

JAPAN INTERNATIONAL
COOPERATION AGENCY

No. 2

DEPARTMENT OF IRRIGATION
MINISTRY OF WATER RESOURCES
HIS MAJESTY'S GOVERNMENT OF NEPAL

THE FEASIBILITY STUDY
ON
TRISHULI IRRIGATION PROJECT

FINAL REPORT
VOLUME II
APPENDICES

AUGUST 1997

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CHUO KAIHATSU CORPORATION

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***THE FEASIBILITY STUDY
ON
TRISHULI IRRIGATION PROJECT***

**FINAL REPORT
VOLUME II
APPENDICES**

AUGUST 1997

CHUO KAIHATSU CORPORATION



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Part A


1. S/W and M/M (July 15, 1996)

SCOPE OF WORK
FOR
THE FEASIBILITY STUDY
ON
TRISHULI IRRIGATION PROJECT
IN
THE KINGDOM OF NEPAL

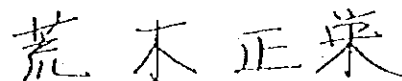
AGREED UPON BETWEEN

DEPARTMENT OF IRRIGATION
MINISTRY OF WATER RESOURCES
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

KATHIMANDU, 15 JULY, 1996



Mr. Y.L. Vaidya
Director General,
Department of Irrigation
His Majesty's Government of Nepal



Mr. Shoei Araki
Leader,
Japanese Preparatory Study Team,
The Japan International Cooperation
Agency

I. Introduction

In response to the request of the His Majesty's Government of Nepal (hereinafter referred to as "HMGN"), the Government of Japan decided to conduct the Feasibility Study on the Trishuli Irrigation Project (hereinafter referred to as "the Study"), in accordance with the relevant laws and regulations in force in Japan.

Accordingly, Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of technical cooperation programs of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of HMGN.

The Department of Irrigation, Ministry of Water Resources (hereinafter referred to as "DOI") shall act as counterpart agency to the Japanese study team and also as the coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

The present document sets forth the scope of work with regard to the Study.

II. Objectives of the Study

The objectives of the Study are;

1. To formulate the feasibility study report on the Trishuli Irrigation Project (hereinafter referred to as "the Project") utilizing $3\text{m}^3/\text{s}$ of water from headrace canal of Trishuli Devighat Hydropower Upgrading Project, and
2. To carry out technology transfer to the Nepalese counterpart personnel through on-the-job training in the course of the Study

III. Study area

The Study area covers approximately 1,000ha of left and right bank terrace of Trishuli river located in the Nuwakot district.

IV. Scope of the Study

The Study will cover the following:

1. Phase I (work in Nepal)

1.1. Review of the existing regional and national development plans related to the Study area

1.2. Collection and analysis of the existing data and information of the Study area;

(1) natural condition

- 1) topography
- 2) meteorology and hydrology
- 3) geology
- 4) pedology
- 5) water quality of Trishuli river
- 6) environment and ecology

(2) social condition

- 1) population
- 2) regional socio-economic condition and economic activities
- 3) social infrastructure
- 4) others

(3) agricultural condition

- 1) land use
- 2) farming and cropping
- 3) agro-economy, agricultural credit, processing, and marketing system
- 4) agricultural supporting system (government institutions, farmers' organizations, supporting organizations, and extension service organizations)
- 5) others

(4) present condition of irrigation and drainage

- 1) pump and pumping station
- 2) irrigation system and facilities
- 3) drainage system and facilities
- 4) water management system

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(5) surveying

- 1) route survey (intake to the Study area)
- 2) topographic survey (the Study area)

1.3. Examination on alternative approach;

(1) irrigation and drainage systems: route of headrace, combination of gravity irrigation and pumping irrigation, irrigation block, etc.

(2) irrigation and drainage facilities: standard, construction methods, engineering, technology, materials, farmers' participation, etc.

(3) cropping pattern

(4) operation and maintenance

- 1) farmers' participation and water users association
- 2) water tariff
- 3) others

1.4. Initial Environmental Examination

2. Phase II (work in Japan)

2.1. Evaluation on alternative approach;

(1) irrigation and drainage systems: route of headrace, combination of gravity irrigation and pumping irrigation, irrigation block, etc.

(2) irrigation and drainage facilities: standard, construction methods, engineering, technology, materials, farmers' participation, etc.

(3) cropping pattern

(4) operation and maintenance

- 1) farmers' participation and water users association
- 2) water tariff
- 3) others

(5) cost estimation

2.2. Formulation of a development plan of the Project with the following components:

(1) Irrigation and drainage with maximum effort on utilization of existing irrigation infrastructure.

- 1) settling basin
- 2) canal (headrace canal, main canal, secondary canal, tertiary canal)
- 3) replacement of pumps and rehabilitation of pumping station
- 4) other minor facilities

(2) Cropping pattern

- (3) Farmers' organization, water users association and supporting service
- (4) Post harvest and marketing system
- (5) Environmental preservation plan (including land conservation)
- (6) Preliminary design of major structures
- (7) Operation and maintenance plan for major structures
- (8) Project implementation schedule
- (9) Estimation of project cost and benefits

2.3 Evaluation of the development plan

2.4. Recommendations

V. Study schedule

The Study will be carried out in accordance with the attached tentative work schedule. (ANNEX)

VI. Reports

JICA will prepare and submit the following reports in English to the HMG/N.

1. Inception Report

Twenty (20) copies at the commencement of the Phase I field study.

2. Progress Report

Twenty (20) copies at the end of the work in Nepal of the Phase I study.

3. Draft final Report



Twenty (20) copies at the end of the Phase II study. HMGN will provide its comments on the Draft Final Report to JICA within one (1) month after receiving the Draft Final Report.

4. Final Report

Fifty (50) copies within two (2) months after the receipt of comments on the Draft Final Report.

VII. Undertakings of HMGN

1. To facilitate smooth conduct of the Study, HMGN shall take necessary measures:

- (1) to secure the safety of the Japanese study team;
- (2) to permit the members of the Japanese study team to enter, leave and sojourn in the Kingdom of Nepal for the duration of their assignment therein, and exempt them from foreign registration requirements and consular fees.
- (3) to exempt the members of the Japanese study team from taxes, duties, fees and any other charges on equipment, machinery and materials brought into the Kingdom of Nepal for the conduct of the Study;
- (4) to exempt the members of the Japanese study team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Japanese study team for their services in connection with the implementation of the Study;
- (5) to provide necessary facilities to the Japanese study team for the remittance as well as utilization of the funds introduced into the Kingdom of Nepal from Japan in connection with the implementation of the Study;
- (6) to secure permission for entry into private properties or restricted areas for the implementation of the Study as and when necessity arises;
- (7) to secure permission for the Japanese study team to take all data and documents related to the Study including photographs and maps out of the Kingdom of Nepal to Japan;
and
- (8) to provide medical services as needed. Its expenses will be chargeable on the members of the Japanese study team.

2. HMGN shall bear claims, if any arises, against the members of the Japanese study team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese study team.
3. DOI shall, at its own expense, provide the Japanese study team with the following, in cooperation with the Department of Agriculture and authorities concerned;
 - (1) available data and information necessary and related to the Study;
 - (2) counterpart personnel and supporting staff necessary for the Study;
 - (3) suitable office space(s) with necessary equipment in Kathmandu and the Study area and ;
 - (4) credentials or identification cards.

VIII. Undertakings of JICA

For the implementation of the Study, JICA shall take the following measures;

- (1) to dispatch, at its own expense, the study team to the Kingdom of Nepal and
- (2) to pursue technology transfer to the Nepalese counterpart personnel in the course of the Study.

IX. Others

JICA and the DOI shall consult with each other in respect of any matter that may arise from or in connection with the Study.



ANNEX

TENTATIVE WORK SCHEDULE

Month	1	2	3	4	5	6	7	8	9	10
Work in Kingdom of Nepal	████████████████████							██		
Home office work in Japan	▬			▬						
Reports	△ Ic/R		△ P/R				△ Df/R	◎	△ F/R	

(Remarks)

Ic / R : Inception Report

P / R : Progress Report

Df/R : Draft Final Report

F / R : Final Report

◎ : Comments on DF/R by the Nepali side

WCE

SP

List of Participants

1. Nepalese Side

Department of Irrigation, Ministry of Water Resources

Mr. Y.L. Vaidya Director General

Mr. S.N. Poudel Deputy Director General,
Planning, Design, Monitoring and Evaluation

Mr. N.N. Vaidya Superintending Engineer,
Planning, Design, Monitoring and Evaluation

Mr. Yatsuhiko Chiba Advisor to DOI

Mr. B. Chhatkuli Engineer,
Central Region Irrigation Directorate

Mr. M. Belbase Engineer,
Planning Section

2. Japanese Side

Mr. Shoei Araki Leader of Preparatory Study Team, JICA

Mr. Masashi Nakai Member of Preparatory Study Team, JICA

Mr. Akinori Ishikawa Member of Preparatory Study Team, JICA

Mr. Kunio Nishimura Member of Preparatory Study Team, JICA

Mr. Noriaki Nagatomo Member of Preparatory Study Team, JICA

Mr. Atsushi Uchida Assistant Resident Representative,
JICA Nepal Office

Mr. Narendra Gurung Senior Program Officer,
JICA Nepal Office



*MINUTES OF MEETING
ON
SCOPE OF WORK
FOR
THE FEASIBILITY STUDY
ON
TRISHULI IRRIGATION PROJECT
IN
THE KINGDOM OF NEPAL*

The preparatory study team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA"), and headed by Mr. Shoei Araki, visited the Kingdom of Nepal from 8 to 16, July, 1996 for the purpose of discussing and confirming the Scope of Work for the Feasibility Study on TRISHULI IRRIGATION PROJECT (hereinafter referred to as "the Study").

The Team had a series of discussions with officials concerned of the Department of Irrigation, Ministry of Water Resources (hereinafter referred to as "DOI") on the Scope of Work for the Study. The list of Participants in a series of meetings is attached in the Annex.

As a result of the discussions, DOI and the Team agreed on the Scope of Work for the Study.

The following are the main issues discussed and agreed upon by both sides in relation to the Scope of Work for the Study.

1. The Study area covers approximately 1,000ha located in the part of Gerkhutar, Bidur, Maharani Dihi, Battar, Pipaltar, Majhitar, Chandi, Pokhari, Lower Pipaltar and Pokhare Phant in Nuwakot District.
2. The existing coordinating committee of DOI and DOA (Department of Agriculture) shall coordinate for the smooth implementation of the Study.
3. The DOI shall get a permission for using the aero-photograph covering the Study area and taking it out of the Kingdom of Nepal from the Survey Department and related authorities.

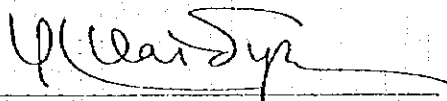




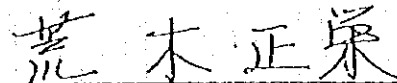
4. The DOI shall provide drivers to the Japanese study team.

5. DOI requested the counterpart training in Japan.
The Team promised to convey its request to the Government of Japan.

KATHMANDU, 15 JULY, 1996



Mr. Y.L. Vaidya
Director General,
Department of Irrigation
His Majesty's Government of Nepal



Mr. Shoei Araki
Leader,
Japanese Preparatory Study Team,
The Japan International Cooperation
Agency

Part A

2. M/M on the Inception Report (December 9, 1996)

**MINUTES OF THE MEETING ON THE INCEPTION REPORT
FOR
THE FEASIBILITY STUDY ON
TRISHULI IRRIGATION PROJECT IN
THE KINGDOM OF NEPAL.**

Date: December 9, 1996
Venue: Conference Room of the Department of Irrigation
Participants: Listed in Annex-I

A. SUBMITTING OF INCEPTION REPORT (IC/R)

The Feasibility Study Team (hereafter refer to as "the Study Team") dispatched by the Japan International Cooperation Agency (hereafter referred to as "JICA") has arrived at the Kingdom of Nepal for the purpose of execution of the Field Survey from December 4, 1996 to March 22, 1997.

At commencement of the Field Survey, the Study Team has submitted 20 copies of the Inception reports to Department of Irrigation, Ministry of Water Resources (hereafter referred to as "DOI") of the His Majesty's Government of Nepal (hereafter referred to as "HMG/N") on December 5, 1996.

Mr. Masamitsu Fujioka, Team Leader of the Study Team, explained contents of the IC/R to the concerned officials of DOI.

Through series of discussions, the contents of the Inception Report were in principle accepted by DOI.

The followings are the main issues discussed and agreed upon by both sides in relation to the Inception Report.

