmers to pay for improved water services. Secondly, the project would target structural institutional improvements to the irrigation and land sectors. As far as irrigation is concerned, this essentially covers (a) improving the capacity of key irrigation stakeholders, with a strong focus on the national irrigation agency; (b) supporting a tariff reform; (c) developing tools and knowledge to implement key functions (investment planning, drought management, etc.); and (d) determining where and under which conditions the WUO model would be adapted and better than delivery by GA (this would be done in connection with the expanded pilot in selected schemes). For further strengthening land market development the project moves to the next level of building its foundations by developing various essential national-level land sector policies and strategies and by piloting in selected areas their implementation. The pilots could include such activities as Sustainable Land and Water Management (SLWM) practices, mass valuation, land consolidation and banking, leveraging the successful scale-up of systematic land registration activities under GILMDP. Transparent and well-functioning land markets will contribute to improve farmers' livelihoods, provide security to their land assets, and incentivize investment that will promote farm commercialization.

33. **The project would be structured around four components:**

- Component 1 “Resilient irrigated agriculture” comprising (a) Subcomponent 1.1: Modernization of selected irrigation schemes, and (b) subcomponent 1.2: Promotion of CSA practices and value chain development, (c) subcomponent 1.3: Improvement of the irrigation sector management, and Subcomponent 1.4: Strengthening of local irrigation institutions and improving individual farmers’ local water management
- Component 2 “Improvement of Land Management Practices” comprising: Sub-Component 2.1 Strengthening of Land Management, and Sub-Component 2.2 Sustainable Landscape Management Practices.
- Component 3 “Enhancement of land administration services delivery”
- Component 4 “Project management”.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	No
Summary of Screening of Environmental and Social Risks and Impacts	



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