



# Initial Poverty and Social Analysis

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## Nepal: Mechanized Irrigation Innovation Project

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Asian Development Bank



## **CURRENCY EQUIVALENTS**

(as of 28 July 2022)

Currency unit	–	Nepalese Rupees (NRs)
NRs 1.00	=	0.0078222778
\$1.00	=	NRs 127.840000

## **ABBREVIATIONS**

ADB	–	Asian Development Bank
ICPMR	–	Indicative country pipeline and monitoring report
CPS	–	country partnership strategy
GESI	–	gender equality and social inclusion
TA	–	technical assistance

## **NOTE**

In this report, "\$" refers to United States dollars.

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## INITIAL POVERTY AND SOCIAL ANALYSIS

Country:	Nepal	Project Title:	Mechanized Irrigation Innovation Project (MIIP)
Lending/Financing Modality:	Loan	Department/ Division	South Asia Department/Environment, Natural Resources and Agriculture Division

### I. POVERTY IMPACT AND SOCIAL DIMENSIONS

**A. Links to the National Poverty Reduction Strategy and Country Partnership Strategy** (i) The Project fits within ADB's country partnership strategy for Nepal, 2020–2024 (CPS), including promoting improved infrastructure for private sector-led growth. It also supports the indicative country pipeline and monitoring report for Nepal, 2022–2024 (ICPM), particularly the results areas for increased agricultural productivity and strengthened resilience to climate change. (ii) The Project directly supports the Nepal National Water Plan 2002–2027 (NNWP), by aiming to provide farmers with reliable year-round irrigation to enhance food security, resulting in increased productivity, self-reliance and competitiveness in the Nepalese agriculture sector. Practices identified in the plan and reflected in the project design include: (a) incorporating innovative modern technologies to utilize water resources for increased year-round irrigation; (b) efficient technologies in new irrigation systems; (c) farmers' participation in the management, operation and maintenance; and (d) climate change adaptive irrigation development in compliance to the Irrigation Master Plan 2019 and Agriculture Development Strategy, 2015–2035. (iii) The project aligns with the Government of Nepal's Fifteenth Plan (2019/20–2023/24), which identifies the agricultural sector as playing a main role in inclusive economic growth and poverty alleviation. The Project Social Survey shows that households' overall income comes from agricultural (1/3) and non-agricultural sources (2/3), except for farming landowners cultivating areas bigger than one ha<sup>a</sup>. Very small (<0.5ha) and small farmers (0.5 to <1.0ha) contribute 14% and 22% from agriculture to their income, whereas bigger farmers manage about half of the income through agriculture. The Project will provide the opportunity (a) for reliable and increased irrigated agricultural income, (b) a decreased dependence on non-agricultural income (including reliance from remittances), and (c) a more sustainable livelihood strategy. Subsequently, it will support farming households to rise above the Nepali monetary poverty line.<sup>b</sup>

#### B. Poverty Targeting

General Intervention  Individual or Household (TI-H)  Geographic (TI-G)  Non-Income MDGs (TI-M1,M2, etc.)  
The project districts population (Rautahat and Sarlahi) range from significantly to marginally poorer than the general population in Nepal. Among surveyed project households, 38.5% own 0.5 hectares or less, 28.7% own 0.5- 1.0 ha, 22.7% own 1.0-2.0 ha and 10.1% own greater than 2.0 ha<sup>a</sup>. Social impacts of groundwater irrigation were also assessed. ADB project team recognized that indigenous peoples and marginalized social castes present in the project area have a high incidence of poverty. If impacted by the project, these groups will be provided with opportunities to increase their livelihoods. Training for farmers (including women) on micro-irrigation technology will be conducted as a pro-poor project initiative.

#### C. Poverty and Social Analysis

**1. Key issues and potential beneficiaries.** The project will cover 9,874 ha in Sarlahi and 12,649 ha in Rautahat (representing 40% and 29% of the district's total areas).<sup>c</sup> Out of the 597,799 population, 261,961 (43%, of which 49% are females) reside in the project's beneficiary area. The project will potentially benefit 11 major ethnic groups, mostly Terai middle castes (over 60%), Muslims (22%) and Terai Dalits (11%). Of the total cropped land in Terai, approximately 55% is irrigated.<sup>c</sup> Farmers are faced with low farm productivity due to unreliable irrigation, limited access to modern agricultural technology and extension services, and poor access to markets. All-season irrigation water and inputs will directly benefit farmer yields and potentially create job opportunities for agricultural laborers and others in the supply chain. As such, potential project beneficiaries are the poor and marginal farmers and agricultural employees, including but not limited to, women and socially excluded groups (indigenous peoples and marginalized social castes residing in the project area). The project benefits will target the poor and socially excluded as part of the gender equality and social inclusion (GESI) action plan. The need of the beneficiaries is increased food security and livelihood enhancement.