1. In response to the proposal by the Study Team, HMG/N proposed as shown in section B shown in the following page.
2. Counterparts, listed in Annex-2 attached herein, are assigned from DOI to be involved as full time and contact persons of DOI for this Study during the entire period of the Study in Nepal.
3. The first workshop/meeting of CCG will be held on December 25, 1996. The possible venue for the CCG workshop/meeting shall be at DPIC, Lalitpur.
4. List of agenda/issues to be discussed in the workshop/meeting (CCGs and FLAGs) shall be provided by the Study Team to DOI, one week prior to the workshop/meeting.
5. DOI shall have the prime responsibility of coordinating the participants and will take responsibility of requesting the concerned agencies to participate in workshop/meeting of CCGs and FLAGs during the entire Study period

M. Fujioka

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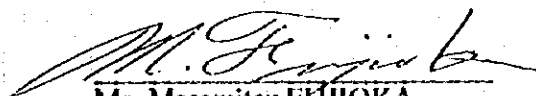
6. Two drivers are to be provided by DOI for the Study Team.
7. Two vehicles from JICA will be handed over to DOI after the completion of this Study.

B. HMG/N PROPOSAL TO THE INCEPTION REPORT

HMG/N proposal to the compositions of the Central Coordinating Group (CCG) and Field Level Action Group (FLAG) as agreed by JICA Study Team on page 22 and 23 in the IC/R shall be made by officials of DOI as mentioned in Annex-3(a) and Annex-3(b).



Mr. Mahesh Man SHRESTHA
Acting Director General, DOI



Mr. Masamitsu FUJIOKA
Team Leader, JICA Study Team

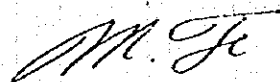
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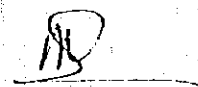


Mr. Atsushi UCHIDA
Assistant Resident Representative,
JICA Nepal Office

LIST OF PARTICIPANTS

- | | |
|-------------------------------|--|
| 1. Mr. Mahesh Man Shrestha | Acting Director General, DOI |
| 2. Mr. Som Nath Poudel | Deputy Director General, DOI |
| 3. Mr. Nirjara Nanda Vaidya | Superintending Engineer, DOI |
| 4. Mr. Sharada Prasad Sharma | Regional Director, CRID, DOI |
| 5. Mr. Shiv Kumar Sharma | Senior Divisional Engineer, DOI |
| 6. Mr. Shital Babu Regmi | Senior Divisional Engineer, CRID, DOI |
| 7. Mr. Mahesh Bahadur Pradhan | Engineer, DOI |
| 8. Mr. Prakash Man Shrestha | Engineer, DOI |
| 9. Mr. Khila Nath Dahal | Engineering Geologist, DOI |
| 10. Mr. Yatsuhiko Chiba | JICA Expert, DOI |
| 11. Mr. Masamitsu Fujioka | Team Leader, JICA Study Team |
| 12. Mr. Kuniki Iwata | Irrigation and Drainage, JICA Study Team |
| 13. Dr. Shiva Kumar Chaudhary | Farm Management, JICA Study Team |
| 14. Dr. Prachanda Pradhan | Farmer Organization, JICA Study Team |
| 15. Mr. Kiyofumi Tanaka | Rural Society, JICA Study Team |
| 16. Mr. Kazumitsu Tsumura | Facility Design/Cost Estimate, JICA Study Team |
| 17. Mr. Kentarou Usuda | Toposurvey Supervision, JICA Study Team |
| 18. Mr. Atsushi Uchida | Assistant Resident Representative, JICA Nepal Office |
| 19. Mr. Narendra Guring | Senior Program Officer, JICA Nepal Office |





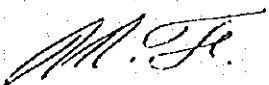
LIST OF COUNTERPARTS

Full Time Counterparts

- | | |
|--|---------------------------------------|
| 1. Mr. Mahesh Bahadur Pradhan(Chief Counterpart) | Engineer, DOI |
| 2. Mr. Prakash Man Shrestha | Engineer, DOI |
| 3. Mr. Khila Nath Dahal | Engineering Geologist, DOI |
| 4. Mr. Nirmal Gadai | Agronomist, CRID, DOI |
| 5. Mr. H. K. Jha | Environmentalist, Environment Section |

Contact Persons

- | <u>Discipline</u> | <u>Name of Counterparts</u> | <u>Position / Agencies</u> |
|------------------------------------|-----------------------------|---------------------------------------|
| 1. Team leader | Mr. Nirjara Nanda Vaidya | Superintending Engineer, DOI |
| 2. Irrigation and Drainage | | |
| - Central Level | Mr. Mahesh Bahadur Pradhan | Engineer, DOI |
| - Regional Level | Mr. Shital Babu Regmi | Senior Divisional Engineer, DOI |
| - District Level | Mr. L. D. Shrestha | Office in Charge, DOI |
| 3. Farm Management | | |
| - Regional Level | Mr. Nirmal Gadai | Agronomist, CRID, DOI |
| - District Level | Mr. N. P. Khanal | Agriculture Dev. Officer, DOA |
| 4. Farmer Organization | | |
| - Central Level | Mr. P. R. Dhungana | DOI |
| - District Level | | Association Organizers, DOI |
| 5. Rural Society | Ms. Sangita Singh | Sociologist, CRID, DOI |
| 6. Agro-Economy / Cost Evaluation | Mr. D. B. Khanal | Agri-Economist, DOI |
| 7. Facility Design / Cost Estimate | Mr. Prakash Man Shrestha | Engineer, DOI |
| 8. Environment | Mr. H. K. Jha | Environmentalist, Environment Section |
| 9. Toposurvey Supervision | Mr. Prakash Man Shrestha | Engineer, DOI |





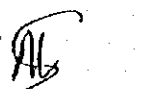

SELECTED MEMBERS OF CENTRAL COORDINATING GROUP (CCG)

Policy Making Group

- | | |
|--|--------------------|
| 1. Director General, DOI (Chairman) | Mr. Y. L. Vaidya |
| 2. Deputy Director General, DOI, | |
| 1) Irrigation, Management & Water Utilization Division | Mr. M. M. Shrestha |
| 2) Planning, Design, Monitoring & Evaluation Division | Mr. S. N. Paudel |
| 3) Surface Irrigation Division | Mr. M. Aryal |
| 3. Regional Directors, DOI | |
| 1) Regional Directorate of Irrigation, Central Development Region | Mr. S. P. Sharma |
| 2) Senior Divisional Engineer, CRID | Mr. S. B. Regmi |
| 3) Chief, Training & Research Branch | Mr. K. R. Sharma |
| 4. Representatives | |
| 1) National Planning Commission | |
| 2) Department of Agriculture | |
| 3) Department of Forestry | |
| 4) Department of Soil Conservation | |
| 5) Agricultural Development Bank | |
| 6) Agricultural Input Corporation | |
| 7) Ministry of Population & Environment | |
| 8) Ministry of Water Resources | |
| 9) Nepal Electricity Authority (NEA): Preferably Project Manager,
Trishuli-Devighat Hydropower Rehabilitation Project | |
| 10) Chief, Planning & Feasibility Study, DOI | |
| 11) Experts of related Fields | |

Planning Group (Counterparts arranged by the related agencies)

- 1) Irrigation Management & Water Utilization
- 2) Department Agriculture
- 3) Department of Forestry
- 4) Department of Soil Conversation
- 5) Officers of related Agencies



**PROPOSED MEMBERS OF FIELD LEVEL ACTION GROUP
(FLAG)**

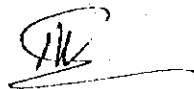
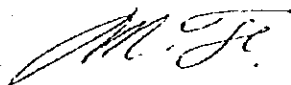
Concerned Government Agency Group

- 1) District Irrigation Office
- 2) Agriculture Service Center
- 3) Co-operative Society
- 4) Agricultural Development Bank (ADB/N)
- 5) District Agricultural Development Office
- 6) Agricultural Input Corporation (AIC)
- 7) Branch Office of Department of Food & Marketing Services
- 8) Local Development Officer, DDC, Nuwakot
- 9) Manager of NEA (Trishuli-Devighat Hydropower Rehabilitation Project)

Beneficiary Farmer Group

Around 40 Farmers from user beneficiaries selected on the basis of the survey to determine beneficiary farmers

Composition of one ward group : Chairman (1) and Farmer representatives (5-6 nos.)



Part A

**3. "Request to shift the intake point
of the Trishuli Irrigation Project"**

To,
The Director General,
Department of Irrigation,
Ministry of Water Resources,
Panipokhari, Kathmandu,
Nepal.

Date: 9/2/1997

Subject: Request to shift the intake point of the Trisuli Irrigation Project.

Dear Sir,

With regard to the Trisuli Irrigation Project Study, I would like to present following interim recommendations for your consideration.

Considerations for making viable Trisuli Irrigation Project.

Background:

The JICA Study Team has executed the Field Survey since early December, 1996. On the basis of site survey and field information, the Study Team has done comparative study on the main canal alignment and irrigation system development. On the basis of study, following interim recommendation is made for immediate consideration by your Department.

Alternative 1.

As suggested in the Central Coordination Group Meeting of 25 December, 1996, the Alternative 1 alignment is found to be the viable one for Trisuli Irrigation Development Project. (Detail attached, Annex.1.)

In adopting Alternative 1, it is possible to accommodate additional flow of $1.5\text{m}^3/\text{s}$ as design discharge for TIP through the existing hydropower canal system from No.2 Aqueduct without any modifications and additional works

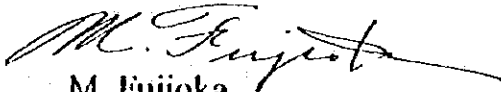
in the existing structures. (Details attached, Report on Water Availability for TIP from Trisuli Hydel Power Project.)

Interim Conclusion of the Study Team.

The Study Team has come to interim conclusion that the Trisuli Irrigation Project viability would be maintained only by adopting the proposal of Alternative No.1.

Keeping in view the interim conclusion, I would like to request you to take necessary step in order to make possible to shift the intake point from the originally proposed one to Alternative No.1. Early decision on this proposal would greatly help finalize the study.

Sincerely Yours,



M. Fujioka
Team Leader
JICA Study Team.

Part A

4. 1st CCG Workshop Meeting (December 25, 1996)

Date

December 25, 1996

Venue

Seminar Hall, DPTC, Lalitpur

**1ST WORKSHOP
FOR
THE FEASIBILITY STUDY
ON
TRISHULI IRRIGATION PROJECT**

Date: December 25, 1996
Place: Seminar Hall, DPTC, Lalitpur
Participants: As Listed in Annex

A. AGENDA

1. Assessment of Availability of Water for Irrigation during Wet and Dry Seasons
2. Possibility of Shifting Intake Point from Headrace Canal to;
 - 1) Alternative-1 : from downstream point of the Trishuli-Devighat Hydropower Desilting basin, and
 - 2) Alternative-2 : from the Tailrace of the Devighat Power Station
3. Need of Quantitative Assessment of Intake Flow
4. Effectiveness on Agricultural Production Increase by the Supplementary Irrigation during Wet Season

B. WORKSHOP MEETING

After having the reconnaissance field visit / survey for 10 days in proposed Trishuli Irrigation Project area by the JICA Study Team and the DOI counterparts, a Workshop on Trishuli Irrigation Project was held to discuss about the findings and controversial issues on the Feasibility Study of the proposed Trishuli Irrigation Project.

Dr. P. Pradhan, JICA Study Team, moderated the meeting.

Mr. N. N. Vaidya, Superintending Engineer, DOI gave an introductory background of the Project with the implementation of Battar Lift Irrigation Project as a pilot project in 1974/75. He further added that NEA made 3m³/s provision in the Headrace Canal of Aqueduct No.2 during the expansion of Trishuli-Devighat Hydropower rehabilitation Project

Mr. M. Fujioka, Team Leader highlighted on the purpose of the meeting and the findings and

controversial issues during the recent reconnaissance field visit made by the Study Team. He added that FLAG the meeting was conducted in Nuwakot under the chairmanship of DDC President on December 15, 1996 and the enthusiasm of user beneficiaries focused on whether they are sure to get irrigation water or not. He further added that the discussions should be focused on the assessment of the prerequisite terms and conditions.

Then the floor was open for discussion on the agenda mentioned above.

Mr. R. Sulpya, NEA briefed about the capacity of present sill level at Aqueduct No.2 as 45.6m³/s and above only the discharge will be released for irrigation purpose. Also during rainy season for silt clearance at Headwork site, disruption of water for 3 ~ 4 hours/day will be necessary.

Mr. Y. L. Vaidya, D.G, pointed that with the existing intake at Aqueduct No.2 and proposed Alternative-1, there, is no possibility of round the year irrigation.

Mr. M. B. Pradhan, DOI pointed that if the Intake is constructed at Aqueduct No.2, in addition to the idle length of 8.5km pipe conduits, number of structures such as 2 nos. of aqueducts across the Trishuli river (more than 100m), 1 tunnel across the road, 2 aqueducts in the gorges of military camp and numerous other structure are necessary.

Dr. S. K. Chaudhary, JICA Study Team, explained the agricultural situation in the Project area. Mr. S. Saburi, JICA Expert, DOA inquired whether water requirement of different crops and water moisture content are known.

