



RESTRUCTURING PAPER
ON A
PROPOSED PROJECT RESTRUCTURING
OF THE
IRRIGATION AND LAND MARKET DEVELOPMENT PROJECT
APPROVED ON MAY 23, 2014
TO
GEORGIA

WATER
EUROPE AND CENTRAL ASIA REGION

| | |
|---------------------------|---|
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ABBREVIATIONS AND ACRONYMS

| | |
|--------|--|
| AF | Additional Financing |
| FA | Financing Agreement |
| GA | Georgian Amelioration Ltd |
| GILMDP | Georgia Irrigation and Land Market Development Project |
| KS | Kvemo Samgori |
| LA | Loan Agreement |
| MEPA | Ministry of Environment Protection and Agriculture |
| MOF | Ministry of Finance |
| MOM | Management, operation and maintenance |
| MOU | Memorandum of Understanding |
| MTR | Mid-term review |
| NAPR | National Agency of Public Registry |
| NLSR | National Systematic Land Registration |
| PAD | Project Appraisal Document |
| POM | Project Operations Manual |
| PDO | Project Development Objective |
| RF | Results Framework |
| RVP | Regional Vice President |
| SLR | Systematic Land Registration |
| TK | Tbisi Kumisi |
| WUO | Water User Organization |
| WUOSU | Water User Organization Support Unit |
| ZR | Zeda Ru |



BASIC DATA

Product Information

| | |
|--|--|
| Project ID P133828 | Financing Instrument Investment Project Financing |
| Original EA Category Partial Assessment (B) | Current EA Category Partial Assessment (B) |
| Approval Date 23-May-2014 | Current Closing Date 30-Sep-2022 |

Organizations

| | |
|---|--------------------|
| Borrower Public Debt Management Department, Ministry of Finance of Georgia | Responsible Agency |
|---|--------------------|

Project Development Objective (PDO)

Original PDO

The Project Development Objective is to (i) improve delivery of irrigation and drainage services in selected areas and (ii) develop improved policies and procedures as a basis for a national program of land registration.

Current PDO

The Project Development Objectives are to: (a) improve delivery of the irrigation and drainage services in selected areas; and (b) develop improved policies, procedures, and systems as a basis for a national land management program.

Summary Status of Financing (US\$, Millions)

| Ln/Cr/Tf | Approval | Signing | Effectiveness | Closing | Net Commitment | Disbursed | Undisbursed |
|------------|-------------|-------------|---------------|-------------|----------------|-----------|-------------|
| IBRD-90430 | 20-Feb-2020 | 30-Mar-2020 | 21-May-2020 | 30-Sep-2022 | 20.40 | 8.88 | 11.47 |
| IDA-54560 | 23-May-2014 | 21-Nov-2014 | 13-Mar-2015 | 30-Sep-2022 | 50.00 | 41.68 | 3.34 |

Policy Waiver(s)

Does this restructuring trigger the need for any policy waiver(s)?

No



I. PROJECT STATUS AND RATIONALE FOR RESTRUCTURING

A. Project Status

1. This restructuring paper seeks the approval to: (i) extend the Credit № 5456-GE (Credit) and the Loan № 9043-GE (Loan) closing dates for twelve (12) months from September 30, 2022 to September 30, 2023, (ii) revise the Project results framework (RF), and (iii) adjust the institutional arrangements. If approved, the proposed restructuring will be the Project's third restructuring for the credit and first one for the loan. It would result in a cumulative extension of 50 months from the original closing date of July 31, 2019 for the credit, and extension by 12 months for the loan from the original closing date of September 30, 2022 to September 30, 2023.
2. The "Irrigation and Land Market Development Project" (Project) consists of activities financed by both a Credit from the International Development Association (IDA) and a Loan from the International Bank for Reconstruction and Development (IBRD). Description of Project activities can be found in the Project Appraisal Document (PAD) and corresponding Financing Agreement (FA) of the Credit, and Project Paper and corresponding Loan Agreement (LA) for the activities financed by the Additional Financing (AF) Loan.
3. The financing for Credit (US\$50 million equivalent) was approved by the Board on May 23, 2014 and the FA became effective on March 13, 2015. It comprises three components: (i) Component 1: Irrigation and Drainage Improvement; (ii) Component 2: Land Market Development (LMDC); and (iii) Component 3: Project Management. The first restructuring was processed in June 2018 following the recommendations of the mid-term review to extend the FA closing date by two years from July 31, 2019 to July 31, 2021 and to revise the RF.
4. On February 20, 2020, the Board approved an AF Loan (US\$20.4 million equivalent), and the LA became effective on May 21, 2020. The AF funds intended to: (i) finance new activities under Components 1 and 2, (ii) close a financial gap under Component 1, and (iii) scale up activities of systematic land registration (SLR) under Component 2. The restructuring associated with the AF also modified the Project Development Objective (PDO) and RF to capture the effects of the AF-supported activities, reallocated funds between the components, and extended the credit closing date from July 31, 2021 to September 30, 2022.
5. The PDO and Implementation Progress (IP) ratings are Moderately Satisfactory. The Project has disbursed a total of US\$49.53 million (77.23 percent) to date. The PDO is achievable, and the Borrower's and the Implementing Agency's performance are acceptable.

