Government of Nepal

Ministry of Irrigation

Department of Irrigation

## Rani Jamara Kulariya Irrigation Project

.कलारिया जमरा राना आयोजना (दोश्रो चरण): सामा पक्षबारे वातावरणीय सरोकारवालाहरुसंगको छलफल २०७४/८/२८ टीकापुर , कैलाली 14/12/2017 14:08

## Modernization of Rani Jamara Kulariya Irrigation Schemes Phase 2

(MRJKIS Phase 2)

**Safeguard Documents** 

## **Public Consultation Record**

December 14, 2017

### PREFACE

This document is the eight of eight volumes, which records the stakeholder concerns raised during stakeholder consultation on December 14, 2017 at Tikapur. This consultation was conducted by project proponent (Department of Irrigation, Rani Jamara Kulariya Irrigation Project) to comply safeguard requirements before project implementation, to disseminate the finding of the safeguard studies as well as to obtain the valuable feedbacks from the stakeholders in relation to the Modernization of Rani Jamara Kulariya Irrigation Scheme (MoRJKIS) in Tikapur Kailali Districts, Far West in the Province Seven of Nepal.

The report of these studies comprises eight volumes, which are arranged as follows:

- Volume 1: Executive Summary (combining the finds of EA, BIA, IPM, SA, VCDP & RPF)
- Volume 2: Environment Assessment (EA);
- Volume 3: Biodiversity Impact Assessment (BIA)-;
- Volume 4: Integrated Pest Management Plan (IPM);
- Volume 5: Social Impact Assessment (SIA);
- Volume 6: Vulnerable Community Development Plan (VCDP);
- Volume 7: Resettlement Planning Framework (RPF);
- Volume 8: Stakeholder Consultation Proceeding conducted at Tikapur on December 14, this document.

The relevant inputs received from the stakeholders during consultation has already been incorporated in respective reports. It is enclosed for reference only.

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### ABBREVIATIONS

ACIU	Agriculture Component Implementation Unit
BMP	Bio-diversity Management Plan
BPs	Bank Procedures
CDO	Chief District Officer
CFUG	Community Forest User's Group
DAO	District Administration Office
DADO	District Agriculture Development Office
DCC	District Coordination Committee
DOI	Department of Irrigation
EA	Environment Assessment
FMIS	Farmer Managed Irrigation System
GoN	Government of Nepal
IPM	Integrated Pest Management
MRJKIS	Modernization of Rani Jamara Kulariya Irrigation Schemes
NGO	Non-Governmental Organization
OPs	Operational Policies
RPF	Resettlement Policy Framework
RJKIP	Rani Jamara Kulariya Irrigation Project

SA	Social Assessment
VCDP	Vulnerable Community Development Plan
WB	World Bank
WUA	Water User Association

#### 1. Background

Rani, Jamara and Kulariya are Farmer-Managed Irrigation Systems (FMIS) located in Kailali district in the far western development region of Nepal with a command area of about 14,300 ha. The systems were developed by the farmers between 1896 (Rani system) and 1915 (Kulariya system). These systems receive water from the Karnali River, a major snow-fed river, which forms braided channels as it emerges from the hills to the Terai plains. Jharahi Nala is one such channel from which the farmers divert water into the canals by constructing temporary diversion works. The irrigation systems lack intake and control structures to provide reliable and adequate water to the canals. The main problems encountered include uncontrolled flooding during higher flows in the river, erosion of canal banks, frequent wash out of temporary diversion, poor water distribution and management. However, during the dry period, every year, the farmers have to dig out the channel in the river bed and divert water from the main course using machinery and mostly the manual labour.

World Bank (WB) support for Modernization of Rani Jamara Kulariya Irrigation Scheme (MRJKIS) was proposed in two phases. The first phase was to modernize the higherorder irrigation systems to make them hydraulically more efficient, to strengthen community based irrigation management by institutional development of beneficiary organizations and to provide support to agriculture development. All works under MRJKIS Phase I has been completed. The second phase would work on lower-order irrigation systems (sub secondary, tertiary, water course) to deliver water from sub secondary canal to the field and intensifying agriculture to increase production and productivity through best use of irrigation water together with effective extension and outreach services. The first phase ended in September 30, 2017 and preparation for the second phase is in progress.

The assessment of safeguard policies triggered by the project was conducted in accordance with World Bank's Operational Policies (OPs) and Bank Procedures (BPs). The public disclosure of the safeguard documents; draft Environment Assessment (EA), the draft Biodiversity Management Plan (BMP), the draft Integrated Pest Management

Plan (IPM), the draft Social Assessment (SA), the draft Vulnerable Community Development Plan (VCDP) and Resettlement Policy Framework (RFP) commenced on December 14, 2017.

### 2. Overview of Public Consultation

The executive summary of the draft safeguard documents was made publicly available on Department of Irrigation's (DOI) website <u>www.doi.gov.np</u>. All the concerned stakeholders from the Governmental, Non-Governmental, Water User's Association, Community Forest User's Group were invited to the consultation program through an official letter on December 11, 2017. The list of invitees for Public Consultation Program is shown in **Annex I**.

On the 14<sup>th</sup> December 2017 at 12:30 a.m. in the meeting hall of the Siddhartha Hotel, Tikapur, Kailali, an open public meeting was held on the public consultation for the following safeguard DRAFT documents of **Modernization of Rani Jamara Irrigation Schemes Phase 2.** 

- Environment Assessment (EA)
- Biodiversity Impact Assessment (BIA);
- Integrated Pest Management Plan (IPM);
- Social Impact Assessment (SIA);
- Vulnerable Community Development Plan (VCDP);
- Resettlement Plan Framework (RPF);

The program started with participant's registration, the signed attendance list shown in **Annex III and overall meeting schedule is attached in Annex II .** The public consultation meeting was facilitated by Mr. Baburam Subedi, Under Secretary, Rani Jamara Kulariya Irrigation Project (RJKIP). After a brief greeting, Mr. Subedi highlighted the purpose of the program and encouraged for the active participation and discussion during the program. The program schedule was organized in three sessions; presentation, discussion and feedback from the participants, and recommendation and suggestion from the Stakeholders. The presented power point slides of all presentations are attached in Annex IV.

#### **2.1 Presentation session**

#### 2.1.1 Brief Introduction of the Project

The presentation session began with the brief overview of MRJKIS Phase 1 and 2. Mr. Susheel Chandra Acharya, Project Director, RJKIP. Mr. Acharya presented overall achievement of activities under Phase 1, project preparation status and overview of proposed phase 2. Mr. Acharya also highlighted the completed activities related to environment, safeguard as well as health and safety measures applied during implementation. He briefly focused the problems faced during implementation and lesson learned for phase 2. The project components with major activities and programmes under each component was also highlighted. All the power points presented during session is attached at Annex III.

#### 2.1.2 Agricultural Component and Integrated Pest Management (IPM)

Mr. Kul Prasad Tiwari Chief Agriculture Component Implementation Unit (ACIU) began his presentation giving brief overview of Agriculture component under Phase 1 and Phase 2. He highlighted the achievements due to implementation of phase 1 proposed activities under Phase 2. He highlighted the achievements due to implementation of phase 1 and overall scenario changed in agriculture in the project area. and proposed activities under phase 2. Achievements in increment of crop yield change in cropping pattern through Farmers Field School and by other measures was briefly highlighted.,.

Then presentations on draft IPM was delivered. Mr. Tiwari highlighted the purpose of IPM, adopted practices during implementation of phase 1, pest problems in the command area and recommended measures during implementation of phase 2.

#### 2.1.3 Environmental and Bio-Diversity Assessment and Management Plan

Draft EA and BMP was delivered by Mr. Dinesh Bhatt, Senior Divisional Engineer (SDE), RJKIP, with the Consultants representative, Dr. Naresh Rimal. Mr. Bhatt highlighted on beneficial impact, potential adverse impact, mitigation measures, implementation and monitoring and recommendation for Bio-Diversity conservation. He elaborately presented adverse impact during construction phase to wildlife and aquatic

life. For the implementation monitoring as in the first phase reformed LEMC matching with local body was proposed. Similarly third party monitoring at the beginning of the project, mid-term and final year of the project altogether three times during project implementation was highlighted too. Similarly as a bio-diversity conservation measures linkages of fragmented forest with Chure, wet land restoration, dolphin conservation measures etc were presented.