The discussion led to the following understandings between JICA Study Team and the Participants;

1. Based on the data of water discharge from the Trishuli river (1977~1993) and NEA basic policy, it was concluded that virtually these will be no irrigation water during mid January to mid April (3 months) using the proposed Intake point and year round irrigation is not possible.
2. It was also discussed and understood that the cost effectiveness be taken into consideration using the proposed Intake point at Aqueduct No.2.
3. Since, there is no agreement made between DOI and NEA regarding the use of Intake point

- suggested as Alternative-1 or Alternative-2, it was felt that such agreement be made.
4. It was suggested that detailed cost and benefit analysis be done for all three(3) alternatives.
 5. It was understood that the situation of water availability for irrigation may be same in case of proposed as well as Alternative-1 Intake point (only wet season irrigation) with the exception that water with less silt may be available in case of using Alternative-1 Intake point. In addition, the cost will also be less as it will shorten the length of canal.
 6. It was confirmed that water availability will not be constraint, if Alternative-2 is used as an Intake point. However, in this case water has to be lifted, therefore, cost and benefit analysis is necessary.
 7. It was suggested that further investigation be done to examine the economic viability and impact on agricultural productivity, if irrigation is available only during wet season
 8. NEA official commented that the discussion for the use of $3\text{m}^3/\text{s}$ water for irrigation purpose has been made by minister of the Ministry of Water Resources during implementation period, then, NEA had to redesign canal capacity changing from $45\text{m}^3/\text{s}$ to $48\text{m}^3/\text{s}$ design discharge upto the Aqueduct No.2. However, no such agreement has made between DOI and NEA. In this case, further inquiry or confirmation should be needed.
 9. It was also suggested that the use of $1\text{m}^3/\text{s}$ to $2\text{m}^3/\text{s}$ water instead of $3\text{m}^3/\text{s}$ be also taken into consideration for this Study and suitable and economically more beneficial cropping pattern for crops except paddy should be proposed in consultation with user beneficiaries.

(1st Workshop)

Annex

LIST OF PARTICIPANTS

1. Mr. Y. L. Vaidya	Director General,	DOI
2. Mr. N. N Vaidya	Superintending Engineer,	DOI
3. Mr. M. N. Aryad	Deputy, Director General,	DOI
4. Mr. P. Paudel	Senior Divisional Engineer	DOI
5. Mr. U. L. Malla	Senior Divisional Engineer	DOI
6. Mr. J. R. Sharma	Project Manager, IDS	DOI
7. Mr. S. B. Regni	Senior Divisional Engineer, CRID	DOI
8. Dr. N. K. Lal	Project Manager, Rajapur Irrigation Project	DOI
9. Mr. S. P. Rajbhadari	Senior Divisional Engineer, SMB	DOI
10. Mr. S. K. Sharma	Senior Divisional Engineer	DOI
11. Mr. L. C. Pradhan	Senior Divisional Engineer, IMB	DOI
12. Mr. Y. Chiba	JICA Expert	DOI
13. Mr. S. L. Shrestha	Under Secretary,	NPC
14. Mr. M. P. Bhattarai	Senior Divisional Engineer	MOWR
15. Mr. M. M. Pokhral	Senior Officer	MOPE
16. Mr. R. M. Sulpya	Deputy Director	NEA
17. Mr. R. Adhikari	Assit. Agricultural Economist	DOA
18. Mr. S. Saburi	JICA Expert	DOA
19. Mr. A. P. Gantam	Silviculturist	DOF
20. Mr. B. D. Shrestha	Senior Geologist	Deptment of Soil Conservation
21. Mr. M. B. Pradhan	Engineer	DOI
22. Mr. P. M. Shrestha	Engineer	DOI
23. Mr. K. N. Dahal	Engineering Geologist	DOI
24. Mr. N. Gadal	Asst. C. D. Officer, CRID	DOI
25. Mr. H. K. Jha	Soil Consevation Officer	DOI
26. Mr. G. B. Bkandain	Engineer	ADB/N
27. Mr. U. Sautam	Consultant	CMS
28. Mr. A. Uchida	Assit. Resident Representative	JICA Nepal
29. Mr. N. Grung	Senior Program Officer	JICA Nepal
30. Mr. M. Fujioka	Team Leader	JICA Study Team
31. Mr. K. Iwata	Irrigation and Drainage	JICA Study Team
32. Dr. P. Pradhan	Farmer Organization	JICA Study Team
33. Dr. S. K. Chaudhary	Farm Management	JICA Study Team
34. Mr. K. Tanaka	Rural Sociaty	JICA Study Team
35. Mr. N. Toyooka	Agricultural Economist	JICA Study Team
36. Mr. K. Tsumura	Facility Design	JICA Study Team

Part A

5. FLAG Meetings (2 times)

	<u>Date</u>	<u>Venue</u>
1)	December 15, 1996	Meeting Hall, DDC Office, Bidur
2)	February 28, 1997	Trishuli Hotel, Bidur

**RECORD OF MEETING
1ST FLAG
FOR
THE FEASIBILITY STUDY ON
TRISHULI IRRIGATION PROJECT**

Date: December 15, 1996
Venue: Meeting Hall, District Development Committee Office, Bidur, Nuwakot
Participants: As Listed in Annex

The JICA Study team and the DOI counterpart staffs had a meeting with CDO, LDO, DSP, Chief of DIO, the officers of other line agencies, people representatives and the beneficiaries under the chairmanship of the President, District Development Committee, Nuwakot on December 15, 1996.

The meeting was commenced with a brief introduction of the Project by Mr. L. D. Shrestha, the Chief of DIO. A session of self introduction was followed immediately afterward.

The DOI Chief Counterpart Mr. M. B. Pradhan highlighted on the current government policy regarding the involvement of user beneficiaries from the project planning to the operation and the maintenance stage. He briefed about the origin of the proposed Feasibility Study on the Trishuli Irrigation Project by the JICA. On behalf of the DOI, he requested all the line agencies and beneficiaries to cooperate and help the JICA Study team in supplying the relevant data and the information needed during the study period.

The JICA Study Team Leader, Mr. M. Fujioka greeted the attendants. He emphasized on the need of the identification of beneficiaries, and the inclusion of farmers' opinion in the Project Design. He pointed out that the participatory approach is a need for the sustainable development and also the requirement of the present irrigation policy of Nepal. He proposed that the FLAG be held once in every month to incorporate the farmers' opinion in the Project Design. He also strongly emphasized for the clear agreement between NEA and DOI for the minimum 1 cumec discharge during the dry period. He expressed his serious concern about the existing sill level provided for the diversion of the irrigation water at the Aqueduct No 2, where the present water level is about 0.5 m below the sill level. He liked to know whether shifting the Intake point downstream of the present desilting basin of Trishuli Hydropower Project rather than at the present proposed Intake point may be amended or not.

The JICA Study team, Farm Management expert, Dr. S. K. Chaudhary explained the stages of

the Participatory Rural Appraisal (PRA) methodology, stage I as the identification of beneficiaries and stage II as the full fledged PRA. He explained the commercialization of agriculture through the participatory approach. He also emphasized on the cooperation needed from the concerned line agencies, political leaders and especially the beneficiaries, without which the Study could not be carried out smoothly.

Mr. K. Tanaka, Rural Society expert of the JICA Study team expressed about the program of visiting to the field level, exchange ideas about the present existing condition and about uplifting the economic condition of the disadvantaged farmers as well as to uplifting the women groups in the proposed Project area.

After the formal speeches, the floor was opened for the common discussion on the Project. Exchange of the ideas and queries about the existing Battar Irrigation system and areas covered by the proposed Project were also discussed among the participants. Farmers expressed their willingness to cooperate in building the tertiary canal provided the system is simple enough to manage and maintain with the technical support of the line agencies. Mr. K. Iwata, Irrigation Specialist of the Study team expressed his views that the simple is the best for the sustainability and the easy management.

The user beneficiaries were also curious to know:

- (i) whether Pokhare Phant (Area-B) is included in the Study of 1,000ha of Trishuli Irrigation Project or not,
- (ii) whether the command area of the existing Battar Lift Irrigation Scheme is included or not,
- (iii) whether any alternative source rather than Aqueduct No.2 is proposed in this Study or not.

In response to the above queries, Mr. M. Fujioka replied that the command area of Pokhare Phant (Area-B) and existing command area of Battar Lift Irrigation Scheme are included. He again added alternative source can be finalized only after the Study.

It was decided that the demarcation of the actual irrigation area can be determined only after the Feasibility Study. The actual available field level data from the Ward chairman for the household list also can be verified from the available data from the different line agencies. To resolve the issues on the need and the availability of water during the dry season, it was suggested by Chief District Officer that meeting be held involving the concerned line agencies at the district level.

LIST OF PARTICIPANTS**Line Agencies from Nuwakot**

- | | |
|-----------------------------|---|
| 1. Mukunda Raj Sitaula | President of District Development Committee |
| 2. Shyam Sunder Sharma | Chief District Officer |
| 3. Tika Ram Silwal | District Sperintending Police |
| 4. Bharat Dhungana | Member of DDC, Sector 4 |
| 5. Narayan Marasini | Acting Chief of AIC |
| 6. Narayan Prasad Khanal | Acting Officer of DAD Office |
| 7. Maheshwar Sharama | Office Acting, LDO |
| 8. Arun Kumar Barwwal | Loan Officer, ADB/Trishuli |
| 9. Bishow Ram | Representative, District Co-operative Office |
| 10. Hemant Kumar Mahato | Office Acting incharge, Regional Soil Conservation Office |
| 11. Balaram Dhital | District Survey Office |
| 12. Raju Thapa | Representative, Kautipur Publication |
| 13. Bishowa Raj Upadhyaya | Land Revenu Officer |
| 14. Harsha Bahadur Shrestha | Representative, Trishuli Hydropoeer Station |
| 15. Lok Dharshan Shrestha | Chief Irrigation Officer, DOI, Nuwakot |

Beneficiaries

- | | |
|---------------------------|--|
| 1. Bishnu Acharya | Bidur Muninciparity, Ward-5 |
| 2. Shiva Prasad Gasurel | Bidur Muninciparity, Ward- |
| 3. Janka Bahadur K. C. | Bidur, Inarpati |
| 4. Janka Prasad Neupane | Bidur, Pipaltar, Ward-7 |
| 5. Hari Krishna Adhikari | |
| 6. Netra Prasad Adhikari | Khadaga Bhanjyang VDC-4 |
| 7. Mohan Lal | Chairman of WUA, Khadagbhanjyang, Ward-5 |
| 8. Ramhari Gajurel | |
| 9. Upendra Bahadur Ojha | |
| 10. Man Bahadur Dangol | Bidur Muninciparity, Pipaltar, Ward-7 |
| 11. Gobinda Lal Chitrakar | Devighat, Thulo Pipaltar |
| 12. Bal Ram Neupane | Bidur Muninciparity, Inarpati, Ward-6 |
| 13. Prem Prasad Neupane | Bidur Muninciparity, Inarpati, Ward-6 |
| 14. Lal Bahadur | Bidur Muninciparity, Ward-5 |
| 15. Sukrama Shrestaha | Bidur Muninciparity, Ward-4 |

16. Thakur Prasad Lamichhane
17. Neupane Bidur Municipality, Ward-6
18. Prakash Bhattarai

Counterparts from Kathmandu

1. Mahesh Bahadur Pradhan Chief Counterpart, Engineer, DOI
2. Prakash Man Shrestha Engineer, DOI
3. Khila Nath Dahal Engineering Geologist, DOI
4. Nirmal Gadal Agronomist, CRID, DOI

JICA Study Team

1. Masamitsu Fujioka Team Leader
2. Kuniki Iwata Irrigation And Drainage
3. Dr. Shiva Kumar Chaudhari Agronomist
4. Kiyofumi Tanaka Rural Society
5. Kazumitsu Tsumura Facility Design
6. Kentaro Usuda Toposurvey Supervision

**RECORD OF MEETING
2ND FLAG
FOR
THE FEASIBILITY STUDY ON
TRISHULI IRRIGATION PROJECT**

Date: February 28, 1997

Venue: Trishuli Hotel, Bidur, Nuwakot

Mr. Fujioka introduced the progress made by JICA study team on Trishuli Irrigation Project. He explained about the water availability only for 9 months during wet season. The other important point was the recommendation for shifting of intake from original one (Aqueduct No.2) to the lower part of balancing reservoir of NEA. No decision from the government side is made yet. The reason for the recommendation of alternative I is due to high cost of implementation from the original intake site.

Mr. Iwata explained the alignment of main canal and design of irrigation system. The main canal will be served by 1.2 meter dimension pipe not the open canal.

The Water Users Associations will be formed on the basis of hydrological boundary. The membership will be based on the land ownership or the water users.

After brief presentation on the program of the TIP study, discussion revolved around the shifting of intake. Two proposals were brought out;

(a) to take initiative by CDO to hold the meeting of the local level officials (NEA staff, DiO staff, CDO, LDO and other officials) at the proposed intake site and come out some solution.

(b) The vice-chairman of Nuwakot District Development Committee suggested that he will take lead and try to arrange a meeting with the Minister of Water Resources. He wants to have the participation of JICA study team members also in the meeting.

