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

Concept Stage | Date Prepared/Updated: 07-Mar-2017 | Report No: PIDISDSC19562



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BASIC INFORMATION

Project ID	Lending Instrument	Environmental Assessment Category	Team Leaders
P158364	Investment Project Financing	B - Partial Assessment	Ahmed Shawky M. Abdel Ghany
Approval Date	Bank / IFC Collaboration		
14-Nov-2017	No		
Practice Manager/Manager	Senior Global Practice Director	Country Director	Regional Vice President
Meike van Ginneken	Guang Zhe Chen	Qimiao Fan	Annette Dixon

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Proposed Development Objective(s)

The project development objectives are to improve the irrigation service and to strengthen farmer organizations in the irrigated areas of the Rani Jamara Kulariya Irrigation Scheme.

PROJECT FINANCING DATA

<input checked="" type="checkbox"/> Counterpart Funding	<input type="checkbox"/> IBRD	<input checked="" type="checkbox"/> IDA Credit	<input type="checkbox"/> IDA Grant	<input type="checkbox"/> Trust Funds	<input type="checkbox"/> Parallel Financing
		<input type="checkbox"/> Crisis Response Window	<input type="checkbox"/> Crisis Response Window		
		<input type="checkbox"/> Regional Projects Window	<input type="checkbox"/> Regional Projects Window		



For Loans/Credits/Others (US\$M)

Total Project Cost :	65.00
Financing Gap :	0.00
Total Bank Financing :	65.00
Of Which Bank Financing (IBRD/IDA):	60.00

Financing Source	Amount
Borrower	4.00
International Development Association (IDA)	60.00
Local Farmer Organizations	1.00
Total	65.00

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Borrower : Nepal

Contact :

Title :

Telephone No :

Email :

Implementing Agency : Department of Irrigation

Contact : Rajendra Prasad Adhikari

Title : Director General, Department of Irrigation

Telephone No : 091561236

Email : rjkip@hotmail.com

INSTITUTIONAL DATA

Practice Area (Lead)

Water

Contributing Practice Areas

Agriculture



Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Private Capital Mobilized

Yes

Public Private Partnership

No

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

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SYSTEMATIC OPERATIONS RISK- RATING TOOL (SORT)

Risk Category

Rating

1. Political and Governance

● High

2. Macroeconomic

● Moderate



3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Substantial
8. Stakeholders	Substantial
9. Other	
10. Overall	Substantial

PREPARATION SCHEDULE

Preparation Schedule

Milestone	Original	Revised	Actual
AIS Sign off			Dec 06, 2015
Concept Review Meeting	Apr 20, 2016	Mar 22, 2017	Mar 22, 2017
Begin Appraisal	Jul 17, 2017	Sep 25, 2017	
Approval	Nov 14, 2017	Nov 14, 2017	

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Expenditures

Source of Funds	Preparation Expenses to Date (USD)
Bank Executed Trust Funds	

Team

Bank Staff

Name	Role	Specialization	Unit
Ahmed Shawky M. Abdel	Team Leader(ADM	Irrigation & WRM	GWA06



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Ghany	Responsible)		
Shambhu Prasad Uprety	Procurement Specialist(ADM Responsible)	Procurement	GGO06
Yogesh Bom Malla	Financial Management Specialist	Financial management	GGO24
Drona Raj Ghimire	Environmental Specialist	Environment safeguards	GEN06
Hiroshi Yamaguchi	Team Member	Processing consultant	GFA03
Joop Stoutjesdijk	Team Member	Irrigation Engineering	GWA02
Jun Zeng	Safeguards Specialist	Social Development & Safeguards	GSU06
Junko Funahashi	Counsel	Legal	LEGES
Purna Bahadur Chhetri	Team Member	Co-TTL, Agriculture	GFA12
Rekha Shreesh	Safeguards Specialist	Social Safeguards	GSURR
Satish Kumar Shivakumar	Team Member	Finance Officer	WFALA
Tara Shrestha	Team Member	Assistance	SACNP
Zakia B. Chummun	Team Member	Operations	GWA06
Extended Team			
Name	Title	Organization	Location



B. Introduction and Context

Country Context

1. Nepal is an under-developed country located in the Himalayan region, with harsh mountain topography except for its southern part consisting of a narrow strip of flat land called the Terai region. The economy is largely agrarian-based, with low labor productivity. The shares of agriculture, services and industry in GDP are around 32, 50 and 18 percent, respectively. The per-capita GDP/yr is around US\$700 (FY16) with 24% of the population below the poverty line. Nepal experienced its slowest growth in 14 years in FY2016. Real GDP growth, which slowed to 2.7 percent in FY2015 because of a devastating earthquake, was further dragged down to 0.6 percent in FY2016 due to the sluggish post-earthquake reconstruction activities and the disruption in cross-border trade.