#### 2.1.4 Social Impact Assessment

The draft SA was presented by Senior Sociologist of RJKIP Mr. Gauri Lal Upadhyaya. Mr. Upadhaya highlighted the settlement, demography identified vulnerable community, institutional status of WUA, social issues and mitigation measures. The identified social issues presented were Gender and Social, land acquisition and resettlement, communication strategy, institutional strengthening of WUA, capability of WUA for MOM, coordination with local body etc. He presented a grievances redress committee for settlement of grievances.

## 2.1.5 Vulnerable Community Development Plan (VCDP) and Resettlement Policy Framework (RPF)

Draft VCDP and RPF was presented by the Consultants Mr. Madhav Bhattarai. He elaborately presented the detailed programmes for enhancing livelihood of vulnerable community and stated proposed project willnot have any adverse effect to the targeted community The identified programmes were improved access to information, creating enabling environment for the participation, agriculture support program, capacity support. Mr. Bhattrai also highlighted about Gender action Plan (GAP). Similarly Mr. Bhattrai presented policy matrix for resettlement action. The matrix was targeted for loss of economic opportunity, loss of livelihood base, adversely affected family, loss of community structures and loss of land etc.

#### 2.1.6 **Discussion**

After the presentation, the floor was opened for discussion and feedback session, participants were asked to provide their valuable feedback, suggestions, queries regarding the draft safeguard documents. Participants of the public consultation asked questions,

provided suggestions, raised issues regarding the safeguard documents and highlighted the positive aspect of the program. The response to the participant's queries, comments was answered by the Project Director, RJKIP. The issues raised from the participants and its response is shown in **Annex V**. The program ended with feedback and suggestions from stakeholders, followed by a vote of thanks from the Project Director.

## 3. Issues Highlighted

The major issues highlighted by the Participants are as follows:

- Programs for conservation of birds in the project area.
- Destruction of wildlife movement corridor, providing passage for safe wildlife movement and provisions to rescue domestic animals trapped in the canal.
- Programs focusing on livelihood improvement of Raji, Badhi and Sonaha Communities.
- Women's participation in each and every activity of the project, participation of low level women in the training programs.
- Plantation on the vacant public land, and along the embankment constructed by the Project (Karnali, Mohana and Patharaiya River)
- Agriculture activities should focus on livestock, fish farming, and bee farming.
- Discharging water of Rani, Jamara and Kulariya system to the Patharaiya River for creating enabling environment for Dolphins during winter season.
- Management of the feral Cattle.
- Pollution of Jamara Canal. Suggested to include waste water management activities.
- Market expansion of banana and other agricultural products, and non-availability of pesticides required for modernized banana farming in the market.
- Programs for river training works of Rora Canal and watershed management of Dhobini Khola.

## 4. Findings and recommendation from the Stakeholders

### Kumar Raja Shahi, Chairman, WUA Main Committee

Mr. Shahi appreciate the works of phase 1 and suggested following for phase 2.

- Continuation of upgrading of farm roads in Phase 2.
- Monitoring of river bed material extraction and prohibition of its export outside of the District.
- Dissemination of information regarding location and river stretch where EIA has recommended for sand gravel and boulder extraction.
- Monitoring the excessive use of pesticides.

### Pradeep Choudhary, Chairman, Janaki Rural Municipality

- The Project and local government should coordinate with each other during the implementation of MRJKIS Phase 2 Project.
- Project should provide information about its annual plan, program and activities.
- Monitoring of the activities implemented by the project and the local government in order to control duplication of the programs.

#### Mahadev Bajgain, Mayor, Lamki Chuha Municipality

- Concept of collective farming is a good initiation. Farmers should be provided with convenience loan, subsidy on seeds and machineries, technical support for collective farming.
- Programs and activities of Phase 2 should be focused to maximize the utilization of agricultural production.
- Priority should be given to the river training works of Rora, Charela, Chauri and Pathariaya Rivers.

• Special programs with services from livestock and agriculture experts, should be launched for the management of feral cattle.

#### Tapendra Rawal, Mayor, Tikapur Municipality

- Concept of construction of Irrigation Museum will be an added benefit in the project area. Tikapur Municipality has started the preparation of master plan for extension of the Tikapur Park and Municipality will provide support for the construction of Irrigation Musuem.
- Tikapur Municipality has initiated waste water management programs to solve the problem of river and canal pollution. Furthermore, Municipality has prepared an action plan for the management of feral cattle.
- The main issue is the management of project after its completion.
- Project should conserve the traditional Badhghar system of canal operation and maintenance.
- Project should initiate activities regarding insurance of crops and livestocks.

#### Govinda Prasad Rimal, Chief District Officer, District Adminstration Office, Kailali

- The Public consultation program has helped to increase transparency and accountability. Satisfactory performance of MRJKIS Phase 1 activities.
- Need to assess the consequence of land fragmentation in the project area; whether the project will be able to gain benefit after its completion.
- Importance of establishment of Quarantine Post and quality control in the Custom Office.
- Improvement in implementation of Phase 2 by incorporating lessons learnt during the implementation of Phase 1.

#### Surya Bahadur Thapa, Chairman, District Coordination Committee, Kailali

• Negative impact on achievement of project development objective due to fragmentation of agricultural land. Need to restrict the land fragmentation process in the project area.

- Project should focus on collective farming programs.
- Project should launch a model program in the project area for industrialization of agriculture. All necessary technical support, subsidy on equipment's, machineries, seeds, fertilizers should be provided by the Project.
- Plantation along the river banks
- Requested to support the establishment of Soil testing lab, agriculture college in the project area.

Annex I: List of Invitees for Public Consultation Program

A. From Water User's Association

Executive committee members in principal position from four (Rani, Jamara, Kulariya and Main WUA) system

Five representatives Badghar from each system.

B. Governmental and Non-Governmental Organization

Chief District Officer, District Administration Office, Kailali

DADO, District Agriculture Office

Warden, Bardiya National Park

Representative, TAL, Kohalpur

DFO, District Forest Office

Chief, Sector Forest Office, Lamki

Chief, Illaka Forest Office, Lamki

Chief, Soil conservation Office, Kailali

Representative, President Chure-Terai Madhesh Conservation Development Board

Chief, District Women Development Office, Kailali

C. Local Government

Chairman, District Coordination Committee

Mayor and Deputy Mayor, Tikapur Municipality

Mayor and Deputy Mayor, Lamki Chuha Municipality

Chairman and Deputy Chairman, Janaki Rural Municipality

D. Community Forest User's Group

Representative from Kalika CF, Chetana CF, Kailasheswor CF, Jagatpur CF, Shivashakti CF, Chatiwan CF.

E. Non-Governmental Organization

Chief, Dolphin Conservation Centre, Lamki

Representative, Khadka Prathisthan, Tikapur

Representative Single Women Group, Tikapur

Representative from project based relevant NGO's, NGOs working on Women, indigenous and Dalit group in the project area, NGOs working in conservation and environment in the Project area.

Chairman of cooperatives of seed collection and promotion centre

Agro-vet businessman in Tiakpur and project area.

Annex II: Program Schedule

#### Government of Nepal

#### Ministry of Irrigation

### Department of Irrigation

### Modernization of Rani Jamara Kulariya Irrigation Scheme Phase II (P158364)

#### **Public Consultation on Safeguard Documents**

Date: December 12, 2017 onwards

Time: 11:00 AM

Venue: Siddhartha Hotel, Tikapur, Kailali

Master of Ceremony: Baburam Subedi

#### Observer from the WB: Drona Raj Ghimire, Rekha Shreesh, Prakash Awasthi

S.N	Duration	Activity	Responsible	Remarks
1	12:30-13:00	Registration	Jagi Raj Joshi, Prakash Bhatt RJKIP	
2	13:00-13:15	Brief overview of MoRJKIS Phase I and II	Susheel C Acharya, PD, RJKIP	
3	13:15-13:25	Brief Overview of Agriculture component	Kul P Tiwari, Chief ACIU	
4	13:25-13:40	Briefing of the Pest Management Plan	Kul P Tiwari, Chief ACIU	
5	13:40-14:10	Briefing of Environmental and Biodiversity Assessment	Dinesh Bhatt, RJKIP / Dr. Naresh Rimal, Consultant	
6	14:10-14:25	Briefing of Social Assessment	Gauri Lal Upadhaya, RJKIP	
7	14:25-14:40	Briefing of VCDP, RPF	Madhav Bhattrai, Consultant	
8	14:40-14:55	TEA B	REAK	
9	14:55-15:50	Discussion and Feedback	Rapporteur: Manish Maharjan; Kushal Gautam, RJKIP	
10	15:50-15:55	Feedback and suggestion	Kumar Raj Shahi, WUA Chairman	
11	15:55-16:00	Feedback and suggestion	Chairman, Janaki Rural Municipality	
12	16:00-16:05	Feedback and suggestion	Mayor, Lamki Chuwa Municipality	
13	16:05-16:10	Feedback and suggestion	Mayor, Tikapur Municipality	
14	16:10-16:15	Feedback and Suggestion	CDO, Kailali	
15	16:15-16:20	Feedback and Suggestion	Chairman, District Coordination Committee, Kailali	
16	16:20-16:25	Vote of Thanks	Susheel C Acharya, PM, RJKIP	