There was discussion about the alignment inside the Maithali military camp. Discussion took place regarding the appropriate alignment inside the camp. At one point, it was

suggested that the pipe lysing showed be from the highway itself. Mr. Iwata suggested that the height of the highway is higher and it will require at least 10 meter deep digging so it has to be from inside the camp.

It was agreed in the meeting that Engineer from DIO, Mr. Iwata from JICA study team and Major from Army caomp would do quick review of the situation inside the camp and come out a tentative alignment.

Major from Army camp suggested that they are positive about the project. However, decision is to be made at the higher level, might be at C-in-C level. The detail description of the activity is to be included in the proposal to be sent to the higher offical.

Army camp would like to have an outlet for water supply to the proposed swiming pool inside the camp. Army camp is recuit training center so the construction activity inside the camp should be minimum as far as possible so that it will not disturb the training activity in the camp.

The security committee within the sidtrict is composed of CDO, chief of the army camp and DSP of Police. They said that they are positive on the project so they will move the proposal in a positive line.

The other government property which is going to be affected by the alignment is the Horticulture farm of Ministry of Agriculture. The concern of the Manager of Horticulture farm is that it is a reserch farm with different varities of fruit trees. They want to know what will pappen to these trees? They should be informed about the alignment within the Horticulture farm.

It is agreed that all the poeple who are to be affected by the alignment are to be informed.

List of Participants

Nuwakot District

1. Shyam Sunder Sharma Chief District Officer
2. Tika Ram Silwal District Superintending Police
3. Mahendra Bahadur Thing Vice-Chairman of District Development Committee
4. Chaturbhuj Prasad Sharma Local Development Officer
5. Baldev Mahat Military Major
6. Suraj K. C. Inspector (Police)
7. Lok Dharshan Shresta Chief Irrigation Officer, DIO

JICA Study Team

1. Masamitsu Fujioka Team Leader
2. Kuniki Iwata Irrigation and Drainage
3. Dr. Prachanda Pradhan Farmer Organization
4. Kiyofumi Tanaka Rural Society
5. Nobuyuki Toyooka Agro-economy/ Project Evaluation
6. Kazunitsu Tsumura Facility Design
7. Yuki Matsuo Environment

Part A

6. Sub-Project Area-wise Farmers' Meetings (5 places)

	<u>Date</u>	<u>Venue</u>
1)	January 21, 1997	Chautar near Chandra Jyoti Lower Secondary School, Tallo Pipaltar
2)	January 22, 1997	Upper Pipaltar No.2 Pumpu House, Chuhadi, Beltar
3)	January 23, 1997	Laxmi Narayan Temple near Mahalaxmi Primary School, Maharani Dihi
4)	January 23, 1997	Shree Ranabhuaneshwory High School, Phirkep Devighat, Pokhariphant
5)	January 26, 1997	Indrayani Chautara, Shimbutar

Sub-Project Area-wise Farmers' Meetings (1)
Minutes of Meeting
(Upper Pipaltar, Lower Pipaltar and Devighat)

Date & Time: January 21, 1977 (Tue) 11:00 - 12:30 am

Venue: Chautara near Chandra Jyoti Lower Secondary School, Tallo Pipaltar

This Farmers' Meeting was organized by Dr. P. Pradhan on the behalf of JICA Feasibility Study Team with the objectives of sharing information on Trishuli Irrigation Project (TIP) with the farmers and learning from the farmers' opinions on TIP and their experiences about Battar Lift Irrigation Project (BLIP). This first meeting was organized for the farmers of Upper Pipaltar (Mathillo Pipaltar), Lower Pipaltar (Tallo Pipaltar) and Devighat. The list of the participants is attached in the Annex.

After Dr. P. Pradhan introduced JICA Team members and the Department of Irrigation (hereinafter referred to as DOI) counterparts, Mr. M. Fujioka, Team Leader of JICA Team, delivered the introductory speech. Mr. M. Fujioka briefed the objectives of the meeting, the general background of TIP and the availability of irrigation water during the dry season and the wet season. He added that JICA Team has requested DOI to negotiate with Nepal Electricity Authority (NEA) for getting the irrigation water during the dry season, because the water availability is only 8 months from the aqueduct No. 2. He requested the farmers to express their opinions frankly which will be valuable inputs to proceed this study.

Mr. M. B. Pradhan, chief counterpart to JICA Team and engineer from DOI, spoke that the project will be launched as a joint management for the irrigation development. He added that, as per the consent with NEA, there is a provision of irrigation water from the aqueduct No. 2 only for 8 months without interruption of electricity, but discussion is still going on between DOI and NEA for making water available in the dry season as well.

Mr. K. Iwata briefed the proposed alignment of the main canal, the proposed intake point at the aqueduct No. 2 and the need for two irrigation systems, namely the gravity irrigation system and the lift irrigation system, for Upper Pipaltar and Majhitar.

Mr. K. Tanaka informed the farmers about the completion of the social survey and expressed his heartfelt thanks for their sincere cooperation in Rapid Rural Appraisal (RRA) and household questionnaire surveys. He expressed his hope to learn further from the farmers in the coming days.

Dr. S. K. Chaudhary put into discussion the present agriculture situation, constraints and its prospects in the future both for the year round irrigation and the wet season irrigation.

Dr. P. Pradhan briefed the government irrigation policy, the need for water users' association to operate and maintain the irrigation system, the expected farmers' roles and contributions for TIP.

Mr. N. Toyooka asked two questions on comparison of formal and informal banking systems and constraints on marketing of agricultural inputs and produces.

Similarly, Mr. Y. Matsuo made some environmental queries to the participating farmers.

Finally, Mr. M. Fujioka, JICA Team Leader, expressed his thanks to the farmers on behalf of JICA Team for their participation in this meeting.

The participating farmers made the following comments and suggestions on TIP:

1. Since the electricity demand is increasing day by day, there is a doubt that NEA will provide the water for irrigation. Therefore it is better to search for a new independent intake point. (Mr. Ram Krishna Bhatta, Upper Pipaltar, Bidur Ward 7)
2. Farmers can make the collective pressure on NEA to get the irrigation water during the dry season from the aqueduct No. 2, once TIP gets materialized and constructed. (Mr. Shiva Prasad Gajurel, Upper Pipaltar, Bidur Ward 7)
3. Having had unsuccessful operational experiences in BLIP, the adoption of the lift irrigation system for Upper Pipaltar and Majhitar is questionable, so it was suggested that the other better alternatives be looked for. (Mr. Moti Ram Neupane, Upper Pipaltar, Bidur Ward 7)
4. Even though BLIP had previously uplifted the economic conditions of the farmers, discontinuation of BLIP has worsened the living standards of the farmers in this area. The situation will get reversed if there is an irrigation facility. (Mr. Shiva Prasad Gajurel, Upper Pipaltar, Bidur Ward 7)
5. We are ready to contribute for TIP as per the government irrigation policy. (Mr. Lila Nath Neupane, Upper Pipaltar, Bidur Ward 7)
6. Lack of improved seeds, pesticides, fertilizers, agricultural implements, credit facilities, technical supports, trainings, observation tours, etc. are the constraints on agricultural development besides irrigation. (Mr. Man Bahadur Dangol, Lower Pipaltar, Bidur Ward 7 and Mr. Ram Krishna Bhatta, Upper Pipaltar, Bidur Ward 7)
7. Due to the procedural complications and the provisions of mortgage such as fixed assets (land, gold, etc.) in the formal institutions (bank, etc.) for getting the loan, the farmers are compelled to go to local moneylenders even though their interest rate is too high. (Mr. Man Bahadur Dangol, Upper Pipaltar, Bidur Ward 7 and Mr. Samsher Bahadur Dangol, Lower Pipaltar, Bidur Ward 7)

Annex. List of Participants

A. Farmers

No.	Name	Occupation	Ward	Settlement
1	Deepak Gajurel	Farmer	Bidur-5	Upper Pipaltar
2	Hari Prasad Gajurel	Farmer	Bidur-5	Upper Pipaltar
3	Ram Sharan Gajurel	Farmer	Bidur-5	Upper Pipaltar
4	Keshab Neupane	Farmer	Bidur-5	Upper Pipaltar
5	Ram Krishna Bhatta	Farmer	Bidur-7	Upper Pipaltar
6	Bharat Prasad Gajurel	Farmer	Bidur-7	Upper Pipaltar
7	Hem Prasad Gajurel	Farmer	Bidur-7	Upper Pipaltar
8	Shiva Prasad Gajurel	Farmer	Bidur-7	Upper Pipaltar
9	Surendra Gajurel	Farmer	Bidur-7	Upper Pipaltar
10	Tanka Prasad Gajurel	Farmer	Bidur-7	Upper Pipaltar
11	Keshab Prasad Nepali	Farmer	Bidur-7	Upper Pipaltar
12	Lila Nath Neupane	Farmer	Bidur-7	Upper Pipaltar
13	Moti Ram Neupane	Teacher	Bidur-7	Upper Pipaltar
14	Sambhu Prasad Neupane	Farmer	Bidur-7	Upper Pipaltar
15	Tanka Prasad Neupane	Farmer	Bidur-7	Upper Pipaltar
16	Ganga Ram Gajurel	Farmer	Bidur-5	Lower Pipaltar
17	A. A. Dangol	Farmer	Bidur-7	Lower Pipaltar
18	Babu Lal Dangol	Farmer	Bidur-7	Lower Pipaltar
19	Badri Man Dangol	Farmer	Bidur-7	Lower Pipaltar
20	Bhakta Dangol	Farmer	Bidur-7	Lower Pipaltar
21	Bhim Bahadur Dangol	Farmer	Bidur-7	Lower Pipaltar
22	Ganesh Man Dangol	Farmer	Bidur-7	Lower Pipaltar
23	Gore Dangol	Farmer	Bidur-7	Lower Pipaltar
24	Krishna Man Dangol	Farmer	Bidur-7	Lower Pipaltar
25	Man Bahadur Dangol	Farmer	Bidur-7	Lower Pipaltar
26	Marich Man Dangol	Farmer	Bidur-7	Lower Pipaltar
27	Pahal Man Dangol	Farmer	Bidur-7	Lower Pipaltar
28	Prahlad Dangol	Farmer	Bidur-7	Lower Pipaltar
29	Sharada Man Dangol	Farmer	Bidur-7	Lower Pipaltar
30	Shayam Dangol	Farmer	Bidur-7	Lower Pipaltar
31	Sansher Bahadur Dangol	Farmer	Bidur-7	Lower Pipaltar
32	Mrs. Sano Maiya Joshi	Farmer	Bidur-7	Lower Pipaltar
33	Chakra Bahadur Kumal	Farmer	Bidur-7	Lower Pipaltar
34	Gaj Bir Kumal	Farmer	Bidur-7	Lower Pipaltar
35	Govinda Kumal	Farmer	Bidur-7	Lower Pipaltar
36	Gyan Prakash Kumal	Farmer	Bidur-7	Lower Pipaltar
37	Judha Man Kumal	Farmer	Bidur-7	Lower Pipaltar
38	Madhu Lal Kumal	Farmer	Bidur-7	Lower Pipaltar
39	Maithe Kumal	Farmer	Bidur-7	Lower Pipaltar

40	Ram Bahadur Kumal	Farmer	Bidur-7	Lower Pipaltar
41	Ranji Kumal	Farmer	Bidur-7	Lower Pipaltar
42	Samar Bahadur Kumal	Farmer	Bidur-7	Lower Pipaltar
43	Sano Chaure Kumal	Farmer	Bidur-7	Lower Pipaltar
44	Som Bahadur Kumal	Farmer	Bidur-7	Lower Pipaltar
45	Thulo Chaure Kumal	Farmer	Bidur-7	Lower Pipaltar
46	Tul Bahadur Kumal	Farmer	Bidur-7	Lower Pipaltar
47	Ishwar Bahadur Majhi	Farmer	Bidur-7	Lower Pipaltar
48	Kanchha Majhi	Farmer	Bidur-7	Lower Pipaltar
49	Pahal Man Majhi	Farmer	Bidur-7	Lower Pipaltar
50	Mint Bahadur Prasaini	Farmer	Bidur-7	Lower Pipaltar
51	Bhun Narayan Chitrakar	Farmer	Bidur-7	Devighat
52	Ganesh Lal Chitrakar	Farmer	Bidur-7	Devighat
53	Govinda Lal Chitrakar	Farmer	Bidur-7	Devighat
54	Krishna Lal Chitrakar	Farmer	Bidur-7	Devighat
55	Suku Narayan Chitrakar	Farmer	Bidur-7	Devighat
56	Surat Bahadur Chitrakar	Farmer	Bidur-7	Devighat
57	Resham Lal Dangol	Farmer	Bidur-7	Devighat
58	Ram Raja Aryal	Farmer	Bidur-5	Majhitar
59	Chandra Dev Thapa	Farmer	Bidur-5	Majhitar

B. JICA Team Members

- 1 M. Fujioka
- 2 K. Iwata
- 3 Dr. P. Pradhan
- 4 Dr. S. K. Chaudary
- 5 K. Tanaka
- 6 N. Toyooka
- 7 Y. Matsuo
- 8 K. Tsumura

C. DOI Counterparts

- 1 M. B. Pradhan
- 2 Nirmal Gadal
- 3 H. K. Jha

D. District Irrigation Office (DIO), Nuwakot

- | | | |
|---|------------------------|-----------------------------|
| 1 | Lok Darshan Shrestha | District Irrigation Officer |
| 2 | R. Risal | Overseer (O.S.) |
| 3 | Keshab Prasad Adhikari | Association Officer (A.O.) |
| 4 | Mod Nath Rimal | Peon |

Sub-Project Area-wise Farmers' Meetings (2)
Minutes of Meeting
(Majhitar, Gangate and Part of Upper Pipaltar)

Date & Time: January 22, 1977 (Wed) 11:00 - 12:30 am

Venue: Upper Pipaltar No. 2 Pump House, Chuhadi, Beltar

This Second Farmers' Meeting was organized for the farmers of Majhitar, Gangate and part of Upper Pipaltar (Mathillo Pipaltar) with the objectives of making beneficiary farmers familiar with the feasibility study activities and sharing their opinions and experiences about the lift irrigation system. The list of the participants is attached in the Annex.