Component 1

6. The rehabilitation and modernization of the irrigation schemes occurs in two stages. For each of the three irrigation schemes targeted by the project (Kvemo Samgori [KS], Zeda Ru [ZR], Tbisi Kumisi [TK]), stage 1 corresponds to the rehabilitation of the main canal conveying water from the headworks to the irrigated areas. Stage 2 corresponds to the rehabilitation and modernization of secondary, tertiary network (canals or pipelines) and hydraulic structures within each irrigation scheme. Stage 1 was completed in 2018 for the three schemes. Prior to this restructuring, the targeted areas to modernize were 9,200 Ha in the KS irrigation scheme, 2,300 Ha



in ZR, and 3,000 Ha in TK. The improved conveyance in the main canal in KS scheme allowed a private investor to develop a farm outside the command area without affecting the supply of farmers inside the command area. Stage 2 works are underway and cover only KS and ZR schemes. The Ministry of Environmental Protection and Agriculture (MEPA) faced a US\$12 million budget gap that required excluding the TK scheme from stage 2. Currently, two-thirds of the works at the upstream part of the KS scheme have been finalized, and the new design for modernization of the ZR scheme has been finalized. In May 2022, MEPA decided to reduce the area to be fully rehabilitated at KS scheme by 2,750 ha due to a possible risk of insufficient irrigation supply and recognizing the implementation of a technical solution to address this risk could take over 25 months (design and works), which is beyond the 12-month extension requested by MEPA and National Agency of Public Registry (NAPR). At the time of this decision, the entire undisbursed amount was committed. This reduction in area of rehabilitation at KS scheme allowed for the reallocation of savings; US\$3.0 million was reallocated to finance the full lining of the irrigation canals at the ZR scheme, and US\$5.0 million was reallocated to activities listed in Table 1 below.

7. The prefeasibility study “Readiness of Reservoir Rehabilitation and Construction Program” will evaluate and rank 25 existing or new dam projects, and inform the selection process of the dams to be studied further at feasibility level. The study will be completed by the end of September 2022. MEPA plans to use part of the available financial resources to carry out geotechnical surveys for the selected shortlisted dams. While progress has been made on adopting the legal framework for the establishment of Water User Organizations (WUO), the actual establishment of WUOs will require more time than originally envisaged, due, most notably, to the COVID-19 pandemic. The pandemic has significantly reduced the interactions with farmers for one year and delayed the roll-out of the awareness campaign, which is critical to establishing WUOs. Also, the slower than anticipated progress of the rehabilitation works has hindered some farmers’ commitment to form WUOs. Nonetheless, at present, MEPA is actively engaged in the WUO process as evidenced by (a) the establishment and operationalization of WUO Support Units within Georgian Amelioration (GA), and (b) formation of some Farmers Initiative Groups (FIGs). Also, a formalized induction process initiated by MEPA in November 2021, is on schedule with baseline surveys (1st stage) completed and an NGO recruited for awareness building and training.



Component 2

8. The activities of Systematic Land Registration (SLR) in the areas in and around irrigation schemes are on track to be completed by September 30, 2022. However, the proposed project extension would allow for another 6-8 months of support to the National Systematic Land Registration (NSLR) program to further scale up SLR activities.
9. The IT System upgrade is progressing well: (i) the Electronic Minutes Application is already developed and implemented within the Project, and under the NSLR, (ii) the IT equipment procurement was completed in June 2022 and deployment is ongoing, and (iii) the business analysis and system architecture for the Integrated Registration and Cadastre System (IRCS) is completed and currently is going through the internal approval process within NAPR. The implementation of the IRCS, including staff training, would run until the Project closing date using Project funds, and maintenance and potential enhancements will be financed from the NAPR budget. The proposed closing date extension will also allow for the implementation of a pilot of voluntary land consolidation mechanisms as a part of the SLR process under NSLR. The pilot is a joint activity by the NAPR and the Food and Agriculture Organization (FAO) and the signing of the agreement is dependent of the extension of the Project. Such pilot would start immediately after signing.
10. An extension of the Project closing date will contribute considerably to the achievement of the PDO and generate additional results beyond the Project's RF and especially under Component 2 from the scale up in land registration.

B. Rationale for Restructuring

11. The Ministry of Finance (MOF), MEPA, and NAPR, in their letters dated October 22, 2021, November 2, 2021, and December 23, 2021 respectively formally requested: (i) the extension of the IBRD loan closing date from September 30, 2022 to September 30, 2023, and (ii) the revision of the RF. This requires restructuring the Project, which includes both Loan and Credit. Subsequently, MOF and MEPA sent letters on August 3, 2022 and July 21, 2022 respectively, to formally request the extension of the Credit closing date by 12 months. The restructuring would result in (a) removing the stage 2 works at the TK scheme from the Project scope (as noted above), and thus reducing the Component 1 scope for irrigation infrastructure rehabilitation by 3,000 Ha; (b) re-allocating funds to upgrade the works in the ongoing stage 2 works at ZR scheme (as noted above), (c) removing from the KS scheme a total of 2,750 Ha in two areas facing a risk of insufficient irrigation supply; (d) scaling up of the land registration activities, delegating the technical oversight of SLR activities under Component 2 to the Systematic Land Registration Division (SLRD) within NAPR; and (e) modifying some existing and introducing new results indicators in both Components 1 and 2, adjusting baseline and target values of several indicators, and clarifying of some indicators.
12. **Component 1:** The rationale for MEPA's request to restructure the Project and adjust the results framework include:
 - **A US\$12 million financing gap** due to under-estimation of the volume and cost of on-farm works¹ for two out of three irrigation schemes (KS and TK) calculated in August 2019 at the preliminary design stage. Consequently, in October 2021, the government decided to stop the procurement process for the stage 2

¹ On-farm works are for secondary and tertiary canals, and primary/main canals that were rehabilitated in 2018.



works at the TK irrigation scheme, which was less advanced than the other two irrigation schemes. The total estimated cost for stage 2 of the TK scheme was approximately US\$12 million, the amount of the financing gap. This resulted in cancelling stage 2 works for TK, which corresponds to an area of 3,000 ha. The adjustment will be reflected in the modified results framework.