2. The weak economic growth of the past two years has setback the steady reduction in poverty. Poverty headcount rate is estimated at 11.8 percent in FY2015, down from 15 percent in FY2010, but is projected to increase slightly to 11.9 percent in FY2016, measured at the \$1.90 a day line. A contributing factor has been the higher inflation. Based on a simulation exercise, other things being equal, a 2 percentage points increase in overall inflation would raise poverty headcount rate by 0.8 percentage point (measured at \$1.90), pushing approximately 225,000 people back into poverty.

Sectoral and Institutional Context

Agriculture, despite being the mainstay of the rural economy, suffers low productivity in the crop sector

3. Agriculture is the mainstay of the rural economy and a source of income for the majority of Nepali with 66 percent of the population engaged in agriculture (small farmers constitute 80 percent of the rural population), a 32 percent contribution to the Gross Domestic Product (GDP) (Central Bureau of Statistics, FY16), and 50 percent contribution to exports earning.

4. Despite this importance of the agricultural sector, the level of income from agriculture is low by the regional and international standards, particularly for the major cereal crops (lower than their potential yield by at least 50 percent). Thus, agriculture in Nepal has not made substantial contribution to improving the living standards during the past decades.

5. Nepal's rural population comprises mainly smallholder farmers and about 80 percent of the rural population aged fifteen and above is engaged in agriculture. The unavailability of sustainable livelihood opportunities in the rural areas has led to a large-scale exodus of the population to the cities and more recently to the Gulf region. The absence of able-bodied farm labor, continuation of traditional irrigation practice, and limited exposure to modern agriculture practices, have led to reduced farm production. Existing farmers are generally unable to benefit from existing modern technologies and inputs.

6. The pressing priority is thus to improve agricultural productivity and foster diversification towards



high-value products to secure food security for a growing population and to improve rural incomes.

Public investment in improving irrigation is becoming paramount for transforming the agriculture sector

7. The frail mountain terrain limits the agricultural potential area to 2.641 million hectares (ha), of which 1.77 million ha has irrigation potential. Irrigation systems in Nepal fall under four distinct categories: (1) traditional farmer-managed irrigation systems (FMIS) developed and managed by the communities; (2) a range of small to large-scale surface systems developed with full or partial support from the government; (3) government-developed tube-well irrigation schemes; and (4) individually-owned and operated tube wells and pumps, mostly utilizing shallow aquifers, streams, ponds, and dug wells.

8. At present, the total irrigated area stands at 1.39 million ha of which only 42% has year-round irrigation. There is limited new land that can be brought under farming as most of the economically-suitable lands for agriculture have already been exploited, mainly because of the substantial increase in Nepal's population in the past century, with the exception of some potential horizontal expansion in newly-irrigated lands of around 0.35 million ha through investing in inter-basin transfers (see government policy below). Thus the largest potential for increasing production is by providing better agricultural inputs and assuring irrigation to the already-existing cultivated land, namely, a "vertical expansion". Modern agricultural practices require crop diversification, high-yielding varieties, improved fertilization, and reliable year-round irrigation.

9. Of the aforementioned improvements, improving irrigation is critical to agriculture both during the monsoon season to overcome the periods of dry spells as well as during the dry season when rainfall is negligible. Agriculture is becoming even more vulnerable to water due to the erratic monsoon rain. Even when recently precipitation during the monsoon has reached 90 to 110 percent of its long-term average after two years of low rainfall, farmers get unreliable rainfall with both droughts and intense rainfall/floods often occurring in same season. Thus, transforming the agriculture sector requires upgrading the irrigation systems to regulate the irrigation supply. Only by mobilizing public funding to invest in effective irrigation systems, farmers could then focus on the complementary inter-farm/farm-level investments such as improving agricultural techniques and inputs and cropping intensity, thus leading to transforming farming to more profitable levels.

Government Irrigation Policy and Irrigation Development Program.