The meeting was started by introducing JICA Feasibility Study Team members and the Department of Irrigation (DOI) counterparts by Dr. P. Pradhan. Then, Mr. M. Fujioka, Team Leader of JICA Team, delivered a short introductory speech about the objectives of the meeting and the general background of TIP and informed the participating farmers about the need of the lift irrigation system for Majhitar and Upper Pipaltar. He also requested the farmers to take initiative towards the group formation to work together for the proposed irrigation system.

Mr. M. B. Pradhan, chief of DOI counterparts to JICA Team and engineer, highlighted the need of farmers' participation for the sustainability of the irrigation project. He requested the farmers to cooperate with JICA Team.

Mr. K. Iwata briefed the survey activities and made clear about the need of the lift irrigation system due to the higher elevation of Majhitar and Upper Pipaltar than the proposed intake point at the aqueduct No. 2.

Mr. K. Tanaka expressed his heartfelt thanks to all farmers for their kind cooperation in household questionnaire surveys and Rapid Rural Appraisal (RRA) including social mapping, group discussions and key informant interviews. He also requested the participating farmers to encourage women to participate in the forthcoming meetings, because women's participation is crucial for the success of the project.

Dr. S. K. Chaudhary requested the farmers to plan about diversification, intensification and commercialization of agriculture with more focus on high value crops, once irrigation water is made available to them. He also inquired about the major constraints limiting the agricultural productivity.

At the same time, Mr. Fujioka asked the farmers how they can utilize the wet season irrigation water for increasing agricultural productivity.

Dr. P. Pradhan briefed the government irrigation policy in three points: (a) the need for a joint management system for TIP, (b) the need for water users' associations (WUAs) to operate and

maintain the irrigation systems and (c) the need for participation and contributions of the beneficiary farmers in irrigation projects.

Mr. N. Toyooka placed one question about current problems on rural credits from formal financial institutions and from local money lenders.

Mr. Y. Matsuo shortly explained the environment and soil test activities of the team.

Finally, Mr. M. Fujioaka, JICA Team Leader, expressed his thanks to the farmers on behalf of JICA Team for their participation in this meeting.

The participating farmers made the following comments and suggestions on TIP:

1. Short and untimely supply of chemical fertilizers, lack of improved seeds, trainings, marketing and proper credit facilities are the major problems of agriculture development. (Mr. Ganga Ram Gajurel, Pipaltar, Bidur Ward 5)
2. Lack of proper identification of suitable and profitable crops based on the soil and climatic condition and lack of relevant trainings are the main problems of agriculture. (Mr. Lal Bahadur Ojha, Majhitar, Bidur Ward 5)
3. We expect the year-round irrigation. However, economic status of the farmers will be changed through paddy cultivation in both upland and lowland by utilizing the eight-month wet season irrigation. (Mr. Bishnu Acharya, Bidur Ward 5)
4. Because the banks lack the efficient system of releasing loans in a timely and simple manner, the farmers do not get loans timely and they cannot utilize them purposively (misuse of loans). As a result, they cannot pay back loans on time. Year by year, interests will be accumulated on to the principal amount, ultimately he cannot pay back and his property will go for auction and he will become landless. (Mr. Lal Bahadur Ojha, Majhitar, Bidur Ward 5)
5. Before Battar Lift Irrigation Project (BLIP), we had enough groundnuts, blackgrams and soyabeans. But farmers now have completely stopped to grow these crops due to soil problems caused by overuse of chemical fertilizers during BLIP. (Mr. Lal Bahadur Ojha, Majhitar, Bidur Ward 5)
7. Lifted water will be expensive for farmers. Therefore, please try your bests to get the alternative water source so that the gravity irrigation system can be adopted for Majhitar and Upper Pipaltar. One of the alternative water sources may be from Tadi River. (Mr. Lal Bahadur Ojha, Majhitar, Bidur Ward 5)
8. If the lift irrigation system will be adopted, distribution of the water should be made through the pipe systems for different blocks and WUAs should be formed for each block to assure fair distributions of the water. (Mr. Ganga Ram Gajurel, Bidur Ward 5)

Annex. List of Participants

A. Farmers

No.	Name	Occupation	Ward
1	Bishnu Acharya	Farmer	Bidur Ward 5
2	Anil Aryal	Farmer	Bidur Ward 5
3	Bhairab Aryal	Farmer	Bidur Ward 5
4	Devendra Bahadur Aryal	Farmer	Bidur Ward 5
5	Hari Sharan Aryal	Farmer	Bidur Ward 5
6	Ishwor Aryal	Farmer	Bidur Ward 5
7	Kaji Aryal	Farmer	Bidur Ward 5
8	Krishna Bahadur Aryal	Farmer	Bidur Ward 5
9	Lalit Bahadur Aryal	Farmer	Bidur Ward 5
10	Raj Kumar Aryal	Farmer	Bidur Ward 5
11	Rajendra Aryal	Farmer	Bidur Ward 5
12	Ram Babu Aryal	Farmer	Bidur Ward 5
13	Ram Chandra Aryal	Farmer	Bidur Ward 5
14	Ram Sharan Aryal	Farmer	Bidur Ward 5
15	Rama Raja Aryal	Farmer	Bidur Ward 5
16	Sai Bahadur Aryal	Farmer	Bidur Ward 5
17	Shuka Dev Aryal	Teacher, Farmer	Bidur Ward 5
18	Yogendra Aryal	Farmer	Bidur Ward 5
19	Surya Bahadur	Farmer	Bidur Ward 5
20	Ram Bahadur Bhujel	Farmer	Bidur Ward 5
21	Man Bahadur Dangol	Farmer	Bidur Ward 5
22	Netra Prasad Dhakal	Farmer	Bidur Ward 5
23	Santa Bahadur Dhital	Farmer	Bidur Ward 5
24	Arjun Gajurel	Farmer	Bidur Ward 5
25	Dil Bahadur Gajurel	Farmer	Bidur Ward 5
26	Ganga Ram Gajurel	Farmer	Bidur Ward 5
27	Hari Prasad Gajurel	Farmer	Bidur Ward 5
28	Lila Nath Gajurel	Farmer	Bidur Ward 5
29	Nawa Raj Gajurel	Teacher, Farmer	Bidur Ward 5
30	Prem Bahadur K. C.	Farmer	Bidur Ward 5
31	Naryan Bahadur Khanal	Farmer	Bidur Ward 5
32	Shiva Koirala	Farmer	Bidur Ward 5
33	Antare Kumal	Farmer	Bidur Ward 5
34	Bharat Bahadur Kumal	Farmer	Bidur Ward 5
35	Bharat Kumal	Farmer	Bidur Ward 5
36	Bhim Bahadur Kumal	Farmer	Bidur Ward 5
37	Bishnu Bahadur Kumal	Farmer	Bidur Ward 5
38	Hari Bahadur Kumal	Farmer	Bidur Ward 5
39	Krishna Bahadur Kumal	Farmer	Bidur Ward 5

40	Laxman Kumal	Farmer	Bidur Ward 5
41	Ram Bahadur Kumal	Farmer	Bidur Ward 5
42	Shiva Bahadur Kumal	Farmer	Bidur Ward 5
43	Ganga Bahadur Kunwar	Farmer	Bidur Ward 5
44	Govinda Bahadur Kunwar	Farmer	Bidur Ward 5
45	Man Bahadur Kunwar	Farmer	Bidur Ward 5
46	Thal Bahadur Kunwar	Farmer	Bidur Ward 5
47	Prodip Lamichhane	Farmer	Bidur Ward 5
48	Raju Lamichhane	Farmer	Bidur Ward 5
49	Ram Bahadur Ale Magar	Farmer	Bidur Ward 5
50	Gopal Majhi	Farmer	Bidur Ward 5
51	Dabal Bahadur Nepali	Farmer	Bidur Ward 5
52	Gopal Nepali	Farmer	Bidur Ward 5
53	Santa Bahadur Nepali	Farmer	Bidur Ward 5
54	Umesh Nepali	Farmer	Bidur Ward 5
55	Lila Nath Neupane	Farmer	Bidur Ward 5
56	Lal Bahadur Ojha	Farmer	Bidur Ward 5
57	Bhim Bahadur Pudasaini	Farmer	Bidur Ward 5
58	Bijaya Thapa	Farmer	Bidur Ward 5
59	Chandra Bahadur Thapa	Farmer	Bidur Ward 5
60	Pravakar Thapa	Farmer	Bidur Ward 5

B. JICA Team Members

1	M. Fujioka
2	K. Iwata
3	Dr. P. Pradhan
4	Dr. S. K. Chaudhary
5	K. Tanaka
6	N. Toyooka
7	Y. Matsuo
8	K. Tsumura

C. DOI Counterparts

1	M. B. Pradhan
2	Nirmal Gadel
3	H. K. Jha

D. District Irrigation Office (DIO), Nuwakot

1	Raj Kumar Khakurel	Overseer (O.S.)
2	Keshab Prasad Adhikari	Association Officer (A.O.)
3	Mod Nath Rimal	Peon

Sub-Project Area-wise Farmers' Meetings (3)
Minutes of Meeting
(Maharani Dihi, Inarpati, Dihigau, Chandipokhari)

Date & Time: January 23, 1977 (Thu) 11:00 - 12:15 am

Venue: Laxmi Narayan Temple near Mahalaxmi Primary School, Maharani Dihi

This Third Farmers' Meeting was organized for the farmers of Maharani Dihi, Inarpati, Dihigau and Chandipokhari. The main objectives of this meeting was to explain the beneficiary farmers about JICA Feasibility Study on Trishuli Irrigation Project (TIP) and know their interests, needs and opinions about the proposed irrigation system. The list of the participants is attached in the Annex.

After the introduction of JICA Feasibility Study Team members and the Department of Irrigation (DOI) counterparts by Dr. P. Pradhan, Mr. M. Fujioka, Team Leader of JICA Team, delivered his introductory speech on TIP and informed the farmers that, at present, the water availability from the aqueduct No. 2 in the proposed TIP will be only for the wet season, but discussion is still going on between DOI and National Electricity Authority (NEA) for getting irrigation water for the dry season as well.

Mr. M. B. Pradhan, chief of DOI counterparts to JICA Team and engineer, welcome all participants on behalf of DOI and emphasized the need of a joint management approach for TIP.

Mr. K. Iwata explained the survey activities and the proposed irrigation system and also informed the farmers that the gravity irrigation system will be adopted for the area of Maharani Dihi, Inarpati, Dihigau and Chandipokhari.

Mr. K. Tanaka informed the farmers about the completion of household questionnaire surveys and Rapid Rural Appraisal (RRA) exercises and expressed his heartfelt thanks to all farmers for their kind cooperation. He explained that the information obtained from these surveys will be the basis for planning and design of TIP.

Dr. S. K. Chaudhary inquired the farmers about the crop preferences by the farmers and the major constraints limiting the agricultural productivity.

Dr. P. Pradhan briefed the government irrigation policy in three points: (a) the need for a joint management system for TIP, (b) the need for water users' associations (WUAs) to operate and maintain the irrigation systems and (c) the need for participation and contributions of the beneficiary farmers in irrigation projects.

Mr. N. Toyooka inquired about the land tenure system with emphasis on sharecropping system.

Mr. K. P. Adhikari, Association Officer, District Irrigation Office (DIO), Nuwakot, explained the procedure to register WUAs.

Finally, Mr. M. Fujioka, JICA Team Leader, expressed his thanks to the farmers on behalf of JICA Team for their good participation (especially women's participation) in this meeting and requested both male and female participants to attend the next meeting. He also added that 20% of women's participation is a must for all WUAs, therefore the success of the project will depend on whether women join the WUAs or not.