Annex III: Signed Attendance Form

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### **Attendance Sheet**

14 Dec, 2017

Hotel Siddhartha, Tikapur

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# **Public Consultation Program**

## Attendance Sheet

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14 Dec, 2017

Hotel Siddhartha, Tikapur

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**Annex IV: Presentations** 

# Presentation on Overall Project Scope (Phase I and Phase II) by

**Project Director Susheel Chandra Acharya** 















### Project Components Component 1: Scheme Modernization (Canals, Structures, Road improvement, Bridges, Culverts, Watershed conservation and CAP works) Agricultural Production Component 2: Support and Strengthening Water Users Associations/Groups (crop diversification, post-harvest support, demonstrations and FFS, Capable WUA for MOM of modernized system, etc) Component 3: Project management (Capacity building, Services, Goodsetc)












Presentation on Agricultural activity during Implementation of Phase I

by

Senior Agricultural Officer Kul Prasad Tiwari

# Well-Come and Namaste



Kul Prasad Tiwari Agriculture Component Coordinator

# Major Programs and Achievements of First Phase

- 1. Cereal, oil seed and Pulse demonstration Program
- 2. Vegetable Demonstration Program
- 3. Fruit demonstration Program
- 4. Seed Production Program
- 5. Farmers Field School (FFS)
- 6. Construction of Collection centre and Hart Bazaar
- 7. Construction of Seed storage houses
- 8. Support to Agriculture Machineries

1. Production Demonstration Program								
	No. of	Multiplication of	Total					
कृषि विभाग	Demonstration	Demonstration	Demonstration in					
	by crop	by cultivation	farmer fields					
Names of	varieties	practices	/Adoption					
Crops								
Cereal crops	17	52	231	300				
Vegetables	25	63	293	381				
Fruits	10	15	101	126				
Lentil	2	15	79	90				
Mustard	2	21	114	96				
Total	56	166		993				
Target :	200 Prog	818	993					



# 1. Achievements of Cereal block demonstration

कृषि विभाग

- 1. Ten Varieties of Paddy and Maize have been introduced in the project command area,
- 2. SRI in Paddy demonstrated and promoted,
- 3. Line showing demonstration in maize, mustard and wheat and other crops promoted
- 4. Direct Sowing Method of paddy used and

promoted 5 . Zero tillage practices in lentil, garlic and wheat,

Cereal block demonstration covered 791 ha and 1555 metric ton of cereals has been produced.



	Primary	Follow up	Total	Production	Tentative
Name of Crops	Demo.	Demo.	area (ha)	(MT)	Income (US\$)
1. Cauliflower	8	38	62	806	85250
2. Cabbage	5	17	39	546	48000
3. Potato	9	34	73	1533	294808
4. Cucumber	17	93	108	2052	236769
5. Bitter gourd	13	35	32	352	30462
6. Bottle gourd	7	24	27	459	48548
7. Chilly	9	31	29	464	62462
8. Tomato	11	19	23	299	51750
9. Cowpea	5	9	17	306	38250
Subtotal	81	300			896298
Total	3	81	410	6817	896298





3. Fruit Production Demonstration									
Name of Fruit	Initial Demonstration	Follow Up Demonstration	Total Area (Ha)	Total Production (MT	Tentative income (US\$)				
Banana	15	101	145	8900	826923				
Lemon	3	5	3						
Mango	1	0	1						
Pomegranate	1	0	0.5	0	0				
Subtotal	20	106							
Total	12	149.5		826923					



### Results of fruit demonstration

- 1. Banana has become of the most preferred high value fruit in the project area: farmers can earn on an average 2500 US\$ net income from one ha of banana in a year.
- 2. Drip irrigation and high density planting method of banana has become of the best of the cultivation in the region: this method reduce the cost of production by 35% and increase the net income by 25%.





4. Seed Production Program								
रूष कृषि 1	Name of Cooperatives	Total Members	Name of Crops	Annual seed production area (in ha)	Annual seed production (in mt)			
1	Namuna Farmers' Multipurpose Cooperative Ltd, Tikapur	331	Paddy Wheat	25	97.5			
2	Adhunik Farmer Multipurpose Cooperative LTD	464	Paddy Wheat	23	87.4			
3	Dhansinghpur Agriculture Cooperative Ltd	33	Paddy Wheat	30	123			
4	Kisan Seed Production Farmer Cooperative Ltd	45	Paddy Wheat	28	112			
5	Pashupati Farmer cooperative Ltd	36	Paddy Wheat	24	93.6			
6	Seed Production Farmers Cooperative Ltd	53	Paddy Wheat	80	304			
7	Ujyalo cooperative Ltd	398	Paddy Wheat	35	140			
	Total	1360		285	957.5			

Cu	Cumulative Figure of Seed Production Programs								
	Area (ha)	Production	Total	Remarks					
None of		(metric ton)	income						
crops			(US\$)						
Paddy	360	1476	283192						
Wheat	360	1368	242000						
Potato	30	570	91827						
Total	750	3414	917019						
Effects:									
🗆 Availability	of improved seed h	as been increased	l in the proje	ect area,					
□ Some of see	ed producing coope	ratives are develo	oped as busi	ness					
	and productivity of	coroal crops have	improved						
	Wheet seed exported other hilly districts variety WK12								
However, and another they decreatives only most 250/									
nowever,	However, seed produced by cooperatives only meet 35%								
de	mand of seed of	project comm	and area,						





5. Details of Farmer Field Schools (FFS)								
	No of FFS	Total No of trained	Total No of trained					
Name of Crops		farmers	women					
Paddy	11	275	206					
Cabbage	12	312	252					
Cucumber	32	832	674					
Biter gourd	14	400	328					
Bottle gourd	7	234	176					
Cow pea	4	108	94					
Okra	6	208	168					
Total	86	2207	1810					
Output and effe	ects of FFS sessi	ons:						
□ Farmers are aw	are of harmful ef	fects of chemical pesticion	des on human					
health and envi	ronment,							
FFS farmers learners	nt adequate skills a	nd knowledge for preparin	g biological					
pesticides from local plants and started preparing and using biological								
pesticides by their own after the termination IPM-FFS.								
□ Most of the FFS t	□ Most of the FFS trained women farmers are empowered technically, socially and							



C									
are	6. Field Based Trainings								
कृति वि	भाग Topic of Trainings	Duration of Training	Numbers of Trainings	Total Number of Trained Farmers					
1	Paddy cultivation practices	3	12	300					
2	Paddy Seed Production Techniques	3	18	486					
3	Vegetable production Techniques	3	23	644					
4	Offseason vegetable production techniques	3	7	175					
5	Seasonable and offseason vegetable production techniques	3	7	182					
6	Management of Vegetable nurseries	3	3	78					
7	Sugarcane cultivation practices	3	2	56					
8	Potato cultivation practices	3	5	145					
9	Cucurbits cultivation practices	3	9	252					

	Onion cultivation	3	4	104	
কৃ 🗊 🖣	practices				
	Cultivation of	3	5	130	
	cauliflower and				
11	cabbage				
	Cowpeas cultivation			116	
	practices				
12		3	4		
	Summer vegetable			297	
	production techniques				
13		3	11		
	Maize cultivation			108	
	practices				
14		3	4		
	Onion cultivation			81	
15	practices	3	3		
	Total		117	3154	
	1		117	0101	



1	Detail of Seed Storage House of Cooperatives								
Sa कृषि	Name of cooperative	Seed Storage Capacity (MT)	Annual Seed Production (MT)	Available Machines					
1	Namuna Farmers' Multipurpose Cooperative Ltd, Tikapur	96	50	Seed processing, seed treatment and weighing machines					
2	Adhunik Farmer Multipurpose Cooperative LTD	80	35	Seed processing and , weighing machines					
3	Dhansinghpur Agriculture Cooperative Ltd	N/A	60	N/A					
4	Kisan Seed Production Farmer Cooperative Ltd	70	50	Seed processing, seed treatment and weighing machines					
5	Pashupati Farmer Cooperative Ltd	80	40	Seed processing and weighing machines					
6	Seed Production Farmers Cooperative Ltd	110	320**	Seed processing, seed treatment and weighing machines					
7	Ujyalo cooperative Ltd	N/A	80	N/A					
	Total	872	635						
	Most of Seed storage houses are under utilized.								