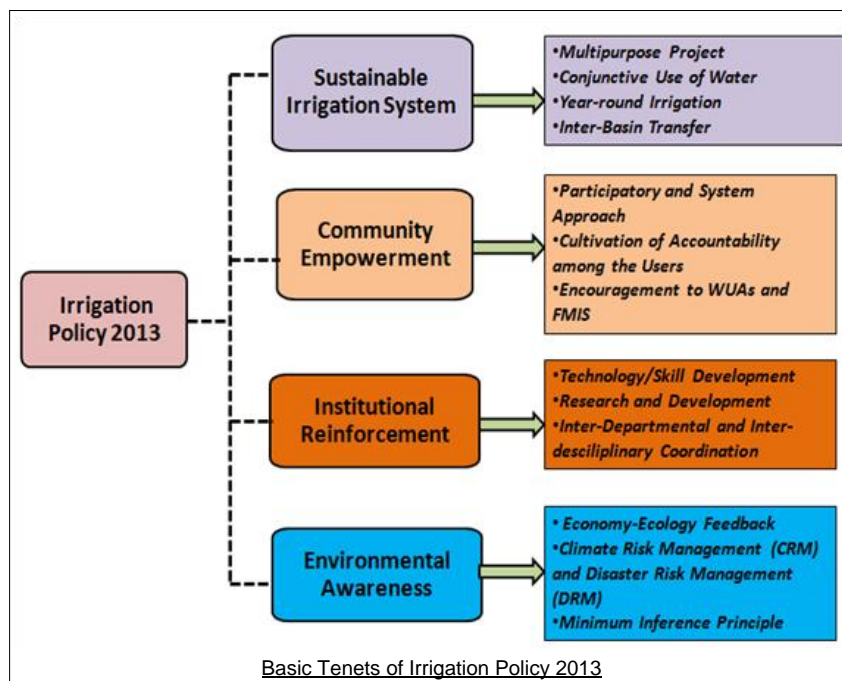
10. The Government of Nepal (GoN) has thus recognized the lack of intensive cropping, inadequate supply and use of basic agricultural inputs such as fertilizer and improved seeds, and problems with deteriorated and inefficient irrigation systems.

11. The Agriculture Perspective Plan (APP) assigns the first priority to accelerating agricultural growth through concentrated investment in irrigation. Also one of the key management goals of the APP is to expand farmer ownership and operation of irrigation schemes as irrigation is vital to the national agricultural production and economic transformation.



12. The Department of Irrigation (DoI) is the lead agency in Nepal tasked with developing and improving irrigation infrastructure. The primary effort of DoI has been to design and implement irrigation infrastructure to provide irrigation to potential new areas and also to intervene in existing schemes to improve their irrigation efficiency and sustainability.

13. The GoN’s strategy for irrigation development and management is reflected in the Water Resources Strategy (2002), National Water Plan (2005), Irrigation Development Vision and Action Plan (2006), and recently, the Irrigation Policy (2013¹, Figure below). The main vision described in these documents is to integrate agriculture and irrigation development in order to realize the full benefits from investment in irrigation and provide sustainable services to the agriculture sector through well-operating irrigation facilities, based on local resources mobilization through a partnership of the users and the government. There is an emphasis on: (i) provision of year-round irrigation services to increase the productivity of irrigated agriculture and extending the cropping seasons; (ii) the need for a service-oriented management approach as a means for providing more reliable and flexible water services to farmers; and (iii) the progressive shifting of operation and maintenance (O&M) costs to water users to enhance efficiency, equity, and sustainability.



14. As GoN internalized the concept of year-round irrigation through its Nepal Water Resource Strategy (2002) and National Water Plan (2005), the DoI aimed to provide year-round irrigation to vast potential areas to boost crop production, leading to food self-sufficiency, employment generation and poverty

¹ Entitled the “Irrigation Policy for 2070” in reference to the Bikram Sambat (BS 2070) which corresponds to 2013 AD. The policy was approved on July 13, 2013.



reduction. There are four themes under this DoI goal:

- a) Rehabilitation of existing FMISs;
- b) Design and construction of new irrigation schemes (including the ongoing MoRJKIP and its proposed phase 2);
- c) Improve the agency-managed large-scale irrigation projects and handover their management to beneficiary farmers (the so called, Irrigation Management Transfer (IMT)), either fully or below the main-canal level; and
- d) Expand the irrigation area horizontally through investing in “inter-basin water transfers”.

15. The Tables below reflect some of the DoI target indicators for the next five years, in incremental areas and crop yields.