**2. Impact channels and expected systemic changes.** Expected impacts: improved crop yields, increased farmer incomes, indirect employment opportunities with increased agricultural production, direct but short-term employment opportunities in the project area during construction.

**3. Focus of (and resources allocated in) the PPTA or due diligence.** The feasibility study has assessed the poverty and socioeconomic factors. The following documents were prepared: (i) "Social, Poverty and Gender Profile" Report; (ii) "Social Survey for Tube Well Development and Hills Schemes" Report; (iii) poverty and social analysis (PSA), GESI-AP, and summary poverty reduction and social strategy (SPRSS); as well as (iv) social safeguards frameworks and plans. Under the ongoing transaction Technical Assistance (TA), the reports under items (iii) and (iv) will be: (a) upgraded to reflect project location changes to just Terai region; and (b) updated as needed. As the socioeconomic baseline has not significantly changed, the survey results are still valid and do not require updating. A social safeguard specialist, two social development specialists and one resettlement specialist were included in the TA team.

### II. GENDER AND DEVELOPMENT

#### 1. What are the key gender issues in the sector/subsector that are likely to be relevant to this project or program?

In Nepal, women play a pivotal role in agriculture. In 2010, 72.8% of women and 62.2% of men were engaged in the sector.<sup>d</sup> About 12% of households are headed by women in the project area. As men increasingly migrate to urban centers for work, women assume greater responsibility for agricultural plots, household subsistence and family and community labor.<sup>e</sup> Women farmers face multi-dimensional poverty challenges including poor access to health, agricultural and education services, employment opportunities and land ownership. Land ownership of women in the project area (Rautahat 21.2%, Sarlahi 22.3%) is higher than the national average (19.7%) but productivity is two times lower than male-managed farms,

attributed to limited and untimely access to information about modern agricultural technology and reliable irrigation.<sup>f,9</sup> Despite increased responsibilities, women (especially Dalits, Janajatis, Muslims) have limited voice and representation in farming decision-making bodies. In the context of irrigation, women require opportunities to be meaningfully consulted and to participate in activities relating to water access, availability and affordability. They also need to equitably share in the benefits of agricultural and marketing services. The project will provide opportunities to enhance women's participation in irrigation and income generation.

**2. Does the proposed project or program have the potential to contribute to the promotion of gender equity and/or empowerment of women by providing women's access to and use of opportunities, services, resources, assets, and participation in decision making?**

Yes  No The proposed project will encourage women to participate in various water users' association (WUA) meetings, training, and study tours. Also, the project will make efforts to expose women on various aspects of irrigation activities. To assist the proposed project achieves these, a GESI action plan will be prepared during project preparation.

**3. Could the proposed project have an adverse impact on women and/or girls or widen gender inequality?**

Yes  No The project will not increase inequality between genders, but will work to reduce existing inequalities within the project scope. The installation of irrigation will benefit both genders; the WUA meetings, training, and study tours could reduce an existing inequality, to the extent that women become more active in agricultural activities.

**4. Indicate the intended gender mainstreaming category:**

GEN (gender equity theme)  EGM (effective gender mainstreaming)  
 SGE (some gender elements)  NGE (no gender elements)

The IPSA identifies gaps and opportunities for the GESI-AP, and other measures to be included into project design

**III. PARTICIPATION AND EMPOWERMENT**

**1. Who are the main stakeholders of the project, including beneficiaries and negatively affected people? Explain how they will each participate in the project design.** Key stakeholders include project beneficiaries, residents of project area, affected persons, representatives of government agencies and other entities responsible for project design, implementation, monitoring and evaluation (consultants, contractors, nongovernment organizations including irrigation water suppliers, farmers and WUAs, district-level farmers' associations, etc.). The stakeholders will be associated with the project design through various consultative tools including (i) focus group discussions/surveys to discuss farmers interest, willingness to pay, project benefits and impacts; (ii) central and provincial workshops to present regularly the progress made with the project design and implementation. Additionally, a study tour was organized to Barind Multipurpose Authority irrigation scheme in Bangladesh and learn technical innovations. Several representative farmers (including women) and irrigation engineers joined the tour. A participation plan will be developed for engagement with different stakeholders.