The participating farmers made the following comments and suggestions on TIP:

1. One sharecropper reported that he has to provide the land owner a half of the total produce of the major crops (rice, maize and wheat) and the land owner bears 50% of costs of the major inputs such as bullock, seeds and fertilizers excluding labors. (Mr. Krishna Bahadur Kumal, Maharani Dihi, Bidur ward 6)
2. The wet season irrigation is also useful for us, because now we are depending on the irregular rainfall to start the paddy cultivation. If the rain starts in July, we can get a good yield of rice, but if it delays, the yield will become less. (Mr. Chhetra Bahadur K. C., Maharani Dihi, Bidur Ward 6)
3. Women are ready to accept the increased responsibilities and work after irrigation, because children and ourselves will have enough food for home consumption. We are also ready to join WUAs. (Mrs. Thuli Maiya K. C., Maharani Dihi, Bidur Ward 6)

Annex. List of Participants

A. Farmers (Total: 111 farmers consisting of 75 males and 36 females)

No.	Sex	Name	Occupation	Settlement	VDC/Ward	
1	Mr.	Incha Bahadur	Koirala (Sharki)	Farmer	Battar	Bidur Ward 4
2	Mrs.	Renuka	Shrestha	Employee	Battar	Bidur Ward 4
3	Mr.	Jhava Raj	Devakota	Farmer	Dihigau	Bidur Ward 6
4	Mr.	Thira Nath	Neupane	Farmer	Dihigau	Bidur Ward 6
5	Mr.	Madhu Sudan	Amatya	Farmer	Inarpati	Bidur Ward 6
6	Mr.	Buddhilal	Amatya	Farmer	Inarpati	Bidur Ward 6
7	Mr.	Surendra	Jhadawari	Farmer	Inarpati	Bidur Ward 6
8	Mr.	Singha Bahadur	Komal	Farmer	Inarpati	Bidur Ward 6
9	Mrs.	Chinu Maiya	Komal	Farmer	Inarpati	Bidur Ward 6
10	Mr.	Ishwor	Acharya	Farmer	Maharani Dihi	Bidur Ward 6
11	Mr.	Ishwor	Acharya	Farmer	Maharani Dihi	Bidur Ward 6
12	Mrs.	Inkira	Adhikari	Farmer	Maharani Dihi	Bidur Ward 6
13	Mr.	Thulonich Bahadur	Chhetri	Farmer	Maharani Dihi	Bidur Ward 6
14	Mr.	Jivan Nath	Devakota	Farmer	Maharani Dihi	Bidur Ward 6
15	Mr.	Tek Bahadur	Dhamala	Farmer	Maharani Dihi	Bidur Ward 6
16	Mrs.	Mittha	Dhital	Farmer	Maharani Dihi	Bidur Ward 6
17	Mrs.	Sani Maiya	Dhital	Farmer	Maharani Dihi	Bidur Ward 6
18	Mr.	Bashu	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
19	Mr.	Raju	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
20	Mr.	Arjun	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
21	Mr.	Buddhi Bahadur	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
22	Mr.	Shyam Raja	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
23	Mr.	Shyam	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
24	Mr.	Ban Bahadur	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
25	Mr.	Rani Babu	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
26	Mr.	Jhatta Bahadur	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
27	Mr.	Kana Bahadur	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
28	Mr.	Kumar Dip	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
29	Mr.	Ashok Kumar	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
30	Mr.	Bachi Bahadur	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
31	Mr.	Krishna Bahadur	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
32	Mr.	Tuk Bahadur	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
33	Mr.	Lal Bahadur	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
34	Mr.	Chhetra Bahadur	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
35	Mr.	Bhagawat	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
36	Mrs.	Shanti	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
37	Mrs.	Maili	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
38	Mr.	Gyani	K. C.	Farmer	Maharani Dihi	Bidur Ward 6

39	Mrs.	Thuli	Maiya	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
40	Mrs.	Kanchhi		K. C.	Farmer	Maharani Dihi	Bidur Ward 6
41	Mrs.	Kamala		K. C.	Farmer	Maharani Dihi	Bidur Ward 6
42	Mrs.	Jamuna		K. C.	Farmer	Maharani Dihi	Bidur Ward 6
43	Mrs.	Maya		K. C.	Farmer	Maharani Dihi	Bidur Ward 6
44	Mr.	Tulasi		K. C.	Farmer	Maharani Dihi	Bidur Ward 6
45	Mrs.	Badr	Kumari	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
46	Mrs.	Maiya		K. C.	Farmer	Maharani Dihi	Bidur Ward 6
47	Mrs.	Indra	Kumari	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
48	Mrs.	Saili		K. C.	Farmer	Maharani Dihi	Bidur Ward 6
49	Mr.	Ram	Kumar	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
50	Mr.	Buddhi	Bahadur	K. C.	Farmer	Maharani Dihi	Bidur Ward 6
51	Mrs.	Suntali		Karki	Farmer	Maharani Dihi	Bidur Ward 6
52	Mr.	Lova	Bahadur	Khatri	Farmer	Maharani Dihi	Bidur Ward 6
53	Mr.	Krishna	Bahadur	Kumal	Farmer	Maharani Dihi	Bidur Ward 6
54	Mr.	Sanu	Harka	Kumal	Farmer	Maharani Dihi	Bidur Ward 6
55	Mr.	Indra	Bahadur	Kumal	Farmer	Maharani Dihi	Bidur Ward 6
56	Mr.	Janga	Bahadur	Kumal	Farmer	Maharani Dihi	Bidur Ward 6
57	Mr.	Hira	Kaji	Kumal	Farmer	Maharani Dihi	Bidur Ward 6
58	Mr.	Ram	Bahadur	Kumal	Farmer	Maharani Dihi	Bidur Ward 6
59	Mr.	Bal	Bahadur	Kumal	Farmer	Maharani Dihi	Bidur Ward 6
60	Mr.	Bharat		Kumal	Farmer	Maharani Dihi	Bidur Ward 6
61	Mr.	Krishna	Bahadur	Kumal	Farmer	Maharani Dihi	Bidur Ward 6
62	Mr.	Durge	Maila	Kumal	Farmer	Maharani Dihi	Bidur Ward 6
63	Mr.	Raj	Kumar	Kumal	Farmer	Maharani Dihi	Bidur Ward 6
64	Mr.	Min	Bahadur	Kumal	Farmer	Maharani Dihi	Bidur Ward 6
65	Mr.	Amar	Bahadur	Kumal	Farmer	Maharani Dihi	Bidur Ward 6
66	Mr.	Ram	Sharan	Kumal	Farmer	Maharani Dihi	Bidur Ward 6
67	Mrs.	Goma		Pandey	Farmer	Maharani Dihi	Bidur Ward 6
68	Mr.	Dhruva	Kumar	Paudel	Farmer	Maharani Dihi	Bidur Ward 6
69	Mrs.	Laxmi		Paudel	Farmer	Maharani Dihi	Bidur Ward 6
70	Mr.	Ram	Chaudra	Paudel	Farmer	Maharani Dihi	Bidur Ward 6
71	Mr.	Ram	Sharan	Sadula	Farmer	Maharani Dihi	Bidur Ward 6
72	Mr.	Shyam	Bahadur	Sadula	Farmer	Maharani Dihi	Bidur Ward 6
73	Mr.	Pradcep		Sadula	Farmer	Maharani Dihi	Bidur Ward 6
74	Mr.	Kaji	Man	Sadula	Farmer	Maharani Dihi	Bidur Ward 6
75	Mr.	Pang	Bahadur	Sadula	Farmer	Maharani Dihi	Bidur Ward 6
76	Mr.	Dan	Bahadur	Sadula	Farmer	Maharani Dihi	Bidur Ward 6
77	Mr.	Ram	Kumar	Sadula	Farmer	Maharani Dihi	Bidur Ward 6
78	Mr.	Madan	Bahadur	Sadula	Farmer	Maharani Dihi	Bidur Ward 6
79	Mrs.	Sabitri		Sadula	Farmer	Maharani Dihi	Bidur Ward 6
80	Mr.	Ganga		Sadula	Farmer	Maharani Dihi	Bidur Ward 6
81	Mrs.	Man	Kumari	Sadula	Farmer	Maharani Dihi	Bidur Ward 6
82	Mrs.	Sival	Kumari	Sadula	Farmer	Maharani Dihi	Bidur Ward 6

83	Mrs.	Nima	Kumari	Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
84	Mrs.	Kamala		Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
85	Mr.	Tanka	Bahadur	Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
86	Mr.	Saila		Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
87	Mr.	Jagat	Bahadur	Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
88	Mr.	Jit	Bahadur	Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
89	Mr.	Lalit	Bahadur	Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
90	Mr.	Dil	Bahadur	Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
91	Mr.	Netra	Bahadur	Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
92	Mr.	Nar	Bahadur	Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
93	Mrs.	Thuli	Kanchhi	Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
94	Mrs.	Sanu	Kanchhi	Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
95	Mrs.	Sushila		Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
96	Mr.	Ganga		Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
97	Mrs.	Kanchhi		Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
98	Mr.	Dil	Bahadur	Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
99	Mr.	Kumar		Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
100	Mrs.	Roj	Kumari	Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
101	Mrs.	Netra	Kumari	Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
102	Mrs.	Usha		Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
103	Mr.	Shanta	Bahadur	Sadaula	Farmer	Maharani Dihi	Bidur Ward 6
104	Mrs.	Tej	Kumari	Thapa	Farmer	Maharani Dihi	Bidur Ward 6
105	Mr.	Ram	Bahadur	Thapa	Farmer	Maharani Dihi	Bidur Ward 6
106	Mrs.	Nani		Thapalia	Farmer	Maharani Dihi	Bidur Ward 6
107	Mr.	Bishnu	Bahadur	Timilsina	Farmer	Maharani Dihi	Bidur Ward 6
108	Mrs.	Maili		Tiwali	Farmer	Maharani Dihi	Bidur Ward 6
109	Mr.	Bhim	Bahadur	Tiwari	Farmer	Maharani Dihi	Bidur Ward 6
110	Mrs.	Sanu	Maiya	Tiwari	Farmer	Maharani Dihi	Bidur Ward 6
111	Mrs.	Kanchhi		Tiwari	Farmer	Maharani Dihi	Bidur Ward 6

B. JICA Team Members

- 1 Mr. M. Fujioka
- 2 Mr. K. Iwata
- 3 Dr. P. Pradhan
- 4 Dr. S. K. Chaudhary
- 5 Mr. K. Tanaka
- 6 Mr. N. Toyooka

C. DOI Counterparts

- 1 Mr. M. B. Pradhan
- 2 Mr. Nirmal Gadal

D. District Irrigation Office (DIO), Nuwakot

- | | | |
|---|----------------------------|----------------------------|
| 1 | Mr. Raj Kumar Khakurel | Overseer (O.S.) |
| 2 | Mr. Keshab Prasad Adhikari | Association Officer (A.O.) |
| 3 | Mr. Mod Nath Rimal | Peon |

Sub-Project Area-wise Farmers' Meetings (4)
Minutes of Meeting
(Phirkep Devighat, Sirkhaligau, Dhodeni and Majhigau)

Date & Time: January 23, 1977 (Thu) 3:00 - 4:15 pm
Venue: Shree Ranabhuwaneshwory High School, Phirkep Devighat,
Pokhariphant

This Fourth Farmers' Meeting was organized by JICA Feasibility Study on Trishuli Irrigation Project (TIP) for the farmers of Phirkep Devighat, Sirkhaligau, Dhodeni and Majhigau. The main objectives of the meeting is to inform the farmers about the proposed TIP and know their opinions, ideas and interests. The list of the participants is attached in the Annex.

After the introduction of JICA Study Team members and the Department of Irrigation (DOI) counterparts by Dr. P. Pradhan, Mr. M. Fujioka, Team Leader of JICA Study Team, delivered his introductory speech which informed the farmers about the objectives of this meeting and the progress of the feasibility study on TIP.

Mr. M. B. Pradhan, chief of DOI counterparts to JICA Study Team and engineer, welcome the participants on behalf of DOI and requested the participating farmers to cooperate JICA Study Team. He also suggested that besides bringing the gravity irrigation system from the aqueduct No. 2 to this tail-end area, some alternative ways to irrigate this area may be investigated.

Mr. K. Iwata explained the possible irrigation systems such as the gravity irrigation system through a siphon from Maharani Dihl and the lift irrigation system directly from Trishuli River, and wanted to know the farmers' opinions for these systems.

Mr. K. Tanaka expressed his sincere thanks to all the farmers for their kind cooperation to household questionnaire surveys and Rapid Rural Appraisal (RRA) exercises. He also requested the participating farmers to encourage women to participate in the next meeting. He also inquired the sharecropping system in this area on behalf of Mr. N. Toyooka.

Dr. P. Pradhan briefed the government irrigation policy and explained the farmers that a joint management system, formation of water users' associations (WUAs) and labor or cash contributions by beneficiary farmers (10% of the total construction cost) are the basic requirements for TIP.

Finally, Mr. M. Fujioka, JICA Team Leader, expressed his thanks to all the farmers on behalf of JICA Team for their participation in this meeting and requested the farmers to attend the next meeting which will be held once a month during the study period.