Table 1: DOI target for the incremental irrigated area by 2022

Activity	Unit	Status to date	Target increment after 5 years
Increment in irrigated area by surface irrigation	Ha	775,000	45,335
Increment in irrigated area by groundwater	Ha	409,013	206,470
Increment in irrigated area by non-conventional irrigation methods (e.g. solar pumping)	Ha	5,865	21,100
Rehabilitation of Farmer Managed Irrigation System (FMIS)	Ha	202,299	71,500
Required financial Resources (in Billion NRs.)			147

Table 2: Examples for the DOI’s target increase in crop production (ton/ha)

Before Intervention			After Intervention		
Irrigated area	Hectare	Production (ton/ha)	Irrigated area	Hectare	Production (ton/ha)
Rehabilitation of FMIS	67,000	Paddy 2.2, Wheat 1.7, Maize 1.76, Potato 7.8	Rehabilitated area	67,000	Paddy 3.6, Wheat 2.7, Maize 2.8, Potato 13.0
IMT projects	102,590	Paddy 2.9, Wheat 2, Maize 2.1, Potato 10	Management Transferred to WUAs	102,590	Paddy 4.7, Wheat 3, Maize 4.2, Potato 18.1

Yields as reported by the Bank-supported Irrigation and Water Resources Management Project (IWRMP, August 2016), which supports activities under both the FMIS and IMT categories.

New irrigation schemes

16. The DoI is entrusted with the planning, design and implementation of medium to large-size irrigation projects mostly in the hills and Terai region. The Rani-Jamara-Kulariaya Irrigation Project (IP), Mahakali III, Babai IP, Sikta IP, Bagmati IP are examples of such large-size undertakings. The development/modernization

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of medium to small schemes (below 300 ha in hills and below 2,000 ha in Terai) are implemented by the Medium Irrigation Project (MIP) and the Non-Conventional Irrigation Technology Project (NITP). At present, the MIP has about 250 new irrigation projects in the pipeline with a combined cultivable command area (CCA) of approximately 37,000 ha and the NITP has in the pipeline about 732 small new projects especially in the hills/mountains with combined CCA of about 8,450 ha. The DoI intends to continue the development of feasible new irrigation schemes in the future. In addition, the DoI has started the use of solar energy to pump blue water to adjoining river terraces for irrigation. This activity has already been initiated along the Bheri corridor and is under consideration for the Babai river, and the DoI intends to expand its use to all feasible areas.

17. The Rani Jamara Kularia scheme (the ongoing Bank-financed Phase 1 and the proposed Phase 2) is amongst the largest schemes in the entire country under the category of new schemes, and it benefits one of the poorest areas in the Terai in south west of the Karnali river basin.

Farmer Organizations and Participatory Irrigation Management (or “Joint Participatory Management”, JPM)

18. Nepal has a long tradition of farmer-managed irrigation systems (FMISs) in the hills, mountains, and the Terai. The FMISs cover about 70 percent of the 1.2 million ha of land with some form of irrigation infrastructure in the country. The hill FMISs are generally small in size compared to the FMISs in the medium to large irrigation systems in the Terai. A strong sense of ownership and hierarchical management system exists in the FMISs. They often exist in some form of Water Users Associations/Groups (WUA/WUG), tasked with operation and maintenance (O&M) of the schemes, most of which is done through labor contribution.

19. However, improving irrigation services in the existing FMIS schemes requires a combination of “hardware” and “software” solutions. The former involves rehabilitating and modernizing existing irrigation and drainage infrastructure to improve reliability of supply and expand the system of secondary and tertiary canals. The latter requires the development of more efficient mechanisms for managing the irrigation systems down to the field level, through a clear delineation of responsibilities between the government and the WUAs in charge of delivering irrigation services to farmers. There is also a need to pool funding through government and users contributions for O&M and asset replacement over time.

Relationship to CPF

20. The proposed project is consistent with the Nepal Country Partnership Strategy (CPS) for FY 2014–18 to support poverty reduction and shared prosperity in Nepal. The proposed project is aligned with the Pillar 2 of CPS – *Increasing Inclusive Growth and Opportunities for Shared Prosperity*. The proposed project aims to improve agriculture and water productivities through modernizing or rehabilitating the lower-order irrigation infrastructure, strengthening WUA, and implementing a comprehensive agricultural improvement program (CPS Outcome 2.1).