A griculture Machineries									
2									
S.N	Name of machines	Numbers	Uses of Machines						
कृषि वि	वेभाग	of							
		machines							
1	Power tillers	132	Plowing, carrying and pumping water etc						
2	Harvesting machines	113	Paddy and wheat harvesting						
	/Reaper								
3	Puddling machines	105	Puddling land for transplanting paddy						
4	Processing/grading	7	Cleaning and grading seed of paddy,						
	machines		wheat, maize, mustard, lentil etc						
5	Seed treatment machines	2	Treating the seed of wheat, paddy,						
			maize, lentil, mustard etc						
6	Weighting machines	45	Weighing any kinds of production inputs						
	Total	404							
🗆 Use	e of machines has suppor	ted to reduc	e cost of production,						
□ To :	some extend has supporte	d to <mark>solve t</mark> ł	ne problem of shortage of manpower,						
	proved the quality of seed	by use of se	ed grading and seed treatment						
m	achines		5 5						
		6							
□ Ha:	s become source of income	e tarmers gro	oups and agriculture cooperatives,						



			Result Framework							
	Indicators	Unit	Baseline	Progress 15 July -17		Average productivity	End Target	Prog	ress	
-	<b>ह</b> षि बिभाग			Project's plots	Farmers' plots		30 Sep-17	in per	cent	
	Increase in									
	irrigated crop									
	yields of main									
	crops rice, wheat,									
	and maize									
	Paddy (Spring)	Mt/ha	2.8	5.0	3.2	4.1	3.1	132	%	
	Paddy (monsoon)	Mt/ha	2.6	4.6	3.1	3.8	2.9	131	%	
	Wheat	Mt/ha	1.6	4.1	3.0	3.5	1.9	184	%	
	Maize	Mt/ha	1.7	3.8	2.9	3.3	1.8	183	%	
	Seed Storage	No			5		4			
	House						-			
	Collection Centre	No		Ľ,	5		3			
	Soil Campaign	No		9	)		5			
	Famer Field School (FFS)	No		8	6		90			
	Demonstration	No		10	38		200			



### **Presentation on Integrated Pest Management**

by

Senior Agricultural Officer Kul Prasad Tiwari



Kul Prasad Tiwari Agriculture Component Coordinator

# िवषादी/Pesticides

विषादी औषधी होईन विष हो । यसले कीरालाई मार्छ भने मानिस र जनावरलालाई पनि मार्छ । वातावरण दूषीत पार्छ र पानीलाई विशाक्त बनाउँछ ।

त्यसैले, विषादीलाई सही तरीकाले प्रयोग गर्न सिकों र सिकाऔं।

### History of Pesticides

- 1939 (Dawn of the modern insecticide era): DDT recognized as an effective insect control
- Late 1940s (post WWII): the advent of chemical" pesticides including 2,4-D,
- 1948 Warfarin<sup>™</sup> registered as a rodenticide (and laterin the early 1950s- as an anticoagulant in human medicine),
- In Nepal Chemical pesticides imported from USA in 1952 to control Malariya,















# <text>

# 3. Integrated Pest Management (IPM)

Integrated Pest Management (IPM) is a sustainable approach to managing pests by combining <u>biological</u>, <u>cultural</u>, <u>physical and chemical tools</u> in a way that minimizes economic, health and environmental risks."



4. संचारि FFS)	ेलत पाठश	ालको िववरण	T (IPM-
वालीको नाम	कृ षक पाठशालाको संा	तर्ााेलम 0ाa कृ षक संा	ताोिलम 0ाa मिहला कृ षक संा
धान	11	275	206
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का ो	32	832	674
करे ला	14	400	328
लैका	7	234	176
बोडी	4	108	94
िभ ी	6	208	168
ज ा	86	2207	1810
	•	·	

**—** 





### 6. IPM-FFS क**ा म**ु**p** उपल **1**ीह

• कृ षकह लाई िवषादीको हािनकारक Uकितको जानकारी भएको: Improved knowledge on chemical pesticides and its detrimental effects on human and environment has been improved.

• जैिवक िवषादी बनाउने र Uयोग गन तरीका सीके का: Farmers have learned technical knowledge and skills concerning to preparing biological pesticides from local plant materials,

• मी ृजीव र श ृजीव वारे जानकारी: Farmers can identify harmful and beneficial insects of major crops,

• सह ी तर ी क ाल े व ाल ी fia थान: Farmers have acquired knowledge to manage the crops properly in the field to protect attack of insects and diseases,

### 6. . IPM-FFS क**ा म**ु**p**

- मिहलाको शस करण: PM-FFS trained women are empowered technically and socially. They share the learnt knowledge and practices to others so they are respected by society,
- िवषादी Uयोग गदा सुर त तरीका: Majority of IPM trained farmers take care of precaution measures while applying chemical pesticides, such as toxicity of pesticides, doses of pesticides, residue duration of pesticides and
- िसके का कु राह को Uयोग: Some of the trained farmers use the learned practices individually in their own field such as

## 7. Institutional Mechanism for Sustainability of IPM-FFS of I Phase

- 1. IPM-FFS दता भएका: Groups have been registered in the DADO and Agriculture Section of Municipalities and Rural Municipalities,
- 2. IPM-FFS समूहको िहतकोष: Monthly basis membership fee collection and provide loan to the members for agriculture related activities,
- िनयिमत बैठक र काय म: Groups have involved in collective farming activities, समूिहक उ1ादन Oदश न संचालन गरेका
- 4. समूिहक उ ादन Uदश न संचालन गरे का: Project support for establishing production demonstration,
- 5. Regular monitoring of Group activities: DADO, ASC and Project organize Pesticide Reduction campaigns.

### 8. के ही सुधार नु पन कु राह

- िवषादीका िकलिसम र **ा**सको िवषालुपन वारेमा कम जाकनरी भएको: Majority of farmers are unaware of pesticides types (fungicides, bactericides, weedicides), level of poisoning, safety measures and potential hazard to environment and human health,
- कृ षकह ले आ नै Oयासमा पाठशाला संचालन नभएको: Farmer to farmers dissemination of IPM practices has not got momentum among IPM-FFS groups and trained farmers (Lack of IPM-FFS result dissemination strategies)
- ए ोभेटह लाई िवषादी fia थापन Orientation नभएको: Agro- vets and pesticides retailers orientation programs were not included in the IPM package especially of pesticides transportation, storage, application, ethical issues),

9. Banned Pesticides in Nepal (2015)			
S.N	Name of Pesticides	Banned date	
1	Chlorden*	March, 2001	
2	D.D.T*	March, 2001	
3	Dieldrin	March, 2001	
4	Endrin	March, 2001	
5	Aldrin	March, 2001	
6	Heptachlor	March. 2001	
7	Mirex	March, 2001	
8	Toxaphen	March, 2001	
9	B.H.C	March, 2001	
10	Lindane	March, 2001	
11	Phosphamidon	March, 2001	
12	Organo-mercury fungicide	March, 2001	
13	Mythyl Parathion	June, 2006	
14	Monocrotophas	June, 2006	
15	Endosalphan	November, 2012	
16	Foret	July, 2015	

### 10. Banned Pesticides Cont...

### □ सबै िकसानह लई Oितब त िवषादी वारे जानकारी नभएको:

Farmers have knowledge about banned pesticides and its detrimental effects to environment and human health but majority of farmers may be unaware of banned pesticides,

□ Agro-vets and pesticide retailers are informed about banned chemical pesticides and they are aware of risk of using these pesticides in selling lists,

□ **O**ितब त िवषादी वारे मा आम संचार मा मबाट सूचानाह िदनु पन :Community and FM radio, Poster, publication in local language and farmer to farmers information.