The participating farmers made the following comments and suggestions on TIP:

1. Pokhariphant is the tail end of the proposed irrigation project which plans to bring water from the aqueduct No. 2, therefore I would like to suggest the lifting water from Trishuli river up to Dvare Khola or Bhorle Khola from which water can be brought to this area by the existing gravity irrigation system. (Mr. Govinda Chitrakar, Phirkep Devighat, Khadga Bhanjyan Ward 5)

2. We can still adopt the lift irrigation system from Trishuli River, by learning the lessons from Battar Lift irrigation project which had failed due to the long pumping distance and installment of the main pump near the river. (Mr. Hari Krishna Adhikari, Amalchaur, Khadga Bhanjyan Ward 4)

3. Farmers can be organized into a new WUA and 20% females can be involved in this WUA.
Water charge can be also collected through the WUA for the proposed irrigation project. (Mr. Hari Krishna Adhikari, Amalchaur, Khadga Bhanjyan Ward 4)

4. As a sharecropper, I have to give 50% of the total crop produce to the land owner and I have to bear the costs of all the inputs. Since the landowner is unwilling to rent land more than one year, every year I have to find the new land owner who will allow me to cultivate the land. (A landless farmer)

5. Since we have no problem to market our agricultural produce, we can produce more vegetables once irrigation is available during the dry season. Women are already organized in this area, so we are ready to participate in the WUA and contribute whatever we can offer for the proposed irrigation project. (Mrs. Kamala Adhikari, Amalchaur, Khadga Bhanjyan Ward 4)

6. In the response to Mr. Iwata's question about the need for rehabilitation of the existing canal, the vice-chairman of the water users' association expressed his opinion that the lift irrigation system up to the existing main canal would be quite enough to supply water for people and livestock, and the rehabilitation in the existing canal system would be carried out by the farmers themselves. (Mr. Govinda Chitrakar, Phirkep Devighat, Khadga Bhanjyan Ward 5)

Annex. List of Participants

A. Farmers (101 farmers consisting of 95 males and 6 females)

No.	Sex	Name	Occupation	Settlement	VDC/Ward
1	Mr.	Krishna Prasad Aryal	Farmer	Buwanibesi	Charghare Ward 4
2	Mr.	Hari Krishna Adhikari	Farmer	Amalchaur	KB Ward 4
3	Mrs.	Kanala Adhikari	Farmer	Amalchaur	KB Ward 4
4	Mr.	Puspa Raj Gautam	Farmer	Aprethok	KB Ward 4
5	Mr.	Shiva Prasad Aryal	Farmer	Judi Khola	KB Ward 4
6	Mr.	Sita Ram Aryal	Farmer	Judi Khola	KB Ward 4
7	Mr.	Baikuntha Nath Adhikari	Farmer	Pusuntar	KB Ward 4
8	Mr.	Bala Ram Adhikari	Farmer	Pusuntar	KB Ward 4
9	Mr.	Buddhi Prasad Adhikari	Farmer	Pusuntar	KB Ward 4
10	Mrs.	Chet Kumari Adhikari	Farmer	Pusuntar	KB Ward 4
11	Mr.	Ishwor Nath Adhikari	Farmer	Pusuntar	KB Ward 4
12	Mr.	Ram Krishna Adhikari	Farmer	Pusuntar	KB Ward 4
13	Mr.	Shiva Prasad Adhikari	Farmer	Pusuntar	KB Ward 4
14	Mr.	Indra Bahadur Karki	Farmer	Pusuntar	KB Ward 4
15	Mr.	Khem Bahadur Karki	Farmer	Pusuntar	KB Ward 4
16	Mr.	Shiva Neupane	Farmer	Pusuntar	KB Ward 4
17	Mr.	Sita Neupane	Farmer	Pusuntar	KB Ward 4
18	Mr.	Bhoj Raj Rimal	Farmer	Pusuntar	KB Ward 4
19	Mr.	Dilli Prasad Rimal	Farmer	Pusuntar	KB Ward 4
20	Mr.	Khada Nanda Rimal	Employee	Pusuntar	KB Ward 4
21	Mr.	Purushottam Rimal	Farmer	Pusuntar	KB Ward 4
22	Mr.	Ram Prasad Rimal	Farmer	Pusuntar	KB Ward 4
23	Mr.	Amar Bahadur Tamang	Farmer	Pusuntar	KB Ward 4
24	Mr.	Bhakta Bahadur Bhandari	Farmer		KB Ward 4
25	Mr.	Shyam Bahadur Osthi	Farmer		KB Ward 4
26	Mr.	Anrit Kumar Shrestha	Farmer	Chhotetar Dhodeni	KB Ward 5
27	Mr.	Babulal Shrestha	Farmer	Chhotetar Dhodeni	KB Ward 5
28	Mr.	Chandra Man Shrestha	Farmer	Chhotetar Dhodeni	KB Ward 5
29	Mr.	Krishna Man Shrestha	Farmer	Chhotetar Dhodeni	KB Ward 5
30	Mr.	Mangal Shrestha	Farmer	Chhotetar Dhodeni	KB Ward 5
31	Mr.	Mohan Das Shrestha	Farmer	Chhotetar Dhodeni	KB Ward 5
32	Mr.	Nawa Raj Shrestha	Farmer	Chhotetar Dhodeni	KB Ward 5
33	Mr.	Netra Man Shrestha	Farmer	Chhotetar Dhodeni	KB Ward 5
34	Mr.	Pancha Nanayan Shrestha	Farmer	Chhotetar Dhodeni	KB Ward 5
35	Mr.	Ram Lal Shrestha	Farmer	Chhotetar Dhodeni	KB Ward 5
36	Mr.	Rundra Lal Shrestha	Farmer	Chhotetar Dhodeni	KB Ward 5
37	Mr.	Suku Man Shrestha	Farmer	Chhotetar Dhodeni	KB Ward 5
38	Mr.	Buddhi Prasad Adhikari	Farmer	Majhigau	KB Ward 5
39	Mr.	Hem Prasad Adhikari	Farmer	Majhigau	KB Ward 5
40	Mr.	Indra Prasad Adhikari	Farmer	Majhigau	KB Ward 5
41	Mr.	Padam Nath Adhikari	Farmer	Majhigau	KB Ward 5

42 Mr.	Ram	Hari	Adhikari	Teacher	Majhigau	KB Ward 7
43 Mrs.	Rohini		Adhikari	Farmer	Majhigau	KB Ward 5
44 Mr.	Surya	Prasad	Adhikari	Farmer	Majhigau	KB Ward 5
45 Mr.	Thakur	Nath	Adhikari	Farmer	Majhigau	KB Ward 5
46 Mr.	Chaure		Majhi	Farmer	Majhigau	KB Ward 5
47 Mr.	Gunthe		Majhi	Farmer	Majhigau	KB Ward 5
48 Mr.	Jagat	Bahadur	Majhi	Farmer	Majhigau	KB Ward 5
49 Mr.	Jauge		Majhi	Farmer	Majhigau	KB Ward 5
50 Mr.	Pade		Majhi	Farmer	Majhigau	KB Ward 5
51 Mr.	Keshar	Bahadur	Paudel	Farmer	Majhigau	KB Ward 5
52 Mr.	Kale		Sarki	Farmer	Majhigau	KB Ward 5
53 Mr.	Hari	Lal	Shrestha	Farmer	Majhigau	KB Ward 5
54 Mr.	Rana	Bahadur	Tamang	Farmer	Majhigau	KB Ward 5
55 Mrs.	Geeta		Adhikari	Farmer	Phirkep Devighat	KB Ward 5
56 Mr.	Tanka	Prasad	Adhikari	Farmer	Phirkep Devighat	KB Ward 5
57 Mr.	Tej	Bahadur	Adhikari	Farmer	Phirkep Devighat	KB Ward 5
58 Mr.	Bir	Bahadur	Barakoti	Farmer	Phirkep Devighat	KB Ward 5
59 Mr.	Govinda		Chitrakar	Farmer	Phirkep Devighat	KB Ward 5
60 Mrs.	Ram	Maya	Chitrakar	Farmer	Phirkep Devighat	KB Ward 5
61 Mr.	Tara	Nath	Rimal	Farmer	Phirkep Devighat	KB Ward 5
62 Mr.	Bhagawati		Rimal	Farmer	Phirkep Devighat	KB Ward 5
63 Mrs.	Bimala		Rimal	Farmer	Phirkep Devighat	KB Ward 5
64 Mr.	Shambhu		Sharma	Farmer	Phirkep Devighat	KB Ward 5
65 Mr.	Chatur	Man	Shrestha	Farmer	Phirkep Devighat	KB Ward 5
66 Mr.	Hira	Lal	Shrestha	Farmer	Phirkep Devighat	KB Ward 5
67 Mr.	Mohan	Lal	Shrestha	Farmer	Phirkep Devighat	KB Ward 5
68 Mr.	Mulam	Lal	Shrestha	Farmer	Phirkep Devighat	KB Ward 5
69 Mr.	Purna	Lal	Shrestha	Farmer	Phirkep Devighat	KB Ward 5
70 Mr.	Shyam	Lal	Shrestha	Farmer	Phirkep Devighat	KB Ward 5
71 Mr.	Khadga	Bahadur	Thapa	Farmer	Phirkep Devighat	KB Ward 5
72 Mr.	Buddhi	Prasad	Adhikari	Farmer	Kumaltar	KB Ward 7
73 Mr.	Dhana	Nath	Adhikari	Farmer	Kumaltar	KB Ward 7
74 Mr.	Gyanendra	Prasad	Aryal	Farmer	Kumaltar	KB Ward 7
75 Mr.	Hira	Lal	Shrestha	Farmer	Kumaltar	KB Ward 7
76 Mr.	Anjun	Prasad	Aryal	Farmer	Sirkhaligau	KB Ward 7
77 Mr.	Khadga	Prasad	Dhital	Farmer	Sirkhaligau	KB Ward 7
78 Mr.	Tej	Prasad	Dhungel	Farmer	Sirkhaligau	KB Ward 7
79 Mr.	Yudha	Bahadur	Dhungel	Farmer	Sirkhaligau	KB Ward 7
80 Mr.	Dola	Nath	Nepal	Farmer	Sirkhaligau	KB Ward 7
81 Mr.	Purna	Prasad	Nepal	Farmer	Sirkhaligau	KB Ward 7
82 Mr.	Yadu	Nath	Nepal	Farmer	Sirkhaligau	KB Ward 7
83 Mr.	Arjun	Prasad	Rimal	Farmer	Sirkhaligau	KB Ward 7
84 Mr.	Bishnu	Prasad	Rimal	Farmer	Sirkhaligau	KB Ward 7
85 Mr.	Geeta	Ballav	Rimal	Farmer	Sirkhaligau	KB Ward 7
86 Mr.	Hari	Prasad	Rimal	Farmer	Sirkhaligau	KB Ward 7
87 Mr.	Iskori	Prasad	Rimal	Farmer	Sirkhaligau	KB Ward 7

88 Mr.	Kamal	Nath	Rimal	Farmer	Sirkhaligau	KB Ward7
89 Mr.	Keshab		Rimal	Farmer	Sirkhaligau	KB Ward7
90 Mr.	Krishna	Prasad	Rimal	Farmer	Sirkhaligau	KB Ward7
91 Mr.	Kul	Prasad	Rimal	Farmer	Sirkhaligau	KB Ward7
92 Mr.	Makara	Nanda	Rimal	Farmer	Sirkhaligau	KB Ward7
93 Mr.	Naryan	Prasad	Rimal	Farmer	Sirkhaligau	KB Ward7
94 Mr.	Netra	Prasad	Rimal	Farmer	Sirkhaligau	KB Ward7
95 Mr.	Ram	Prasad	Rimal	Farmer	Sirkhaligau	KB Ward7
96 Mr.	Shankar	Prasad	Rimal	Farmer	Sirkhaligau	KB Ward7
97 Mr.	Thakur		Rimal	Farmer	Sirkhaligau	KB Ward7
98 Mr.	Buddhi	Man	Shrestha	Farmer	Sirkhaligau	KB Ward7
99 Mr.	Gagan	Bahadur	Rai	Farmer	Bhairatar	KB Ward9
100 Mr.	Luta	Man	Shrestha	Farmer	Gauritar	KB Ward9
101 Mr.	Tapa	Lal	Shrestha	Farmer	Gauritar	KB Ward9

Remarks: KB Khadga Bhanjyan

B. JICA Team Members

- 1 Mr. M. Fujioka
- 2 Mr. K. Iwata
- 3 Dr. P. Pradhan
- 4 Mr. K. Tanaka

C. DOI Counterparts

- 1 Mr. M. B. Pradhan
- 2 Mr. Nirmal Gadal

D. District Irrigation Office (DIO), Nuwakot

- | | | |
|---|----------------------------|----------------------------|
| 1 | Mr. Raj Kumar Khakurel | Overseer (O.S.) |
| 2 | Mr. Keshab Prasad Adhikari | Association Officer (A.O.) |
| 3 | Mr. Mod Nath Rimal | Peon |

Sub-Project Area-wise Farmers' Meetings (5)
Minutes of Meeting
(Simbutar)

Date & Time: January 26, 1977 (Sun) 11:00 am - 0:30 pm
Venue: Indrayani Chautara, Simbutar

This Fifth Farmers' Meeting was organized for the farmers of Simbutar with the objectives of making beneficiary farmers familiar with the feasibility study activities and sharing their opinions and experiences. The list of the participants is attached in the Annex.