21. In line with the CPF, the Bank has been engaged in the irrigation and WRM sector through two lending projects, namely: (1) Irrigation and WRM Project, which is a collaboration of the Agriculture and Water Global Practices (IWRMP, IDA US\$114m, closing in June 2018, targets 26,808 hectares); and (2) Modernization of Rani-



Jamara-Kulariya Irrigation Scheme-Phase 1 (MoRJKIP, IDA US\$40m, due to close in September 2017, targets 14,300 hectares). The Performance and Learning Review (PLR) of the CPS, conducted in October 2016, has indicated that by FY2018 the IWRMP and MoRJKIP would increase the area under improved irrigation services by a total of 50,000 hectares, and would improve the end-users satisfaction with the performance of the WUAs from around 5% to 40%.

C. Proposed Development Objective(s)

22. The project development objectives are to improve the irrigation service and to strengthen farmer organizations in the irrigated areas of the Rani Jamara Kulariya Irrigation Scheme.

Key Results (From PCN)

PDO indicators:

1. Area provided with new/improved irrigation or drainage services (a Corporate Result Indicator): in hectares.
2. Farmers reached with agricultural assets or services (a Corporate Result Indicator): in number, with the number of females as a supplemental indicator.

D. Concept Description

23. The proposed operation will focus on modernization of the lower-order irrigation system (sub-branches, tertiary canals and water courses) so that irrigation water can reach farmer fields with the optimal flows, continuation of the WUA/WUG support program, implementation of a comprehensive agricultural improvement program, and support to the river-basin planning process.

24. The proposed operation is a second phase of the ongoing IDA-supported MoRJKIP. The ongoing project focuses on modernization of the higher-order irrigation infrastructure (intakes, feeder and branch canals, including related flood protection), enhancing the capacity of WUAs to operate and maintain the improved/new irrigation infrastructure, and preparation and initiation of an agricultural development program. The MoRJKIP is on track toward meeting the PDO.

24. The proposed phase 2 is very essential in complementing the ongoing phase 1, because of two inter-related necessities:

1. First, below the main/conveyance system introduced by phase 1, without phase 2 the irrigation distribution and application efficiencies would continue to be low compared to the global/regional norms. Farmers apply as much as 2-3 litre/second/ha (the irrigation “hydro-module”) compared to an optimal level of around 1 litre/second/hectare. The lack of bulk inter-seasonal water storage needs to be compensated by completing the modernization of the system down to the farm level, in order to optimize canal storage and irrigation scheduling, thus optimize the root-zone moisture across the crop-growth stages.



2. Second, the WUAs function is not supposed to stop at the main-system level. There is a need to utilize the immense potential for JPM in the Rani-Jamara-Kulariya community, building on the creation and empowerment of WUAs attained under the phase 1, so that the WUAs can also have a major role in the O&M of the irrigation subsystem down to the farm level.

20. The envisaged project components are as follows:

Component 1, Scheme Modernization (US\$58 million, mainly civil works): will support the construction and modernization of the lower-order irrigation infrastructure, including the sub-branch canals, tertiary canals, and water courses. The activities will include design and execution of irrigation and drainage subsystems below the Branch Canals and down to the Field Outlet levels, including not only the irrigation subsystems but also related river-training and flood-protection works, collector and tertiary drains, and control structures.

Component 2, Agricultural Production Support and Strengthening Water Users Associations/Groups (WUAs/WUGs) (US\$6 million): will support: (i) strengthening WUAs/WUGs to assume responsibility for management, operation, and maintenance of the modernized system; and (ii) carrying out a series of agriculture-based activities in the project area to internalize the gains made in phase 1 and to increase and sustain agricultural production through the promotion of water-smart improved farming practices, crop diversification, post-harvest support, farmer training through demonstrations and farmer field schools, and other adaptive processes. Thus the second phase will adopt value-chain-based approach to support agricultural activities.

Component 3, Project Management (US\$1 million, including goods, technical assistance and capacity building): will support activities to ensure effective project management, including fiduciary and safeguards management and monitoring and evaluation.

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SAFEGUARDS



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

Located in the Kailali District of the Far Western Development Region, the proposed project will cover eight Village Development Committees (VDC) and Tikapur Municipality. Tikapur Municipality is the main market center in the project area. The existing Rani Jamara and Kulariya Irrigation scheme consists of three independent traditional irrigation systems constructed, operated and managed by the indigenous Tharu community. The ethnic composition of the project area includes Tharus as the dominant group (48 percent) followed by Chhetri (17 percent), Dalit (15 percent), Brahmin (10 percent) and others (7 percent). There are three water users associations and one central committee (federation) that has representations of the three WUAs.