l	Jकोप नस ेरोग	ा तथ <b>ा क</b> ीरह
वाली	कीरा	रोग
१ धान	खैरो फड्के कीरा	ा
	गवारो	खैरा रोग
२ आलु	कट वाम	डडु वा
		ऑईले रोग
3 गोलभेडा	फलको गवारो	
र गालमडा	टुटा	मो ाक भाईरस
		डडु वा
		ऑईले रोग
४ फिस समद्रका	फल कु हाउने कीरा	पाउडरी िम यु
तरकारी	रातो खपटे	डाउनी िम यु
	ি	मो ाक भाईरस







### 13. IPM-FFS को बैक क िविधह को Uयोग

- 1. वाली च अपनाउने: Crop rotation helps to break up the pest and disease cycles, not to grow same crops in same land repeatedly,
- 2. रोग अवरोधक जातह को Uयोग: Cost effective and environmental friendly option of best pest management,
- 3. जैिवक िवषादी उ ादन र Uयोगमा जोड: Prepared from local plant materials and less costly and conserve environment,
- 4. िम ु जीवह को संर ण गन : Use of beneficial insects such as spider, dragonfly, Tiger beetle etc,
- 5. **S**ा'थ म**ाट**ो **fi**व'थ**ापनम**ा ज**ोड**: Field cleanliness, timely irrigation, appropriate dose of manure and fertilizers.



### Presentation on Environmental Assessment and Bio-diversity Assessment by

**SDE Dinesh Bhatt** 





	Beneficial Impacts of the Project in the DIA	
Stage	Beneficial Impacts	
0	Impact of Minimizing the Government Land and Forest Encroachment	
0	Reduce the dependency on rain fed agriculture	
0	Impact due to strengthening of the Water User Association Formation	
C / O	Impacts of Construction on Local Employment Opportunities	
0	Impacts on Productivity due to Improved Irrigation	
0	Impacts of Cropping Patterns and Intensity in Project Areas	
0	Impacts of Flood Control by command area protection works	
С	Impacts of Construction on Local Government Revenue opportunities	
C / O	Awareness on Water Management, Siltation and Sedimentation Management, Erosion Protection	
C / O	Awareness on Forest Management and Natural Resources Conservation	
0	Vegetation cover_due to project related afforestation	
C / O	Local produce marketing/business opportunities	
0	Irrigation Canal Acts as Natural Line of Fire	






















#### **Construction Phase**

Pressure to community infrastructures and services (school, water supply, market, fuel)

#### Possible mitigation measures

- Establishment of infrastructure facilitated labor camps
- Encourage local labor force for project employment
- Discourage outside workforce to live outside the camps

















#### Recommendation for Biodiversity conservation

- Linking chure with fragmented forest patches and their conservation
- □ Bank protection and river training works
- Wetland restoration
- Dolphin observatory and ancillary infrastructure
- □ Support to NGO such as DCC
- Capacity enhancement/exposure visit (such turtle breeding center, Kalikoshi saatkanaya wetland, Betana Tal etc) ----resourcegeneration/conservation











For Further Reading: <u>www.doi.gov.np</u> Feedback <u>rjkip@hotmail.com</u> THANK YOU Presentation on Social Assessment

by

Senior Sociologist Gauri Lal Upadhyay

#### SOCIAL ASSESSMENT RANI JAMARA KULARIYA IRRIGATION PROJECT PHASE-II

Public Consultation Program Dec 14, 2017

Hotel Siddhartha, Tikapur

Gauri Lal Upadhyay Senior Sociologist RJKIP



#### THREE TYPES OF STUDY

• Social assessment in phase - I, 2011

• DEVELOPMENT IMPACT EVALUATION (DIEM) BASE LINE STUDY, 2017

• PILOT AREA STUDY, 2017

#### METHODOLOGY USED

- Literature Review
- VISIT/OBSERVATION OF THE PROJECT COMMAND AREAS
- Consultation with the Project Team and the World Bank Team
- CENSUS SURVEY OF THE PILOT AREAS
  - The detailed census survey of 2,443 households of the three pilot areas namely Rani (Simreni), Jamara (Bhagatpur) and Kulariya (Bhagraiya) was undertaken to identify
- BASELINEINFORMATION (DIEME, 2017)
- STAKEHOLDERS CONSULTATION
- INSTITUTIONAL ANALYSIS OF THE WATER USER ASSOCIATIONS (WUAS)
- KEY INFORMANT INTERVIEW
- REVISIT AND REVIEW THE EXISTING RAP AND VCDP
- SOCIAL AND RESOURCE MAPPING OF THE PROJECT SITE
- CONSULTATION WITH THE PROJECT BENEFICIARIES
  - Altogether 23 focus group discussions were carried out with (Women, Occupational Caste, Terai Janajati (Tharu), Hill Janajati (Magar)
- Further, ddisplaced people were also consulted for the cross verification and validation of the information

# FINDINGS OF ASSESSMENT

Population Characteristics	Base Line,2011	DIEM, 2017	Pilot Area census Survey, 2017
Total Population	135062	16926	15260
Male	64136	8672	7838
Female	70926	8254	7422
Total HH	26601	2509	2443
HH size	5.1	6.7	6.2
BCTS%	34.5	16.65	43
Hill adibasi Janajati%			3.31
Terai adibasi Janajati%	50.71	74.95	36.91
Occupational Caste %	14.24	7.5	16.46
Others%	0.55	2.05	0.32
Literacy Rate %		83.5	83

		ΝΔΓ	$\square$			
By Occupation	Male	%	Female	%	Total	%
Agriculture	1309	10.1	1301	10.0	2610	20.10
Business	344	2.6	180	1.4	524	4.03
Service	876	6.7	245	1.9	1121	8.63
Daily wages	828	6.4	226	1.7	1054	8.12
Student	1847	14.2	1663	12.8	3510	27.02
No work	176	1.4	210	1.6	386	2.97
Foreign	1064	0 1	111	0.0	1170	
employment	1004	8.2	114	0.9	11/8	9.07
Household work	171	1.3	2252	17.3	2423	18.66
Other	54	0.4	128	1.0	182	1.40
Total	6669	51.3	6319	48.7	12988	100.00

## LAND HOLDING SIZE IN RJKIP (DIEM, 2017)

Land Holding Size	Percentage of Holding
No holding	6.9
Holding with land	93.1
< 0.1 ha	34.2
0.1 – 0.5 ha	45.4
0.5 – 1.0 ha	9.1
> 1 ha	4.4

The baseline survey of the project carried out by Development Impact Evaluation (DIEM) was carried out in 2509 households of the project command areas (10 % of the total population) in 2017. The data shows the highest percent (45.4 %) of land holding falls in the range of 0.1 to 0.5 ha. Average land holding size in the project command areas is 0.42 ha which is below than the national average (0.67 ha).

By Caste/EthnicityAverage landholding (ha)BCTS0.42Hill origin Janajati/Adibasi0.40Tarai origin Janajati/Adibasi0.42Hill origin Occupational Castes0.35Tarai Occupational Castes0.42Musalman1.39Other0.28By Household Head Sex0.42Male0.42Other0.42Other0.42Tarai Occupational Castes0.42Musalman1.39Other0.28By Household Head Sex0.42Male0.42Other0.42By Percapita Group0.37Above Poverty0.43Total0.42		C CITE IN DILOT AREA
BCTS0.42Hill origin Janajati/Adibasi0.40Tarai origin Janajati/Adibasi0.42Hill origin Occupational Castes0.35Tarai Occupational Castes0.42Musalman1.39Other0.28By Household Head Sex0.42Male0.42Other0.37Above Poverty0.43Total0.42	By Caste/Ethnicity	Average landholding (ha)
Hill origin Janajati/Adibasi0.40Tarai origin Janajati/Adibasi0.42Hill origin Occupational Castes0.35Tarai Occupational Castes0.42Musalman1.39Other0.28By Household Head Sex0.42Male0.42By Percapita GroupBelow Poverty0.37Above Poverty0.43Total0.42	BCTS	0.42
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By Household Head SexMale0.42By Percapita Group0.37Below Poverty0.37Above Poverty0.43Total0.42	Other	0.28
Male0.42By Percapita Group0.37Below Poverty0.43Above Poverty0.42	By Household Head Sex	
By Percapita GroupBelow Poverty0.37Above Poverty0.43Total0.42	Male	0.42
By Percapita GroupBelow Poverty0.37Above Poverty0.43Total0.42		
Below Poverty0.37Above Poverty0.43Total0.42	By Percapita Group	
Above Poverty0.43Total0.42	Below Poverty	0.37
Total 0.42	Above Poverty	0.43
	Total	0.42

Landholding size in the pilot areas: Average land holding size of households of the pilot areas is 0.41 ha which is quite lower than the national average of 0.63 ha per household. This may reflect that land fragmentation is higher and commonly practice in the project site that leads to small and marginal farming.