- **Anticipated delays in implementation of works beyond the current Project closing date of September 30, 2022.** These delays are due to two reasons: (1) COVID-19 pandemic and related restrictions; in autumn 2020, imposing border crossing restrictions prevented the workforce from Azerbaijan (where the contractor was from) to come to Georgia. This was exacerbated by the difficulty in sourcing Polyethylene pipes, the main material used for the works, due to a worldwide supply shortage. The summer season of 2021 lasted longer than anticipated thus shortening the construction period. (2) additional time was needed to redesign the ZR scheme and shift to an open canal design due to rising the sediment load in the Liakhvi river starting in Spring 2021 as a result of increased activity of quarries located upstream.
- **Delays to conduct the WUO establishment process.** Despite the Government's passing of the legal framework for WUO establishment in 2019 and an active information campaign to farmers within rehabilitated irrigation areas targeted by the Project (since November 2018 and still ongoing), the Covid-19 pandemic has significantly reduced interactions with farmers for almost one year. This has severely delayed the awareness raising campaign and the WUO establishment process. More time to conduct intensive interactions with farmers would increase the effectiveness of this process and help increase the likelihood of achieving the Project objectives.
- **Risk to the water supply to some areas included in the KS irrigation scheme.** In May 2022, MEPA calculated that increased water withdrawals from the main canal by commercial farms located outside the command area of the KS scheme create a risk to reliability of water supply to the Giorgitsminda (1,500 ha) and Tora Hill (1,250 ha) areas located at the tail end of the main canal. As a mitigation measure, MEPA plans to disconnect Giorgitsminda from the main canal and create an additional intake on the Lori river. Subject to confirmation of water availability, this technical option requires a redesign, and additional civil works. This cannot be completed within the proposed closing date of September 30, 2023 as it would take until the end of 2024 to complete as per the Project Implementation Unit (PIU)'s estimate. This will lead to a reduction of the area rehabilitated by 2,750 ha and a savings of US\$8 million in Component 1 and sub-component 3.1. As proposed by MEPA, part of the savings will be reallocated to activities and tasks (see Table 1) that will improve the Project's implementation to ensure the timely achievement of Project targets.
- **The need to modify, add or drop Project indicators.** (see Table 2)

Component 2: NAPR has requested changes to the implementation arrangements for Component 2 and adjustment of the Project results framework:

- **The change in implementing arrangements includes** delegating technical oversight of the further scale up of the SLR activities to the SLRD, while the LMDC PIU will continue overall management and monitoring of the activities. The SLRD has excellent technical capacity; the head of the SLRD is the former LMDC project coordinator and several former LMDC staff are also employed in mid-level managerial positions. This change was done to maintain the high standards put in place by the LMDC, that developed and implemented the legislative framework and procedures for its implementation for the current systematic land registration set up in Georgia. The further scale up of the SLR became possible thanks to the introduction of the fully automated data collection and processing tool "Electronic Minutes" developed under the Project and do it in-house. This increased the efficiency in the overall management of the land registration process and



generated substantial financial savings under Component 2. The savings will be used to finance training, equipment, and work of the survey teams and thus, will enable surveying an additional 270,000 parcels. This change in the implementation arrangements does not entail amendment of the LA, but will be reflected in the Project Operations Manual (POM).

- **The revision of the results indicators** will: (i) introduce two new indicators to: (a) appropriately monitor project implementation progress for additional parcels surveyed, and (b) track different stages of the ICT system upgrade, (ii) revise the methodology for the IT System Upgrade related indicators to incorporate different deliverables and phases of completion, and (iii) adjust the baseline value for the indicator “Land parcels with use or ownership rights recorded in pilot areas” to factor in already registered parcels in the area.

II. DESCRIPTION OF PROPOSED CHANGES

A. Extension of Project Closing Date

13. The Project closing dates for the Credit and Loan would be extended by 12 months, from September 30, 2022 to September 30, 2023. MEPA and NAPR have adjusted the implementation schedule and, as noted in Table 1 below, identified a subset of Project activities (already included in the FA and LA; schedule 2) that would strengthen implementation in order to achieve the Project targets in a timely manner. Financing for the activities that relate to Component 1 (MEPA) will be supplemented with an additional \$ 8M from savings under the Project.

14. NAPR and MPA have no outstanding safeguards issues nor overdue audit reports.

Table 1: Activities that will strengthen implementation

| Activity | Project Component |
|---|-------------------|
| Full lining of Zeda Ru irrigation scheme | Component 1 |
| Silt clearing in body of water upstream of KS headworks | Component 1 |
| Water Balance Study for Iori river and Sioni Reservoir | Component 1 |
| Geotechnical investigations for selected dams | Component 1 |
| Preparation of Sustainable Land Management Strategy | Component 1 |
| Preparation of National Land Consolidation Strategy | Component 1 |
| Equipment for the National Land Use and Management Monitoring Agency and National Forestry Agency | Component 1 |
| Public awareness activity for the National Land Use and Management Monitoring Agency | Component 1 |
| NGO services for community mobilization for WUOs | Component 1 |
| Land Consolidation Feasibility Study | Component 2 |
| SLR activities under NSLRP | Component 2 |



B. Change in Implementation Arrangements

15. Whereas the PIU will continue overall management and monitoring of the activities under Component 2, technical oversight of the scale-up of the SLR will be delegated to the National SLR Rollout Coordination Team within NAPR. This will not result in any amendment of the LA or FA.

C. Revision in Disbursement Estimates and Implementation Schedule

16. Following the 12-month extension of the closing date (for both the Credit and Loan) to September 30, 2023, the disbursement estimates, and implementation schedule will be adjusted accordingly. It is expected that the Project will be fully disbursed by the new closing date.

D. Revisions in Results Framework

17. The revised results framework incorporates revisions requested by NAPR and MEPA. The Bank conducted a series of technical discussions with the PIUs to review the proposed changes, which include adjusting and adding new PDO-level Indicators and Intermediate Results Indicators, dropping indicators, and clarifying baseline and target values as well as definitions. For all indicators: (i) the end-target date will be revised to reflect the proposed new closing date of the Project. The methodology for data collection will be updated for a number of PDO and IRI indicators to (i) clarify some technical parameters and scope of a number of indicators, (ii) make definitions more precise and better reflect Project-attributable results, and (iii) align the metrics for indicators and their sub-indicators. These changes are described in the Table 2 below.