The proposed project is in the Terai (plain) area of Nepal. There are community and state forests in and around the project area. Nearest protected area is the Bardiya National Park, which is located across the source river Karnali, in the east of the project area. The target area is the 14,300 ha of the Rani, Jamara and Kulariya command area. Under the ongoing phase 1 which focused on the river/ main system level, the Natural Habitats (OP/BP 4.04) has been triggered because the Karnali River has protected and endangered aquatic species, including the Gangetic Dolphin, Marsh Mugger, and Gharial Crocodile. Also, the Karnali River corridor (forests) is a wildlife movement route for especially elephant, tiger, and rhino. As some of the phase 1 works have been aligned along the fringes of forest areas, the OP/BP 4.36 on Forests was triggered and issues were addressed as part of the Environmental Management Plan. An Environmental Assessment (EA) of the Phase 2 will be commissioned to identify, assess and recommend measures for avoidance, minimization, and mitigation of potential adverse environmental impacts as well as to enhance positive impacts related to component 1 and component 2 of the project.

The scheme abstracts water from the Karnali River, a major left-bank tributary of the Ganges River. The Karnali River has its source in China and flows through Western Nepal into India (where it is called Ghaghara River before it joins the Ganges). The Karnali River is thus an international waterway for purposes of OP 7.50. Due to uncontrolled diversion of the Karnali River water into the main canals there is typically excessive water entry, while there is no control of the water. The scheme in its current state has very low water use efficiency and large water losses through seepage and water logging. The proposed phase 2 will complement phase 1 in helping to reduce water abstraction from the Karnali River, by over 40 percent of the current water abstraction. There upon, an exception to the notification requirement under OP 7.50 has been received from South Asia's Regional Vice President on February 24, 2011. A Strategic Environmental and Social Assessment (SESA) of the proposed River Basin Management Plan (RBM) will be carried out during implementation.

B. Borrower's Institutional Capacity for Safeguard Policies

The DoI is currently implementing MoRJKIP - Phase 1. During the preparation of the ongoing MoRJKIP – phase 1, Social Assessment (SA) and Environmental Assessment (EA) were carried out, based on which DoI prepared Social Impact Management Framework (SIMF) and Environmental Management Plan (EMP) to manage social and environmental safeguard issues. The SIMF prepared under Phase 1 includes a policy framework for land acquisition and resettlement, along with Vulnerable Community Development Framework, Gender and Social Inclusion Framework to ensure that the benefits from the project reaches the indigenous people, vulnerable people, women and other disadvantaged groups. A Resettlement Action Plan (RAP) for the feeder canal was prepared and implemented. Under Phase 1, private land was not affected but a few private structures were affected. An Indigenous and Vulnerable Community Development Plan (IVCDP) was also prepared. To manage social and environmental safeguard activities, a Senior Sociologist and Environmental Specialist have been appointed under Phase 1, yet he started work in a late stage of the project. The DoI have acquired familiarity and experience with Bank's social and environmental safeguard requirements through the ongoing MoRJKIP- Phase 1. The recent safeguard rating under Phase 1 is moderately satisfactory. Besides the safeguard specialist recruited under the project, a Local Environmental Monitoring Committee (LEMC) was formed. LEMC

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consisted of representatives from environmental stakeholders in the area such as Bardia National Park, community forest users group, district forest and NGO, played positive roles in monitoring and providing advices / guidance with regard to environmental management. However, late recruitment of environmental specialists and turnover of the specialist was one of the weak points. The absence of specialist service/ support during initial stage and later as well has affected the timely support, monitoring, reporting, and implementing the mitigation activities as well as timely coordination with local stakeholders, and regularity of the LEMC meetings and awareness activities.

The proposed project, Phase 2, will build on these existing frameworks and their implementation experience to comply with the safeguard policies. The command area is defined, main canal and branch canal have been modernized in the Phase I. An EA will be conducted for the new proposed system and EMP will be drafted accordingly to address environmental issues. The proposed project will intervene in the sub-system and inter-farm areas which are closer to privately-owned assets and livelihood. However, technical design of the project is yet to be performed, thus the specific nature and scale of the social impacts would be known later amid the pre-appraisal stage. Hence, social management framework is proposed. Gaps identified and lessons learnt during the implementation of RJKIP Phase I will be considered while revising the existing Social Management Framework.