ΙΔΝΓ	ENTITL		BY SOC	CIAL CAT	EGORY	
Social category	Population	Entitlements	%	Population	Entitlement	%
All Total	7422	859	11.57	7838	4436	56.60
By Caste/Ethnicity						
Hill high caste	3153	465	14.75	3409	1817	53.30
Hill Adivasi Janajati	253	38	15.02	252	208	82.54
Tarai Adivasi Janajati	2733	199	7.28	2900	1821	62.79
Hill Occupational Caste	602	51	8.47	582	276	47.42
Tarai Occupational Caste	658	101	15.35	669	304	45.44
Musalman	13	1	7.69	13	4	30.77
Others	10	4	40.00	13	6	46.15
By Household Head						
Male Headed	5981	482	8.06	6572	3674	55.90
Female Headed	1441	377	26.16	1266	762	60.19
By Poverty Level						
Below Poverty	2010	197	9.80	1992	996	50.00
Above Poverty	5412	662	12.23	5846	3440	58.84

The census survey of three irrigation schemes under RJKIP shows that only 11.57% of women have entitlements whereas 56.6% to men. This means there is a wider gap between men and women regarding entitlements.

Women's entitlements on land come through three ways; Gift to daughter/sister locally known as Daija/Daijo; (2) Women after the

Irrigation systems	Settements	vunierable Gloups	
	Bijayanagar	MuktaKamaiya	
	Jhanjhatpur	Land squatters/land less	
Rani	Simreni/Saipur	Magar	
	Bisnukantipur	Badi	
	Dhungana tole	Poor	
	Laikpur Sibir	MuktaKamaiya	
	Shaktinagar	Land squatters/land less	
T	Shankarpur, Katanpur	Occupational Caste	
Jamara	Bangaun	Magar	
	Jagatpur/Samatipur	Tharu/Poor	
	Bhartapur, / Dailekhi Tole	Tharu/Poor	
	Schoolpur (Bichki tole), Munuwa/ Thala Tole	Occupational Caste	
	Satbigaha	MuktaKamaiya	
	Baklahawa	poor	
	Chhota Khargauli	Magar, Bhul/Sarki	
Kulariya	Kanchanpur	Land squatters/land less	
	Jadupur	MuktaKamaiya, Land squatters/land	

	Inform	nation d	on Irrigatic	on Syster	n
SN	Name of System	Command area (ha)	Total Population	No. of Sub Branches	No. of Tertiary
1	Rani	5300	47096	19	224
2	Jamara	4900	73101	15	262
3	Kulariya	4100	40465	14	335
	Total	14300	16061 2(25063 HHs)	48	821

Information on WUAs							
SN	Name of WUA	Formation Date	Tenure	No. of committee members	No. of Sub Branches Committee		
1	Rani WUA	2016	5 year	29 (7 F)	19		
2	Jamara WUA	2016	5 year	25 (6 F)	15		
3	Kulariya WUA	2016	5 year	25 (8 F)	14		
4	Main WUA	2016	5 year	29 (7 F)	48		

# LEGAL STATUS OF WUA (Registration Status)

S. N	Name of system	Registration date (year)	Registered authority
1	Rani WUA	2004	Irrigation Development Division No-1: Kanchanpur
2	Jamara WUA	2000	Water Resource Development Committee, Kailali
3	Kulariya WUA	2004	Irrigation Development Division No-1: Kanchanpur
4	Main WUA	1999	Water Resource Development Committee, Kailali

INCLUSIVENESS IN in WUA								
				Com	position of	WUA		
S. N	Name of system	Size of WUA	Present board member	Female	(Occupati onal (Castes)	Janjati	Religious Minority	Women in key position
1	Rani WUA	29	29	7	2	18	0	0
2	Jamara WUA	25	25	6	1	21	0	0
3	Kulariya WUA	25	25	8	0	14	0	1
4	Main (system level) WUA	29	29	7	1	18	0	0

LABOUR CONTRIBUTION STATUS (OPERATION							
		AND N	1AINTE	NANCE	E OF IS)	)	
SN	Name of		Labor C	ontribution	person day b	by FY	
DIV	WUAs	2068/069	2069/070	2070/071	2071/072	2072/073	2073/074
1	Rani WUA	4008	38976	58597	35109	43886	50366
2	Jamara WUA	37923	37797	31368	38699	48362	56396
3	Kulariya WUA	7064	70279	97928	78978	76578	95601
	Total	48995	147052	187893	152786	168826	202363

FYImage: Progress (%) of targetRaniJamaraKulariyaTotal068/6914100020077813128247306028.76069/701800029925114554646279728.14070/711773059374116135777282834.12071/72272677500345250581102360345.20072/73291817543341217335105249340.48073/74225962511865587041132486849.90		UA				
FYRaniJamaraKulariyaTotalof target068/6914100020077813128247306028.76069/701800029925114554646279728.14070/711773059374116135777282834.12071/72272677500345250581102360345.20072/73291817543341217335105249346.48073/74225962511865587041132486849.90		-	ISF collected b	y WUAs (Rs)	)	Progress (%)
068/6914100020077813128247306028.76069/701800029925114554646279728.14070/711773059374116135777282834.12071/72272677500345250581102360345.20072/73291817543341217335105249346.48073/74225962511865587041132486849.90	FΥ	Rani	Jamara	Kulariya	Total	of target
069/701800029925114554646279728.14070/711773059374116135777282834.12071/72272677500345250581102360345.20072/73291817543341217335105249346.48073/74225962511865587041132486849.90	068/69	141000	200778	131282	473060	28.76
070/711773059374116135777282834.12071/72272677500345250581102360345.20072/73291817543341217335105249346.48073/74225962511865587041132486849.90	069/70	18000	299251	145546	462797	28.14
071/72272677500345250581102360345.20072/73291817543341217335105249346.48073/74225962511865587041132486849.90	070/71	17730	593741	161357	772828	34.12
072/73291817543341217335105249346.48073/74225962511865587041132486849.90	071/72	272677	500345	250581	1023603	45.20
073/74 225962 511865 587041 1324868 49.90	072/73	291817	543341	217335	1052493	46.48
	073/74	225962	511865	587041	1324868	49.90

#### PERCEPTION OF STAKEHOLDERS TOWARDS THE PROJECT

- The study team experienced that majority of the local people have positive perceptions toward the project activities and they expressed their willingness and commitment to involve and participate in the project to make it success. Because
  - They are sure to increase agriculture productivity and increase employment opportunities at local level, growing three or four crops a year, off seasonal vegetable farming, improve rural accessibility, protection of command area
  - They are of the view that there will not be impact on existing Badghar system. Because the Badghars are already included in formal WUAs governance structure with the same responsibility, hence the modernization process will not negatively affect the social system associated with Badghar.
  - Similarly, local government agencies, project stakeholders and local NGO appreciated for the project efforts in developing functional coordination and collaboration among the project stakeholders and harmonious working culture in the project.
  - Participants of FGD at Durgauli of Jamara Irrigation System, the participants expressed their concern over the in-sufficient consultation with local farmers during the survey, design and construction phase.