Table 2 – Summary of key changes to the Project results indicators*

**While this table presents and explains the changes, the specific details are in the new results framework.*

| PDO indicators | Indicator | Changes | Rationale |
|---|---|---|--|
| <p>PDO 1: To improve delivery of irrigation and drainage services in selected areas</p> | <p>Absolute volume of irrigation water supplied to Project-rehabilitated schemes (million m3 to Project schemes)</p> | <p>Marked for deletion and will be replaced by a new indicator: (i) “Irrigated area per unit of water supplied for Kwemo Samgori (KS) irrigation scheme (m2/m3, Custom)” and</p> <p>Similarly replaced by a new indicator (ii) “Irrigated area per unit of water supplied for Zeda Ru (ZR) irrigation scheme (m2/m3, Custom)”</p> | <p>These 2 new indicators (in lieu of “<i>Absolute volume of irrigation water supplied to Project-rehabilitated schemes (million m3)</i>” marked for deletion) actually replace it. They allow better monitoring of PDO achievement by measuring an improvement of irrigation services delivery through the increase in irrigated area per unit of water supplied.</p> <p>Two indicators (for respectively Kwemo Samgori and Zeda Ru) are needed because the indicator is based on technical parameters that are specific to each scheme (e.g. design, size, etc). The measurements of the indicator in its previous formulation (absolute volume of irrigation water supplied to Project-rehabilitated schemes) have shown that the volume of water supplied has not systematically increased year after year because the volume is also influenced by external factors that are beyond the Project control such as droughts that limit the supply of water, and rainy seasons, when farmers decrease their demand for irrigation. Thus, given the attribution concerns of the original indicator, it has been replaced by the proposed indicators to better measure the PDO.</p> |
| | <p>Sub-Indicator: Volume of irrigation water effectively supplied to the WUOs in bulk within the Project rehabilitated schemes (million m3) (Text, Custom Supplement)</p> | <p>Marked for deletion</p> | <p>-Due to significant delays in WUO establishment, the project will begin WUO awareness raising and establishment activities in the project extension period, however, WUOs will likely be functional and active only after the project closes. Thus, bulk water supply will begin only once WUOs are established and operational, likely after the project closes. Therefore, this indicator is recommended to be dropped</p> |
| | <p>Area provided with irrigation and drainage services (ha) (Hectare(Ha), Corporate)</p> | <p>Revised definition. End Target becomes 17,400 Ha</p> | <p>The description of the indicator has been adjusted to match the World Bank definition for this Corporate Results Indicator (CRI), i.e. the area where the irrigation delivery conditions have been improved or where no irrigation took</p> |



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| | | | place before, regardless of the existence of a contract and including some private irrigation schemes that could develop as a result as the improvements, as explained below. The target value includes the entirety of Kvemo-Samgori (12,100 Ha), Zeda Ru (2,300 Ha) schemes and the area of the Tbisi-Kumisi scheme that is dominated by the already rehabilitated section of the main canal (3,000 ha), which improves the supply to the farms even without the works on the secondary and tertiary canals, which was cancelled. The above end target for KS includes 2,900 ha of the privately developed Udabno private irrigation company plantation, which pumps its water in the main canal of Kvemo Samgori due to the improved design and associated conveyance capacity of the infrastructure. Altogether, this amounts to 17,400 ha. The end target has been also revised accordingly. |
| | Sub-Indicator: Area provided with irrigation and drainage services - Improved (ha) (Hectare(Ha), Corporate Breakdown) | Revised definition (similar to parent indicator). End Target becomes 14,500 Ha | This indicator is a sub-indicator to the main CRI indicator described above. It captures all the irrigable land where irrigation has been improved and excludes the new area under irrigation (private farm). The end target has been also revised accordingly. |
| | Sub-Indicator: Area provided with irrigation and drainage services – New (Hectare(Ha)), Corporate Breakdown) | New End Target is 2,900 Ha | This indicator is a sub-indicator to the main CRI indicator described above. It captures all new irrigable land. The end target corresponds to the newly created area, which is the Udabno private irrigation scheme. |
| | Area supplied with optimal irrigation delivery conditions (Hectares, Custom) | New | This new indicator has been introduced to capture the degree of improvement of irrigation delivery mentioned in the PDO. It measures the area provided with an irrigation service that allows optimal distribution to farmers’ plots. Optimal implies the following: (a) the scheduling (when farmers receive water and for how long) is more predictable and easier to set (including on demand for KS); (b) the flow per hectare for each plot corresponds to set standards, and (c) farmers have pressurized water (in KS), which increases the range of |



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| | | | possible crops. Optimal conditions result from a full rehabilitation, which includes but is not limited to the main canal (stage 1, already completed and captured by indicator “Area provided with irrigation and drainage services”) but also includes improvement of secondary and tertiary canals / pipelines and the installation of hydrants in case of pressurized irrigation (stage 2). Since Stage 2 works for TK (3,000 Ha) and a portion of KS (2,750 Ha) were removed from the scope of the Project, the final target for the indicator is the reduced area in the KS as well as the ZR scheme area, which will be fully rehabilitated. In total, it amounts to 8,850 Ha. This area increases as the works progress and is tracked accordingly. |
| PDO 2:To develop improved policies, procedures and systems as a basis for national land management program | Preparation and implementation of policies, procedures for systematic land registration and NAPR IT system upgrade (Text, Custom) | Revised End Target Date | Only the date of indicator’s end target achievement was revised to the adjusted Project Closing date. |
| Intermediate Results Indicators | Indicator | Changes | Rationale |
| Component 1: Irrigation and Drainage Improvement | Water users provided with new/improved irrigation and drainage services (number) (Number, Custom) | Revised to “Land owners with access to improved irrigation services” | The indicator has been revised to reflect the fact that all owners of land in the command area will benefit from an improved irrigation service as a result of the rehabilitation of secondary and tertiary irrigation network. Previously the indicator accounted only for water users that had a contract with GA on a given year but excluded other water users, who may not have a contract for that same year but for other years. The target value has been revised accordingly (6,400 to 7,000) |
| | Sub-Indicator: Water users provided with irrigation and drainage services – female (Number, Custom) | Revised to: “Land owners with access to improved irrigation services – female (Number, Custom)” | This indicator and its target value have been adjusted to reflect modification of the parent indicator above. The female land owners are counted within all three areas where irrigation infrastructures were rehabilitated. The target |