C. Environmental and Social Safeguards Specialists on the Team

Drona Raj Ghimire, Jun Zeng, Rekha Shreesh

D. Policies that might apply

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Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	Same as phase 1. As the project scope under Component 1 and Component 2 includes physical construction activities, and agricultural production support, potential adverse impacts on the natural environment and human health and safety are likely. Command area is defined and main and branch canals are existing (modernized in Phase I). Hence, EA and EMP will be prepared for the modernization and agricultural production activities. EA and EMP, inter alia, will cover issues related to labour and labour camps, and EHS issues (following World Bank Groups' EHS Guidelines).
Natural Habitats OP/BP 4.04	Yes	Was triggered in phase 1 due to working on the main system. Karnali and Mohana Rivers are known to have important aquatic species (Gangetic Dolphin, Marsh Muggler, and Gharial crocodile). Occasional movement of wildlife has been reported in the adjoining forests. During project preparation, impacts on natural habitat and biodiversity will be assessed and appropriate



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			mitigations as part of EA and EMP, (or if necessary, Stand-alone Biodiversity Management Plan) will be prepared.
	Forests OP/BP 4.36	Yes	Was triggered in phase 1 due to working on the main system. There are community forests adjoining the project command area. Some sections of the main/ feeder canal constructed in the Phase I was located in the community forests. In the Phase II, sub-branch canals, tertiary canals, inter-farm water courses are the main construction works. These structure are away from the forest areas. Hence, there is less chance of adverse impacts on forest. However, during preparation of the project, each activity will be reviewed to see if the project has potential to cause loss or degradation (the health and quality) of forest. EA will assess potential impacts and propose mitigations, if necessary.
	Pest Management OP 4.09	Yes	Emphasis of Phase II, under Component 2, is to increase and sustain agricultural production by carrying out a series of agriculture-based activities, adopting value-chain-based approach. This may lead to introduction of pesticides or increased use of pesticides. During project preparation, this will be reviewed thoroughly and the EA / EMP will have measures, such as Integrated Pest Management, to mitigate adverse impacts (or if necessary, separate Pest Management Plan will be prepared).
	Physical Cultural Resources OP/BP 4.11	TBD	This was not triggered in the Phase 1. The ESIA will confirm if the project will affect PCR.
	Indigenous Peoples OP/BP 4.10	Yes	The RJKIP project will be implemented in an area with Indigenous ethnic minorities. Tharus, indigenous to the area, are in a majority (48 percent) followed by other indigenous groups from the hill. The project areas are also comprised of other vulnerable groups such as Dalits, women-headed households. SIMF will comprise a Vulnerable Community Development Framework (VCDF) and Gender and Social Inclusion Framework to guide planning approaches on indigenous peoples (and vulnerable groups) and interventions under the project. SA and VCDP will be prepared for project locations known by appraisal while VCDF will be the guiding document for the remaining works.



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Involuntary Resettlement OP/BP 4.12	Yes	Major issues of land acquisition are unlikely. However, the upgrading works may require small plots of land and have impacts on structures requiring relocation. Policy framework for land acquisition and resettlement will be included as a part of SIMF will provide a legal framework on involuntary resettlement. If project locations are known by appraisal, SA and RAP will be prepared. In other remaining works, where project location is not fixed, policy framework will be the guiding document in preparation of RAP. RAP will include among others entitlement matrix, communication strategy and GRM.
Safety of Dams OP/BP 4.37	No	Same as phase 1. Project does not include construction of dam, neither depends on existing dam.
Projects on International Waterways OP/BP 7.50	Yes	Was triggered with phase 1 as it focused on works on the river and main system. In phase 2, works on the sub-system and inter-farm level are not expected to cause any appreciable transboundary water impact. The system modernization is expected to reduce water abstraction (the hydro-module is currently as high as 3 liter/sec/hectare) thus will not impact the water flowing downstream. Through a similar rationale under phase 1 an exception to the notification requirement under OP 7.50 was received from South Asia's Regional Vice President on February 24, 2011.
Projects in Disputed Areas OP/BP 7.60	No	There is no disputed area.

E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Sep 11, 2017

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

September 2017

CONTACT POINT

World Bank

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Borrower/Client/Recipient

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APPROVAL

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