# Social Issues and proposed mitigation measures

### **1. GENDER AND SOCIAL INCLUSION**

#### Issues

- Low representation
- Lack of access to information
- Poor leadership quality
- Gender disparities
- Increased workload
- Wage disparitiesLimited access to
- services

#### Mitigation measure

- Providing Leadership development and Income generation trainings to WUA female members, women, Dalit, Mukta kamaiya and poor from vulnerable communities.
- The project will provide gender sensitization training to the leadership of WUAs to increase participation of women in WUA governance.
- Sensitize WUAs to adjust meeting venues and times to support women's needs and preferences.
- The WUA and project will ensure conducive work conditions for women's participation, e.g. by choosing suitable seasons and time for voluntary labor (Desawar).
- The WUAs/RJKIP shall also ensure that equal payment for work of equal value shall be paid to women. This should be a mandatory obligation on the WUA, specified by a special condition in the WUA agreement.
- Follow Internal and external monitoring to monitor overall progress in gender and social inclusion sector

#### 2. LAND ACQUISITION AND RESETTLEMENT

Issue	Mitigation measures	
Loss of asse and livelihe due to proj	<ul> <li>The irrigation system network is already existed in place and functioning.</li> <li>This study of pilot areas didn't identify any adverse impacts on private assets and livelihood.</li> </ul>	1
<ul><li>implement</li><li>Land</li></ul>	<ul> <li>It will maximize positive impacts (improved irrigation services, improved agricult production system, employment opportunity both as farm labor and at construct sites).</li> </ul>	ure ion
<ul> <li>Structur</li> <li>Crops</li> <li>Trees</li> <li>Livelihoo</li> </ul>	<ul> <li>This implies that land acquisition will not be required for canal improvement.</li> <li>However, minor modification in existing canal alignment, build infra structures, village road improvement and command area protection work may requires additional land and minor impacts on livelihood may occurs.</li> <li>If so, the level of impacts will be assessed and prepared resettlement plan or lan acquisition and compensation plan as per requirement.</li> <li>Follows set criteria specified in Resettlement Planning Framework prepared on t basis of both GON and The WB safeguard policy provisions.</li> <li>In the case of adverse impact on private asset and people's livelihood Specific</li> </ul>	d he
	program to the most vulnerable people living in the Project areas will be launche eg. priority in the construction employment; Training programs and skill developr schemes for income generation; support for agriculture extension, livestock reari	ed: nent ng,

### **3. COMMUNICATION STRATEGY**

#### Issues

Poor communication and consultation because of

- limited Staffs in PIO,
- large command area to work,
- huge beneficiaries population,
  Lack of proper tool to
- Lack of proper tool to communicate
- Language barrier
- Low literacy

#### Mitigation measure

- Mobilization of the women qualified women/girl for social mobilization and communication for specific target group/community.
- Use of poster and visualizing message will be adopted for those communities where literacy rate is below the average.
- Promote existing indigenous communication structure "Chiragis" which is widely used and effective in communicating the message relating to resource mobilization in RJKIP area.
- A dedicated unit with documentation section to look after the communication affair at PIO has to be established.
- Use of the local FM to broadcast relevant program in local languages
- Organize workshop/interaction program to aware and orient project official on GESI, issues of vulnerable community and other social concerns which are integral part of the project.

#### 4. CAPACITY BUILDING AND INSTITUTIONAL STRENGTHENING OF WUAS

Issues	Mitigation measure
<ul> <li>Inadequate Capacity of WUA to handle O&amp;M responsibility of modernize irrigation system</li> </ul>	<ul> <li>Awareness raising Program (Calendar, Leaflet/Brosure, Calendar publication, Visual/Documentry production, Manual preparation)</li> <li>Organization Improvement (Membership distribution camp, ISF collection camp, Laws/by laws preparation,</li> </ul>
Poor office	constitution amendment)
management	<ul> <li>WUA office improvement (Logistic support, Facility)</li> </ul>
<ul> <li>Poor income</li> </ul>	<ul> <li>Training/workshop/Study tour (Need based)</li> </ul>
<ul> <li>Poor database</li> </ul>	<ul> <li>Infrastructure development (Irrigation museum,</li> </ul>
Poor governance	Operation quarter, Cooperative building, Training Centre)

• Use of social mobilizers/Local resource person

# **5. REVENUE GENERATION AND MAINTENANCE OF THE IRRIGATION SYSTEM**

#### Issues

There is a big gap between the revenue generated from the irrigation service fee and costs required to maintain the irrigation system.

- Awareness
- Poor farmers
- Lack of trust

There is a big gap betweenThe WUA shall be trained to prepare Revenue Generationthe revenue generatedPlan (RGP) to collect 100% revenue from the members.

Mitigation measure

- Promoting agriculture tourism in the areas
- Establishing irrigation and agricultural museum and shall be developed as research center
- Learning Centre on organic farming and climate smart agriculture,
- Commercial farming through cooperatives promoted by the WUAs,
- Utilization of the land along the canal sites as source of income- plantation, NTFPs and vegetable farming,
- Promote income generating program initiated by WUAs

# 6. INSTITUTIONAL LINKAGE AND COORDINATION WITH LOCAL GOVERNMENT

Issues

Weak coordination with local government

- Monitoring of the project through LEMC
- Management of feral cattle (Bangai)
- Urban waste management
- Plotting and urbanization in command area of the project
- Excavation of sand, gravel and sands from the canals/command areas
- Grievance handling

Mitigation measure

 Improve coordination with local bodies by regular interaction and sharing

# 7. PARCEL MAPPING FOR WATER MANAGEMENT AND DISTRIBUTION

Issues

Mitigation measures

Inadequate information on land holdings • Thus, to start with, it is recommended and ineffective water management and canal operation plan Kulo for systematic and effective management of water at lower

tertiary level.

## **GRIEVANCE REDRESS MECHANISM**

- PIO shall establish a GRC
- The GRC
  - led by chairperson of rural/municipalities
  - representatives of APs (one man and one woman with social inclusiveness), WUA/UC chairperson, NGO representative, and representative from the project office.
- All complaints/grievances should be documented properly by the Committee and timely response.
- The main steps to be followed for the grievance resolution could be the following:
  - <u>Steps 1:</u> Affected People (AP) file the complaints in GRC. Complaints of APs on any aspect of donation, compensation, relocation or unaddressed losses is in the first instance are discussed and settled verbally or in written form with GRC at project level.
  - <u>Steps 2</u>: If no understanding or amicable solution reached from the GRC at project level, APs can appeal to the CDC. While lodging the complaint, the AP must produce documents to support his/her claim. The CDC shall provide the decision within 15 days of registering the appeal. In the case of voluntary donation, the aggrieved person may appeal to the CDO of the concerned district.
  - <u>Steps 3</u>: If AP is not satisfied with the decision of CDC/ CDO or in the absence of any response of its representatives, within 35 days of the complaint, the AP, in his/her last resort, may file the case in the Court.

#### Monitoring

- Internal/ regular monitoring:
  - PIO
  - WUA
- Periodic monitoring:
  - Joint monitoring: LEMC
  - Independent monitoring



Presentation on Resettlement Policy Framework by

**Consultant Madhav Bhattarai** 

#### **Resettlement Policy Framework** RANI JAMARA KULARIYA IRRIGATION PROJECT PHASE-II

Public Consultation Program Dec 14, 2017 Hotel Siddhartha, Tikapur

> Madhav Bhattarai RJKIP



#### Principles of the framework

- · Involuntary land acquisition and resettlement impact will be avoided or minimized
- If unavoidable, APs will be provided compensation at <u>replacement cost and/or assistance</u> so that they will be as well-off as without the sub-project;
- APs will <u>not be forced to donate their land</u>; and there will also be adequate safeguards for voluntary land donation;
- APs will be <u>fully informed and consulted</u> during project design and implementation, particularly on land acquisition and compensation options;
- An <u>absence of formal legal title to land will not be a bar to compensation</u> for house, structures, and trees/crops, and attention will be paid to vulnerable groups and appropriate assistance provided to help them improve their status;
- Land compensation and resettlement assistance will be completed before award of civil works contract
- · Grievance redress will be set up

#### Principles of land donation

- Full consultation with affected persons and communities on alignment finalization and appropriate design to avoid/minimize additional land take and resettlement effects;
- As a first principle, APs will be informed of their right to entitle compensation for any loss of their property (house, land, and trees) that might be caused by the project intervention, and the land donation might be accepted only as a last option;
- No one will be forced to donate their land, and APs will have the right to refuse a land donation
  proposal from the project authority;
- In case APs are directly linked to project benefits and thus are willing to voluntarily donate their land after they are fully informed about their entitlement, the project will assess their socio-economic status and potential impact of land donation and accept land donation only from those APs who will not fall below the poverty line after the land donation;
- Any voluntary land donation will be confirmed through a written record, including a "no coercion" clause verified by an independent third party
- The donation will be limited to only land and minor assets (houses and major assets will be excluded from donation); and