| | | | |
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| | | | value has been revised accordingly (2,400 to 1,300) |
| | Service area locally managed by water user organizations (Hectare(Ha), Custom) | Marked for Deletion | The indicator is removed as there is a significant risk that WUOs will not be established during the remaining period of the Project in the schemes under rehabilitation despite the step forward made by the Government in passing a legal framework for WUO establishment in 2019. Due to the ongoing Covid-19 pandemic, it has not been possible to interact with farmers for almost one year, and this has severely delayed steps to build awareness and start the WUO establishment process. |
| | Complaints received during the implementation of Component 1 activities and resolved (Percentage, Custom) | Marked for Deletion | The indicator is dropped. The indicator does not yield much information as no grievances have been recorded since its introduction at the time of approval of AF to GILDMP. The RF has another intermediate results indicator under Component 2 that will address Grievance Redress Mechanism (GRM). |
| | Readiness of Reservoir Rehabilitation & Construction program (Text, Custom) | The baseline (No) and target (Yes) remain unchanged. The only change is on the initial number of dams to be studied. | The baseline (No) and target (Yes) remain unchanged. The only change is that the number of preselected reservoirs is 25 and not 44, as was envisaged at approval of the Additional Financing when this indicator was introduced. |
| | Total number of beneficiaries, that benefit from new/improved irrigation services (Number, Custom) | Marked for Deletion | This indicator is proposed to be dropped as it is calculated as a multiplier of the value for the indicator “Landowners with access to new and improved irrigation services” and does not bring any new information allowing better monitoring of the PDO achievements. |
| | Water User Organisation Support Units established and operational (Number, Custom) | New | This new indicator measures the progress in and operationalizing the institutional infrastructure within the Ministry of Environment and Agriculture Protection (MEPA) necessary for supporting the creation of WUOs in GILMDP Project areas. The establishment of WUOs contributes to the provision of better irrigation services to Project beneficiaries and thus to the achievement of the PDO. The plan is to establish 3 WUO support units at a central level and at a regional level, where the schemes are. |



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| | Farmer Initiative Groups (FIGs) formed (Number, Custom) | New | FIGs are a necessary precondition for supporting the creation of WUOs in GILMDP Project areas. The establishment of WUOs would contribute to the provision of better irrigation services to Project beneficiaries and thus to the achievement of the PDO. "Formed" means that FIGs are established on a voluntary basis, based on an informal agreement among local farmers. |
| Component 2: Land Market Development | Land parcels with use or ownership rights recorded in pilot areas (Number, Custom) | Revised Baseline (41,600 to 50,600) | The PIU proposes to increase the Baseline value by 9,000 to account for sporadically registered plots in the Project area in the period between Additional Financing preparation and effective start of field works |
| | IT System Design Completion (Yes/No, Custom) | Revised Unit of Measure (Percentage, Custom) | The indicator measurement methodology and unit of measure have been modified to better monitor the achievement of the PDO. |
| | Land parcels surveyed in selected areas during nationwide systematic land registration program (Number, Custom) | New | Introduction of the electronic minutes application and use of in-house approach, increased efficiency in the overall management of the SLR process and generated substantial financial savings under the Component 2, which will be used to co-finance NSLR activities |
| | ICT Upgrade and Software Development (Percentage) | New | This new indicator will allow to follow up completion process of different stages of the ICT System upgrade of NAPR, thus contributing to better monitoring of achievement of the PDO as a whole. |

III. SUMMARY OF CHANGES

| | Changed | Not Changed |
|----------------------------|---------|-------------|
| Results Framework | ✓ | |
| Loan Closing Date(s) | ✓ | |
| Disbursement Estimates | ✓ | |
| Institutional Arrangements | ✓ | |
| Implementation Schedule | ✓ | |



| | | |
|--|--|---|
| Implementing Agency | | ✓ |
| DDO Status | | ✓ |
| Project's Development Objectives | | ✓ |
| PBCs | | ✓ |
| Components and Cost | | ✓ |
| Cancellations Proposed | | ✓ |
| Reallocation between Disbursement Categories | | ✓ |
| Disbursements Arrangements | | ✓ |
| Overall Risk Rating | | ✓ |
| Safeguard Policies Triggered | | ✓ |
| EA category | | ✓ |
| Legal Covenants | | ✓ |
| Financial Management | | ✓ |
| Procurement | | ✓ |
| Other Change(s) | | ✓ |
| Economic and Financial Analysis | | ✓ |
| Technical Analysis | | ✓ |
| Social Analysis | | ✓ |
| Environmental Analysis | | ✓ |

IV. DETAILED CHANGE(S)

LOAN CLOSING DATE(S)

| Ln/Cr/Tf | Status | Original Closing | Revised Closing(s) | Proposed Closing | Proposed Deadline for Withdrawal Applications |
|------------|-----------|------------------|--------------------------|------------------|---|
| IBRD-90430 | Effective | 30-Sep-2022 | | 30-Sep-2023 | 30-Jan-2024 |
| IDA-54560 | Effective | 31-Jul-2019 | 31-Jul-2021, 30-Sep-2022 | 30-Sep-2023 | 30-Jan-2024 |



DISBURSEMENT ESTIMATES

Change in Disbursement Estimates

Yes

| Year | Current | Proposed |
|-------------|----------------|-----------------|
| 2014 | 0.00 | 0.00 |
| 2015 | 1,500,000.00 | 1,500,000.00 |
| 2016 | 3,978,781.01 | 3,978,781.01 |
| 2017 | 6,981,699.66 | 6,981,699.66 |
| 2018 | 6,812,396.14 | 6,812,396.14 |
| 2019 | 4,040,690.67 | 4,040,690.67 |
| 2020 | 2,400,000.00 | 2,207,019.21 |
| 2021 | 27,800,432.52 | 13,084,850.31 |
| 2022 | 11,600,000.00 | 8,913,539.65 |
| 2023 | 5,316,000.00 | 22,881,023.35 |



Results framework

COUNTRY: Georgia

Irrigation and Land Market Development Project

Project Development Objectives(s)

The Project Development Objectives are to: (a) improve delivery of the irrigation and drainage services in selected areas; and (b) develop improved policies, procedures, and systems as a basis for a national land management program.