**2. Who are the key, active, and relevant CSOs in the project area?** In Nepal, Water User Associations (WUAs) are the immediate responsible organizations to manage irrigation schemes in a collective way. Social survey 2018 also indicate high level of farmer's engagement in WUA activities such as in organizing WUA meetings, collecting water charges, accounting the financial flows, etc. WUAs will play a key role in mobilizing beneficiaries, consultations, and information dissemination, monitoring etc. during project implementation. Active NGOs in irrigation sector will be identified and engaged to further strengthen mobilization and participation of communities and assist project affected people. Farmers Support Program will also involve NGOs and agricultural extension workers for training, capacity building and market linked activities.

**3. Are there issues during project design for which participation of the poor and vulnerable is important?**

Yes  No The project aims to increase farmer's productivity and incomes. Additionally, land will be taken on a voluntary basis from project beneficiaries. The project hence requires a wide acceptance from all sections of the community including the poor and vulnerable for its sustainability. Participation of the poor and vulnerable groups is ensured in all focused group discussions, surveys, workshops etc. to understand their concerns, demands, and willingness to pay for improved services and willingness to donate the land. This will be continued throughout the project. WUAs and district level farmer's association, including its women members and members from disadvantaged groups, will continue to be part of the consultations to maximize the project benefits and avoid any negative impacts.

**4. How will the project ensure the participation of beneficiaries and affected people, particularly the poor and vulnerable and/or CSOs, during project design to address these issues?** Close to 67% of the farmers in Terai region have land holdings less than 1 ha and two-thirds of the total household income is coming from non-agricultural sources. Crops incomes were recorded further low in female headed households and ethnic minorities compared to male-headed households. Female participation in WUA/irrigation schemes operation and maintenance is recorded less than one percent compared to over 80% by the surveyed male farmers. The various aspects of the project design such as location of infrastructure, technical design, operation, cost recovery, farmers support program etc. have evolved from various consultations, information sharing meetings and capacity building workshops undertaken with all project stakeholders including the project beneficiaries and affected people. All these ensured equitable participation from the women and vulnerable groups. Participation is further ensured during updating LAIPF/LAIPPs and willingness to pay surveys. The Project will prepare detailed participation plan for the engagement of CSO/WUA during project implementation.

**5. What level of CSO participation is planned during the project design?**

Information generation and sharing  Consultation  Collaboration  Partnership

Collaboration with CSOs will be scoped during project design to (i) develop strategies for WUAs strengthening and (ii) preparing agriculture extension and marketing support program.