# Entitlement policy matrix

Type of loss	Application	Entitled person	Policy/Entitlement
Acquisition of private, tenancy, or Guthi land	Entire or part of land to be acquired from owner of the land as recorded at cut- off date	Titleholder Tenants	<ul> <li>Land with equivalent size and category, or cash compensation at replacement cost,</li> <li>In case of vulnerable group, preference will be in replacing land for land,</li> <li>Any transfer costs, registration fees or charges,</li> <li>Tenant will receive 50% value of the land,</li> <li>Land registration in the name of both land owner and spouse (in case of land for land compensation),</li> <li>If remaining land becomes unviable as a result of land acquisition, APs have an option to relinquish unviable remaining portion of land and receive similar benefits to those losing all their landparcel(s),</li> <li>Non-titled persons will receive compensation for crops and subsistence allowance for one year's crop, any upfront costs for the tenancy agreement will be reimbursed either through an agreement with the landlord or by the EA</li> </ul>

## Entitlement Matrix

Temporary loss of land	Temporary land taken by the sub- project	Titleholder Tenants	Compensation at replacement cost for the net loss of income, damaged assets, crops and trees etc. Agreement between contractors and APs before entering site
Loss of residential, commercial, and other structure	Structures, buildings including cattle shed, walls, toilets etc. affected by the sub-project	Owner Tenants Non-titled (encroachers and squatters)	Compensation for full or partial loss at replacement cost of the affected structure(s) without depreciation or deduction for salvaged material, Displacement and transportation allowance for residential and commercial structures to cover actual transaction cost as estimated in theresettlement plan, Rental stipend equivalent of three months' rent for tenants who have to relocate from tented building

# Entitlement policy matrix

Loss o community structures and/or resources	f Community facilities (e.g. Irrigation, water, etc.) affected by the sub-project	The users of the facility or community or group	Reconstruction by the sub-project leaving such facilities in a better condition than they were before, or Cash compensation at full replacement cost without depreciation of deduction for salvaged material
Loss of trees and crops	Affected fruit/nut trees	Owner of the affected fruit/nut trees	Cash compensation based on annual value of the produce and calculated according to Department of Agriculture (DOA) norms, RPs to confirm that the DOA norms and techniques are sufficient and are updated regularly
• • •	Affected timber and fodder trees	Owner of the affected timber and fodder trees	Cash compensation based on calculation of the production and calculated according to the district norms as decided by the Department of Forestry
	Affected crops	Owners and sharecroppers of affected crops	Cash compensation based on local market prices for the produce of one year and calculated as per the norms of District Agriculture Development Office, 50% cash compensation of the lost crop for the sharecropper

# Entitlement policy matrix

opportunity	lost as result of loss of livelihood base	who may be adversely affected, although they do not lose assets as such	Skills training support for economic restoration, Priority in poverty reduction/social development program
Loss of time and travel expenses	Expenses incurred in traveling to fill application and making claims and time lost	All sub-project affected persons eligible for compensation	Program facilitates transportation in official process, Payment on the same day as other compensation.
Land donations	Loss of land and other assets by means of voluntary donation	Voluntary donation is accepted only if AP: (i) is project beneficiary and is fully consulted and informed about rights; (ii) doesn't fall below poverty line after land donation; (iii) donating up to 20% land holding; and (iv) freely willing to donate (with an agreement, including a "no coercion" verified by a third	No compensation for the donated land, but entitled for compensation of other assets such as house, structures, allowances, etc. Transfer of land ownership by negotiation (DDC and the owner). Free/escape of any transfer costs, registration fees, or charges. Preferential employment in sub-project construction work

Entitlement	policy	matrix
-------------	--------	--------

Preferential treatment in employment in project activities	All APs	priority in wage labor/employment on sub-project construction during implementation, APs shall be given priority after construction for work as maintenance workers, mandated in local body agreement
Skill training and income generation support	One member of each project affected family belonging to vulnerable group/below poverty line	Skills training and income generation support financed by project Resettlement Plan to include a need assessment and skills training program for APs.
Priority in poverty reduction/social development programs	All APs	Participation of APs with priority in saving credit scheme facilitated by the sub-project, Participation of APs with priority in life skills, income generation, and other entrepreneurship opportunities

# THANK YOU

#### **Presentation on Vulnerable Community Development Plan**

by

**Consultant Madhav Bhattarai** 




	Activities	Target group	Result indicator	Responsible
1. IM	IPROVED ACCESS TO INFORM	IATION		
Orient the obje VCDP	project implementation staff on ective, process and procedure of	Project staff and WUA executive board	Increase DoI staff capability of dealing with VP issues	PIO
Awares and ber	ness raising on project scope nefits	ALL beneficiaries	All marginal and small farmer HH are informed how to access the government support provided through RJKIP	PIO + system level WUA
Periodi group about t deliveri	ic consultation with target to share all the information the services that the project is ing	All WUAs and beneficiaries	Number of consultation and number of participants from target group	PIO
Mobi iz social the info	zation of Chiragis, Badghar for mobilization to communicate ormation beneficiary	Chiragis and Badghar	Numbers and Chiragis and Badghar are oriented on stage -II activities	PIO

Vulnerable C	Community D	Development Action Plan
1. Creating enabling environ	ment for the Particip	pation in project activities
Re-organization of WUA to make more inclusive and balanced representation from all segment of project beneficiaries	Small & marginal farmer from tail and	The WUA reorganized and the appropriate number of marginal land holder, dalit and FHH included in WUA governance structure.
Ensure the participation of the target group in all the training organized by the project	Small & marginal farmer	50% of trainee selected from the target groups
Formulate highly disadvantage people friendly participant selection criteria, endorse in WUA board.	WUA	Guidelines prepared and 50% of training participants are from vulnerable group
Ensure the participation of land less beneficiary as wage labour in construction site	Land less and farmer having less than 0.1 ha	Strategy developed and streamlined in WUAoperation

Vulnerable Community Development Action Plan					
Ensure the participation of target group in commercial agriculture activities	Small and marginal land holding farmer	40% of training participants are included from the target group 20% of targeted farmer involved in commercial farming activities.			
Increased access to extension services and equipment support through linking target group with the agriculture support component C	Small and marginal land holding farmer, specially FHH and HH with differently abled people	Functional relation and understanding reached between DADO and WUA to focus on VC while implementation the component C program			
Skills development training on high value crop and their associated post-harvest, value chair and marketing activities	Small and marginal land holding farmer Differently abled HH	At least 10% small and medium farmer received the training			

Leadership development training	Executive members representing Small and marginal land holding farmer (	WUA executives (those represents tail reach, marginal and small land holding, dalit and other vulnerable class) provided leadership development training
ncome generation training	Small and marginal land holding farmer	30 relatively more vulnerable farmersreceive agro based income generation activities
kill development training	Small and marginal land holding farmer	20 relatively more vulnerable farmerslinked with NGO and other institution working in the area of skill development.

Gende	r Action Plan (GA	P	?)
Lack of information about	Prepare/update socio- economic data	All	beneficiaries
Less access to information	Awareness-raising onthe various aspect of projectimplementation Gender issues will be included in information, materials and messages for project planning, WUA capacity building, system construction and agricultural extension		All man and women farmers in the Project area Men and women of targeted households, Officials and members of WUA
			Project implementation RJKIP
low level of participation	Aware and orient WUA to include more women in executive board Facilitate WUA in drafting policy for minimum 40% women participation in all training and events organized in the scope of project Aware WUA to fix female friendly meeting Venue that so women can feel free and uninhibited in their discussions Orient WUA towards amendment of WUA		WUA
TEPRESE	intion providing more space for female		

	Design and organize specific capacity building programsfor women groups/FHH with focus on skill management communication skills.	
Poor leadership qualities	book-keeping, decision-making	
	Processes, governance, accountability and transparency	
	Study tours both within and outside the Project area districts.	
	Gender sensitization training (with focus on the change of power relationships - Male + Female)	
	Create conducive environment for women's participation (paid labor),	
Gender disparities	Gender sensitive physical facilities i.e. separate sanitation/lavatory facilities in construction sites.	
	Organization of work and its implementation conducive to Gender need	
	Establish functional linkage with extension and other services provided under the scope agriculture component	
	Farmer field school and short agriculture skills training conducted with reference to women's existing skill level and constraints on time	
	Microfinance program introduced to project areas to enhance agricultural livelihoods	
Limited access to services or less familiar with technologies	Facilitation of improved access to rural credit through linking rural women/groups/agricultural cooperatives to micro finance institutions and agricultural banks	
	Agro-based entrepreneurship training for women	
	Focus on female headed households on HVC production,	