Project Development Objective Indicators by Objectives/ Outcomes

| Indicator Name | PBC | Baseline | Intermediate Targets | | | | | End Target |
|---|--|--------------|----------------------|--------------|---------------|---|---|---------------|
| | | | 1 | 2 | 3 | 4 | 5 | |
| To improve delivery of irrigation and drainage services in selected areas | | | | | | | | |
| Absolute volume of irrigation water supplied to Project-rehabilitated schemes (million m3 to Project schemes) (Percentage) | | 0.00 | | | | | | 65.00 |
| Action: This indicator has been Marked for Deletion | <p>Rationale: <i>This will be replaced by 2 new indicators that will allow- better monitoring of PDO achievement by measuring an improvement of irrigation services delivery through the increase in irrigated area per unit of water supplied.</i></p> <p><i>It is split into two indicators (for respectively Kvemo Samgori and Zeda Ru) because the indicator is based on technical parameter that is specific to each scheme (e.g. design, size, etc). The measurements of the indicator in its previous formulation (absolute volume of irrigation water supplied to Project-rehabilitated schemes) have shown that the volume of water supplied has not systematically increased year after year because the volume is also influenced by external factors that are beyond the Project control such as droughts that limit the supply of water, and rainy seasons, when farmers decrease their demand for irrigation. Thus, given the attribution concerns of the original indicator, it has been replaced by the proposed indicators to better measure the PDO.</i></p> | | | | | | | |
| Volume of irrigation water effectively | | 0 million m3 | 0 million m3 | 0 million m3 | 25 million m3 | | | 66 million m3 |



| Indicator Name | PBC | Baseline | Intermediate Targets | | | | | End Target |
|---|---|----------|----------------------|---|---|---|---|------------|
| | | | 1 | 2 | 3 | 4 | 5 | |
| supplied to the WUOs in bulk within the Project rehabilitated schemes (million m3) (Text) | | | | | | | | |
| Action: This indicator has been Marked for Deletion | <p>Rationale: <i>Due to significant delays in WUO establishment, the project will be commencing WUO awareness raising and establishment activities in the project extension period, however, WUOs will likely be functional and active only after the project closes. Thus, bulk water supply will commence only once WUOs are established and operational, likely after the project closes. Therefore, this indicator is recommended to be dropped.</i></p> | | | | | | | |
| Area provided with irrigation and drainage services (ha) (CRI, Hectare(Ha)) | 0.00 | 7,231.00 | 8,000.00 | | | | | 17,400.00 |
| Action: This indicator has been Revised | <p>Rationale: <i>The description of the indicator has been adjusted to match the World Bank definition for this Corporate Results Indicator (CRI), i.e. the area where the irrigation delivery conditions have been improved or where no irrigation took place before, regardless of the existence of a contract and including some private irrigation schemes that could develop as a result as the improvements, as explained below. The target value includes the entirety of Kverno-Samgori (12,100 Ha), Zeda Ru (2,300 Ha) schemes and the area of the Tbisu-Kumisi scheme that is dominated by the already rehabilitated section of the main canal (3,000 ha), which improves the supply to the farms even without the works on the secondary and tertiary canals, which was cancelled. The above end target for KS includes 2,900 ha of the privately developed Udabno private irrigation company plantation, which pumps its water in the main canal of Kverno Samgori due to the improved design and associated conveyance capacity of the infrastructure. Altogether, this amounts to 17,400 ha (KS (9,200 Ha) + Private farm at KS (2,900 Ha) + ZR (2,300 Ha) + TK (3,000 Ha). The end target has been also revised accordingly.</i></p> | | | | | | | |



| Indicator Name | PBC | Baseline | Intermediate Targets | | | | | End Target |
|--|---|----------|----------------------|---|---|---|---|------------|
| | | | 1 | 2 | 3 | 4 | 5 | |
| Area provided with irrigation and drainage services - Improved (ha) (CRI, Hectare(Ha)) | | 0.00 | 4,713.00 | | | | | 14,500.00 |
| Action: This indicator has been Revised | Rationale: <i>This indicator is a sub-indicator to the main CRI indicator described above. It captures all the irrigable land where irrigation has been improved and excludes the new area under irrigation (private farm). The end target has been also revised accordingly.</i> | | | | | | | |
| Area provided with irrigation and drainage services – New (ha) (Hectare(Ha)) | | 0.00 | | | | | | 2,900.00 |
| Action: This indicator is New | Rationale: <i>This indicator is a sub-indicator to the main CRI indicator described above. It captures all new irrigable land. The end target corresponds to the newly created area, which is the Udabno private irrigation scheme.</i> | | | | | | | |
| Area supplied with optimal irrigation delivery conditions (Hectare(Ha)) (Hectare(Ha)) | | 0.00 | | | | | | 8,750.00 |
| Action: This indicator is New | Rationale: <i>This new indicator has been introduced to capture the degree of improvement of irrigation delivery mentioned in the PDO. It measures the area provided with an irrigation service that allows optimal distribution to farmers' plots. Optimal implies the following: (a) the scheduling (when farmers receive water and for how long) is more predictable and easier to set (including on demand for KS); (b) the flow per hectare for each plot corresponds to set standards, and (c) farmers have pressurized water (in KS), which increases the range of possible crops. Optimal conditions result from a full rehabilitation, which includes but is not limited to the main canal (stage 1, already completed and captured by indicator "Area provided with irrigation and drainage services") but also includes improvement of secondary and tertiary canals / pipelines and the installation of hydrants in case of pressurized irrigation (stage 2). Since Stage 2 works for TK (3,000 Ha) and</i> | | | | | | | |