**IV. SOCIAL SAFEGUARDS**

**A. Involuntary Resettlement Category**

A  B  C  FI

<p><b>1. Does the project have the potential to involve involuntary land acquisition resulting in physical and economic displacement?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No There will be permanent land acquisition for locations of (i) tube wells with an area of 85 sqm, plus estimated averaged 135 sqm for access track, (ii) 1 sqm for each outlet, and (iii) also as little as 1 sqm for each electric pole. Based on the pilot sample project design the total land requirement for 500 subprojects is estimated at around 12.6ha. It is proposed that the Project will meet the land requirement through voluntary land donation (VLD) from project beneficiaries and a high willingness to donate the land is recorded during various consultations. Project affected persons also have an option of negotiated land settlement if land requirement is not met through VLD. In addition, the installation of buried distribution pipes and electric poles will require temporary access to land. A similar extrapolation leads for all subprojects to an initial estimate of rounded 528 ha land temporarily to be used for construction wayleaves. Involuntary resettlement issues will be identified and addressed in detail during project preparation.</p> <p><b>2. What action plan is required to address involuntary resettlement as part of the transaction TA or due diligence process?</b> Though this is a 'project loan,' the project uses the DBO modality, so the final detailed design for each subproject will be done by the DBO contractor. Hence a framework approach is adopted.</p> <p><input checked="" type="checkbox"/> Resettlement Plan <input checked="" type="checkbox"/> Resettlement Framework <input type="checkbox"/> Social Impact Matrix  <input type="checkbox"/> Environmental and social management system arrangement <input type="checkbox"/> None</p>
<p><b>B. Indigenous Peoples Category</b> <input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI</p> <p><b>1. Does the proposed project have the potential to directly or indirectly affect the dignity, human rights, livelihood systems, or culture of indigenous peoples?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Due diligence confirms that indigenous peoples will not experience any adverse impacts. The Project will positively impact indigenous people living within the Project area. In Nepal, there are total 59 Aadibasi/Janajati's which are referred to as indigenous peoples. Issues such as of knowledge gap among indigenous peoples to use and understand card-based payment system will be further assessed during detailed design and capacity development plan for such beneficiaries will be included in project design.</p> <p><b>2. Does it affect the territories or natural and cultural resources indigenous peoples own, use, occupy, or claim, as their ancestral domain?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><b>3. Will the project require broad community support of affected indigenous communities?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><b>4. What action plan is required to address risks to indigenous peoples as part of the transaction TA or due diligence process?</b></p> <p><input checked="" type="checkbox"/> Indigenous Peoples Plan <input checked="" type="checkbox"/> Indigenous Peoples Panning Framework <input type="checkbox"/> Social Impact Matrix  <input type="checkbox"/> Environmental and social management system arrangement <input type="checkbox"/> None</p>
<p align="center"><b>V. OTHER SOCIAL ISSUES AND RISKS</b></p> <p><b>1. What other social issues and risks should be considered in the project design?</b> Tender documents include specification to avoid the risks of HIV/AIDS infections and distribution in the subproject areas.</p> <p><input type="checkbox"/> Creating decent jobs and employment <input type="checkbox"/> Adhering to core labor standards <input type="checkbox"/> Labor retrenchment  <input type="checkbox"/> Spread of communicable diseases, incl. HIV/AIDS <input type="checkbox"/> Increasing in human trafficking <input type="checkbox"/> Affordability  <input type="checkbox"/> Increase in unplanned migration <input checked="" type="checkbox"/> Increase in vulnerability to natural disasters <input type="checkbox"/> Creating political instability  <input type="checkbox"/> Creating internal social conflicts <input type="checkbox"/> Others, please specify</p> <p><b>2. How are these additional social issues and risks going to be addressed in the project design?</b> Participatory project planning and proper monitoring by social development officers of PMU and consultants will be included in the final project design. Safeguards and contract documents will stipulate the requirement to adhere to core labor standards, including no child labor policy and inclusion of health and safety plans to avoid COVID-19.</p>
<p align="center"><b>VI. TRANSACTION TA OR DUE DILIGENCE RESOURCE REQUIREMENT</b></p> <p><b>1.</b> Do the terms of reference for the transaction TA (or other due diligence) contain key information needed to be gathered during transaction TA or due diligence process to better analyze (i) poverty and social impact; (ii) gender impact, (iii) participation dimensions; (iv) social safeguards; and (vi) other social risks. Are the relevant specialists identified?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><b>2. What resources (e.g., consultants, survey budget, and workshop) are allocated for conducting poverty, social and/or gender analysis, and participation plan during the transaction TA or due diligence?</b> A \$2.5 million TA was provided from Grant 0299-NEP: Water Resources Project Preparatory Facility to prepare the project. A social safeguards specialist, two social development specialists and one resettlement specialist were engaged to support the social dimensions of the project. Additional provision from TA 9443-REG will be used to finalize the safeguards documents.</p>

H = High, M = Middle, L = Low, NA = Not applicable

<sup>a</sup> MIIP feasibility study, "Social Survey for Tube Well Development and Hill Schemes" October 2018

<sup>b</sup> ADB. 2019. [Country Partnership Strategy: Nepal, 2020–2024—Promoting Connectivity, Devolved Services, and Resilience](#). Manila; Government of Nepal, Central Bureau of Statistics of Nepal. 2011. *Country Poverty Analysis*. Kathmandu

<sup>c</sup> MIIP feasibility study related "Social, Gender and Poverty Report" August 2019; Detailed Engineering Design for revised MIIP project areas.

<sup>d</sup> Government of Nepal, Ministry of Agriculture Development. 2010. *Selected Indicators of Nepalese Agriculture and Population*. Kathmandu.

<sup>e</sup> S. Tamang, K. Paudel, and K. Shrestha. 2014. *Feminization of Agriculture and its Implications for Food Security in Rural Nepal*. *Journal of Forest and Livelihood*.

<sup>f</sup> Central Bureau of Statistics, 2011.

<sup>g</sup> MIIP Social, Poverty and Gender Profile. August 2019.