| Indicator Name | PBC | Baseline | Intermediate Targets | | | | | End Target |
|---|-----|--|---|---|---|---|---|------------|
| | | | 1 | 2 | 3 | 4 | 5 | |
| | | | <p><i>a portion of KS (2,750 Ha) were removed from the scope of the Project, the final target for the indicator is the reduced area in the KS and ZR schemes, which will be fully rehabilitated, that is 8,850 Ha. [This area increases as the works progress and is tracked accordingly.</i></p> | | | | | |
| Irrigated area per unit of water supplied for Kwemo Samgori (KS) irrigation scheme (m2/m3, Custom) (Text) | | 0.57 m2/m3 | | | | | | 1.63 m2/m3 |
| Action: This indicator is New | | <p>Rationale: <i>he new indicator (in lieu of "Increase in irrigated area per unit of water supplied (Percentage) disaggregated by irrigation scheme" marked for deletion)) allow-better monitoring of PDO achievement by measuring an improvement of irrigation services delivery through the increase in irrigated area per unit of water supplied.</i></p> <p><i>It is split into two indicators (for respectively Kvemo Samgori and Zeda Ru) because the indicator is based on technical parameter that is specific to each scheme (e.g. design, size, etc). The measurements of the indicator in its previous formulation (absolute volume of irrigation water supplied to Project-rehabilitated schemes) have shown that the volume of water supplied has not systematically increased year after year because the volume is also influenced by external factors that are beyond the Project control such as droughts that limit the supply of water, and rainy seasons, when farmers decrease their demand for irrigation. Thus, given the attribution concerns of the original indicator, it has been replaced by the proposed indicators to better measure the PDO.</i></p> | | | | | | |
| Irrigated area per unit of water supplied for Zeda Ru (ZR) irrigation scheme (m2/m3, Custom) (Text) | | 0.79 m2/m3 | | | | | | 0.93 m2/m3 |
| Action: This indicator is New | | <p>Rationale: <i>The new indicator (in lieu of "Increase in irrigated area per unit of water supplied (Percentage) disaggregated by irrigation scheme" marked for deletion)) allow-better monitoring of PDO achievement by measuring an improvement of irrigation services delivery through the increase in irrigated area per unit of water supplied.</i></p> | | | | | | |



| Indicator Name | PBC | Baseline | Intermediate Targets | | | | | End Target |
|--|--|--|---|--|---|--|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | |
| <p><i>It is split into two indicators (for respectively Kvemo Samgori and Zeda Ru) because the indicator is based on technical parameter that is specific to each scheme (e.g. design, size, etc). The measurements of the indicator in its previous formulation (absolute volume of irrigation water supplied to Project-rehabilitated schemes) have shown that the volume of water supplied has not systematically increased year after year because the volume is also influenced by external factors that are beyond the Project control such as droughts that limit the supply of water, and rainy seasons, when farmers decrease their demand for irrigation. Thus, given the attribution concerns of the original indicator, it has been replaced by the proposed indicators to better measure the PDO.</i></p> | | | | | | | | |
| <p>To develop improved policies, procedures and systems as a basis for national land management program</p> | | | | | | | | |
| Preparation and implementation of policies, procedures for systematic land registration and NAPR IT system upgrade (Text) | | The corpus of registration regulations and procedures in place | Updated recommended policies and procedures for pilot submitted and approved. Pilot areas were selected following Regulation 351 (Completed). | Implementation of pilot 12 sites under Regulation 351 (Completed). | Recommended policies and procedures (legislative package) for national program submitted to the GoGAF-covered areas (In-Completed). | Policies and procedures based on new legislative package implemented in the progress). | NAPR IT System is upgraded (In-progress). | Prepared and implemented policies and procedures for systematic registration and upgraded NAPR IT system. |
| Action: This indicator has been Revised | <p>Rationale: <i>Only the date of indicator's end target achievement was revised due to the adjusted Project Closing date.</i></p> | | | | | | | |

Intermediate Results Indicators by Components

| Indicator Name | PBC | Baseline | Intermediate Targets | | End Target |
|--|-----|----------|----------------------|---|------------|
| | | | 1 | 2 | |
| Component 1 Irrigation and Drainage Improvement | | | | | |



| Indicator Name | PBC | Baseline | Intermediate Targets | | End Target |
|---|---|-------------|----------------------|----------|---|
| | | | 1 | 2 | |
| Landowners with access to new and improved irrigation services (Number) | | 0.00 | 5,000.00 | | 7,000.00 |
| Action: This indicator has been Revised | <p>Rationale: <i>The indicator has been revised to reflect the fact that all owners of land in the command area will benefit from an improved irrigation service as a result of the rehabilitation of secondary and tertiary irrigation network. Previously the indicator accounted only for water users that had a contract with GA on a given year but excluded other water users, who may not have a contract for that same year but for other years. The target value has been revised accordingly (6,400 to 7,000)</i></p> | | | | |
| Land owners with access to improved irrigation services – female (Number) | | 0.00 | 485.00 | 1,100.00 | 1,300.00 |
| Action: This indicator has been Revised | <p>Rationale: <i>This indicator and its target value have been adjusted to reflect modification of the parent indicator above. The land owners-female are counted within all three schemes. The target value has been revised accordingly (2,400 to 1,300)</i></p> | | | | |
| National irrigation and drainage strategy prepared and endorsed (Text) | | No strategy | | | Strategy finalized and endorsed by government |
| Action: This indicator has been Revised | <p>Rationale: <i>Only the date of indicator's end target achievement was revised to the adjusted Project Closing date</i></p> | | | | |
| Service area locally managed by water user organizations (Hectare(Ha)) | | 0.00 | 6,000.00 | | 12,560.00 |
| Action: This indicator has been Marked for Deletion | <p>Rationale: <i>The indicator is removed as there is a significant risk that WUOs will not be established during the remaining period of the Project in the schemes under rehabilitation despite the step forward made by the Government in passing a legal framework for WUO establishment in 2019. Due to the ongoing Covid-19 pandemic, it has not been possible to interact with farmers for almost one year, and this has severely delayed steps to build awareness and start the WUO establishment process.</i></p> | | | | |



| Indicator Name | PBC | Baseline | Intermediate Targets | | End Target |
|---|---|--|----------------------|---|---|
| | | | 1 | 2 | |
| Complaints received during the implementation of Component 1 activities and resolved (Percentage) | | 0.00 | 60.00 | | 80.00 |
| Action: This indicator has been Marked for Deletion | Rationale: <i>The indicator is dropped. The indicator does not yield much information as no grievances have been recorded since its introduction at the time of approval of AF to GILDMP. The RF has an another intermediate results indicator under Component 2 that will address Grievance Redress Mechanism (GRM).</i> | | | | |
| Readiness of proposed program for Reservoir Rehabilitation & Construction (Yes/No) | | No | | | Yes |
| Action: This indicator has been Revised | Rationale: <i>The baseline (No) and target (Yes) remain unchanged. The only change is that the number of preselected reservoirs is 25 and not 44, as was envisaged at approval of the Additional Financing when this indicator was introduced.</i> | | | | |
| Total number of beneficiaries, that benefit from new/improved irrigation services (Number) | | 7,705.00 | | | 21,400.00 |
| Action: This indicator has been Marked for Deletion | Rationale: <i>This indicator is proposed to be dropped as it is calculated as a multiplier of the value for the indicator "Landowners with access to new and improved irrigation services" and does not bring any new information allowing better monitoring of the PDO achievements.</i> | | | | |
| Strengthening of the National Agency for Sustainable Land Management and Land Use Monitoring (Text) | | Tender documents for the announcement of expression of interest are prepared; tender was announced on October 7, 2021 to | | | Spatial land use and land management information updated and used for policy analysis |



| Indicator Name | PBC | Baseline | Intermediate Targets | | End Target |
|--|---|---|----------------------|---|------------|
| | | | 1 | 2 | |
| | | identify and select an international consultant to prepare a concept paper on establishment and integration of the database on land resources | | | |
| Action: This indicator has been Revised | Rationale: Only the date of indicator's end target achievement was revised to the adjusted Project Closing date | | | | |
| Water User Organization Support Units established and operational (Number) | | 0.00 | | | 3.00 |
| Action: This indicator is New | Rationale: This new indicator measures the progress in and operationalizing the institutional infrastructure within the Ministry of Environment and Agriculture Protection (MEPA) necessary for supporting the creation of WUOs in GILMDP Project areas. The establishment of WUOs contributes to the provision of better irrigation services to Project beneficiaries and thus to the achievement of the PDO. The plan is to establish 3 WUO support units at a central level and at a regional level, where the schemes are. | | | | |
| Farmer Initiative Groups (FIGs) formed (Number) | | 0.00 | | | 8.00 |
| Action: This indicator is New | Rationale: FIGs are a necessary precondition for supporting the creation of WUOs in GILMDP Project areas. The establishment of WUOs would contribute to the provision of better irrigation services to Project beneficiaries and thus to the achievement of the PDO. "Formed" means that FIGs are established on a voluntary basis, based on an informal agreement among local farmers. | | | | |
| Component 2 Land Market Development | | | | | |
| Land parcels with use or ownership rights recorded in pilot areas (Number) | | 50,600.00 | | | 178,000.00 |
| Action: This indicator has been Revised | Rationale: | | | | |



| Indicator Name | PBC | Baseline | Intermediate Targets | | End Target |
|--|--|-----------|----------------------|---|------------|
| | | | 1 | 2 | |
| | <i>The PIU proposes to increase the Baseline value by 9,000 to account for sporadically registered plots in the Project area in the period between Additional Financing preparation and effective start of field works</i> | | | | |
| Target population with use or ownership rights recorded as a result of the Project (Number) | 0.00 | 19,000.00 | | | 68,000.00 |
| Action: This indicator has been Revised | Rationale: <i>Only the date of indicator's end target achievement was revised to the adjusted Project Closing date</i> | | | | |
| Target population (females) with land use of ownership rights recorded as a result of the Project (Number) | 0.00 | 8,000.00 | | | 30,600.00 |
| Action: This indicator has been Revised | Rationale: <i>Only the date of indicator's end target achievement was revised to the adjusted Project Closing date</i> | | | | |
| Complaints received as a result of the systematic registration process and resolved (Percentage) | 99.94 | | | | 99.95 |
| Action: This indicator has been Revised | Rationale: <i>Only the date of indicator's end target achievement was revised to the adjusted Project Closing date</i> | | | | |
| IT System Design Completion (Percentage) | 0.00 | | | | 100.00 |
| Action: This indicator has been Revised | Rationale: <i>The indicator measurement methodology and unit of measure have been modified to better monitor the achievement of the PDO.</i> | | | | |



| Indicator Name | PBC | Baseline | Intermediate Targets | | End Target |
|--|---|----------|----------------------|---|------------|
| | | | 1 | 2 | |
| Target land area with use or ownership rights recorded as a result of the Project (Hectare(Ha)) | | 0.00 | | | 180,000.00 |
| Action: This indicator has been Revised | Rationale: <i>Only the date of indicator's end target achievement was revised to the adjusted Project Closing date</i> | | | | |
| Land parcels surveyed in selected areas during nation-wide systematic land registration program (Number) | | 0.00 | | | 270,000.00 |
| Action: This indicator is New | Rationale: <i>Introduction of the electronic minutes application and use of in-house approach, increased efficiency in the overall management of the SLR process and generated substantial financial savings under the Component 2, which will be used to co-finance NSLR activities.</i> | | | | |
| ICT Upgrade and Software Development (Percentage) | | 0.00 | | | 100.00 |
| Action: This indicator is New | Rationale: <i>This new indicator will allow to follow up progress of completion of different stages of the ICT System upgrade of NAPR, thus contributing to better monitoring of the achievement of the PDO as a whole.</i> | | | | |



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