The meeting was started by introducing JICA Feasibility Study Team members and the Department of Irrigation (DOI) counterparts by Dr. P. Pradhan. Then, Mr. M. Fujioka, Team Leader of JICA Team, delivered a short introductory speech about the objectives of the meeting and the general background of TIP. He also requested the farmers to take initiative towards the group formation as per the government irrigation policy to work together for the proposed irrigation system.

Mr. M. B. Pradhan, chief of DOI counterparts to JICA Team and engineer, informed that, at present, the water availability from the aqueduct No. 2 is only for eight months (the wet season) as per the consent between DOI and NEA. He also requested the farmers to cooperate with JICA Team.

Mr. K. Iwata briefed the on-going survey activities and the proposed irrigation canal alignment. He pointed out that the level at the aqueduct No. 2 is equal to the level at Indrayani Chautara where this meeting is taking place, so the gravity irrigation system will cover only the area below the level of this Chautara.

Mr. K. Tanaka expressed his heartfelt thanks to all farmers for their kind cooperation in household questionnaire surveys and Rapid Rural Appraisal (RRA). He also expressed his happiness to know the activities of various self-help groups in this area. He informed that he will come back again after receiving the social survey results from the local consultants. He inquired about the construction of the suspension bridge connecting this area and Ward 10 and 11 (Trishuli Bazaar).

Mr. M. Fujioka asked the farmers how they can utilize the wet season irrigation water for increasing agricultural productivity and how women's work burdens will increase if there is irrigation.

Dr. P. Pradhan briefed the government irrigation policy in three points: (a) the need for a joint management system for TIP, (b) the need for water users' associations (WUAs) to operate and maintain the irrigation systems and (c) the need for participation and contributions of the beneficiary farmers in irrigation projects. He explained that the joint management system will be adopted if this irrigation project is launched.

Finally, Mr. M. Fujioka, JICA Team Leader, expressed his thanks to the farmers on behalf of JICA Team for their participation in this meeting.

The participating farmers made the following comments and suggestions on TIP:

1. Due to the snow melt, the water discharge in Trishuli River increases from April. Hence the proposed irrigation water from April onwards will be better for vegetable cultivation, although we do not have much experience in vegetable cultivation. (Mr. Kattak Bahadur Thapa, Simbutar, Bidur Ward 1)
2. The wet season irrigation is useful for the farmers because they now depend on the irregular rainfall to start paddy cultivation. If the rain starts in July, they will get a good yield of rice, but if it delays, the yield will become less. (Mr. Kattak Bahadur Thapa, Simbutar, Bidur Ward 1)
3. Women have the same idea with men about irrigation. In this barren land, if irrigation water is available, women will be quite busy. But in the meantime, women will be able to help to uplift the economic standards of the family, so women will be very happy. (Mrs. Subhadra Thapaliya, Simbutar, Bidur Ward 1)
4. The farmers are, at present, cultivating rice in the wet season and mustard in the dry season with the available moisture contents in November. The farmers have recently started to cultivate mustard, so the yield of mustard is not certain. If there is assured irrigation water, they will be able to cultivate any kind of crops, for example, cabbages, cauliflower, etc. (Mr. Krishna Bahadur Shrestha, Simbutar, Bidur Ward 1)
5. Once irrigation water is available, the farmers would like to have soil testing, technical advice for suitable types of crops, fertilizers, etc. After receiving these services, they will first see their own capability and marketing facility, and accordingly they will grow suitable crops. (Mr. Belram Thapaliya, Simbutar, Bidur Ward 1)
6. Whenever the water users' associations or farmers have to contribute 10% in cash, in kind or in the voluntary labor as per the irrigation policy, they will be quite grateful because at present, they are spending their own funding for the whole irrigation systems through their own organized water users' associations. (Mr. Kattak Bahadur Thapa, Simbutar, Bidur Ward 1)
7. We are tired of waiting for the outsider's assistance, because the politician came and promised irrigation before the election but nothing has materialized so far. So we now decided not to rely on anyone but ourselves. We started our saving groups, and by using the interest of this saving we are now constructing a drinking water tap for community development. (Mr. Kattak Bahadur Thapa, Simbutar, Bidur Ward 1)

Annex. List of Participants

A. Farmers (23 farmers consisting of 17 males and 6 females)

No.	Sex	Name	Occupation	Settlement	VDC/Ward
1	Mr.	Deepak Raj Pant	Farmer	Simbutar	Bidur Ward 1
2	Mr.	Keshab Raj Pant	Farmer	Simbutar	Bidur Ward 1
3	Mr.	Shiya Prasad Pant	Farmer	Simbutar	Bidur Ward 1
4	Mr.	Ram Bahadur Rai	Farmer	Simbutar	Bidur Ward 1
5	Mr.	Krishna Bahadur Shrestha	Farmer	Simbutar	Bidur Ward 1
6	Mr.	Kattak Bahadur Thapa	Farmer	Simbutar	Bidur Ward 1
7	Mr.	Belran Thapaliya	Farmer	Simbutar	Bidur Ward 1
8	Mr.	Bishnu Prasad Thapaliya	Farmer	Simbutar	Bidur Ward 1
9	Mr.	Krishna Thapaliya	Farmer	Simbutar	Bidur Ward 1
10	Mr.	Madhav Thapaliya	Farmer	Simbutar	Bidur Ward 1
11	Mr.	Om Prasad Thapaliya	Farmer	Simbutar	Bidur Ward 1
12	Mr.	Prakash Thapaliya	Farmer	Simbutar	Bidur Ward 1
13	Mr.	Purna Thapaliya	Farmer	Simbutar	Bidur Ward 1
14	Mr.	Rabi Prasad Thapaliya	Farmer	Simbutar	Bidur Ward 1
15	Mr.	Ram Thapaliya	Farmer	Simbutar	Bidur Ward 1
16	Mr.	Ram Prasad Thapaliya	Farmer	Simbutar	Bidur Ward 1
17	Miss	Rita Thapaliya	Farmer	Simbutar	Bidur Ward 1
18	Mr.	Shiya Thapaliya	Farmer	Simbutar	Bidur Ward 1
19	Mrs.	Sita Thapaliya	Farmer	Simbutar	Bidur Ward 1
20	Miss	Sita Thapaliya	Farmer	Simbutar	Bidur Ward 1
21	Mrs.	Subhadra Thapaliya	Farmer	Simbutar	Bidur Ward 1
22	Mrs.	Tara Laxmi Thapaliya	Farmer	Simbutar	Bidur Ward 1
23	Mrs.	Yamuna Thapaliya	Farmer	Simbutar	Bidur Ward 1

B. JICA Team Members

- 1 M. Fujitoka
- 2 K. Iwata
- 3 Dr. P. Pradhan
- 4 K. Tanaka
- 5 K. Tsumura

C. DOI Counterparts

- 1 M. B. Pradhan

Part A

7. Block-wise Farmers' Meetings (10 places)

	<u>Block</u>	<u>Date</u>	<u>Venue</u>
1)	A	Feburay 26, 1997	Indrani Chautara
2)	B	Feburay 28, 1997	Prithvi Primary School, Bidur
3)	C	Feburay 28, 1997	Battar Tol Improvement Office, Battar
4)	D	Feburay 26, 1997	Sundardevi School
5)	E	Feburay 26, 1997	Laxhini Naryan Temple
6)	F&G	Feburay 25, 1997	Athagharae
7)	H	Feburay 25, 1997	Prithivi Smarak
8)	I	Feburay 27, 1997	B.P. Srimiti Primary School, Majhitar
9)	J&K	Feburay 25, 1997	Nagarpalika Gate
10)	L	Feburay 25, 1997	Chautara

**Block-wise Farmers' Meetings (A)
Minutes of Meeting
(Gerkhutar and Simbutar)**

Date & Time: February 26, 1997, 11:00
Venue: Indreni Chautara, Simbutar

The Eleventh farmers' meeting was organized to exchange the ideas with the farmers of the command area about the progress and outcome made by the study team till this date and possible feed back during the interaction with the beneficiary farmers to make the irrigation system more successful in terms of its usage. The list of participants is attached in the annex.

The meeting was started by introducing the study team members by Dr. Pradhan.

Mr. Fujioka, Team leader greeted the participants of the meeting. He highlighted about the present finding of the survey and the study.

He added that this A block can be irrigated by gravity system in both the cases of the proposed intake and the new proposed intake. He added that this canal system gets water from the NEA reservoir. He said that the availability of the water is only for 9 months during the wet season only.

He said that the proposed intake point is from aqueduct no.2 but after the finding of the study, the study team proposed intake d/s of the balancing reservoir as an alternative. He said that the decision for shifting is not yet decided. He added that the cost is expensive in case of the original proposed intake at Aqueduct no.2.

Mr. K. Iwata explained about the irrigation system. He briefed about the location of the original intake, head race canal of the NEA, Balancing Reservoir, alternative intake.

He added that the study team is designing the canal system from the alternative 1. He informed that in case the water is being taken from the alternate, the main canal will be in the opposite direction just opposite of the trisuli river.

He explained that the water will be brought to this Simbutar area by crossing the pipe across the river. He said that for Gerkhutar, water will be made available from the original intake by means of a small pipe.

Dr. Pradhan informed that the members of the WUA will be either the land owner or the water user. He said that the cost sharing of 10% of the Construction cost will have to borne based on the area of the land rather than the household.

He added that there are two villages namely Simbutar and Gerkhutar and there will be two different intakes for them if alternative one is accepted.

He also briefed about the process of the submission of the report.

Mr.M.B.Pradhan said that as per Water Resources Regulation, WUA is to be formed.

He informed that there will be an agreement between Irrigation office and the WUA about the work, duty and the power before the implementation of the project.

Also he informed that there is the provision that WUA can work amounting Nrs. 10 lakhs with the use of locally available resources as per the provision of the Financial Administrative regulation.

The followings are the outcome of the meeting:

1. The user beneficiaie will be more active to bear only 10% of the construction cost as per the irrigation policy simply because they are at present investing 100% for their canal system. Might be the cash but the user beneficiaries are able to do labour volunteer work. It will be better if the construction activities can be done by themselves to complete the work in the scheduled time.
2. The main canal system will be by means of pipe system not like an open canal system. In the map there are 2 numbers for this block. One blocks gets water from aqueduct no.2 and the other by the alternate 1.
3. There will be another committee for this two blocks and another individual committee.
4. For 3 months from Jan to march, irrigation water will not be available .User beneficiaries expressed that it is better to have water for 9 months leaving 3 months .
5. If circumstances for electricity improves, it may be possible that water may be available for round the year.
6. There will be 2 sources for this block for two different areas if alternative 1 is chosen. At present this irrigation was proposed to irrigate the areas in Batter but in the main time it was proposed to irrigate the areas nearby the canal
7. From alternative 1 water will not be available for Gerkhutar. But survey was already carried out and this area is included as per the demand of the user beneficiaries.
8. The general trouble in this area are the quality of soil, water requirement for the red soil is less and there is the drainage trouble in this soil. Let there be no drought adjoining the source like Gerkhutar.

Annex: List of Participants

A. Farmers

No.	Name	No.	Name
1	Katak B. Thapa	20	Balram Thapaliya
2	Ms.Chinimaiya	21	Naryan P. Thapaliya
3	Rajesh Pandey	22	Bishnu P. Thapaliya
4	Shiva Raj Pandey	23	Ms.Sita Thapaliya
5	Danxlar Khatewada	24	Rajkumar Bohara
6	Ms. Sanikanchi	25	Ram B. Rai
7	Bishnu P. Pandey	26	Krishna P. Thapaliya
8	Govinda Thapaliya	27	Jaya B. Pandey
9	Krishna P. Thapaliya	28	Sriram Thapaliya
10	Ram Thapaliya	29	Ramhari Pandey
11	Shyam Thapaliya	30	Amirjung Pandey
12	Prem N. Thapaliya	31	Sudarsan Pykurel
13	Bhopal Mijar	32	Hari P. Thapaliya
14	Madhav Thapaliya	33	Naryan B. Pandey
15	Ms.Bhairebi Thapaliya	34	Balram Khatewada
16	Ms. Yamuna Thapaliya	35	Som Nath Thapaliya
17	Ms. Sanikanchi	36	Ms. Sita Pant
18	Ms.Subhadra Thapaliya	37	Ms. Savitri Pant
19	Namaraj Thapaliya	38	Ms. Kamala Thapaliya

B. JICA Team Members

- 1 M. Fujioka
- 2 K. Iwata
- 3 Dr. P. Pradhan
- 4 K. Tanaka

C. DOI Counterparts

- 1 M. B. Pradhan

D. District Irrigation Office (DIO), Nuwakot

- 1 Keshab Prasad Adhikari Association Officer (A.O.)

**Block-wise Farmers' Meetings (B)
Minutes of Meeting
(Bidur)**

Date & Time: February 28, 1997, 8:00
Venue: Prithivi Primary School, Bidur

The second set of FLAG meeting was organized to make the farmers of the command area aware of the progress made by the study team till this date and possible feed back from the beneficiary farmers to make the proposed irrigation pro more successful in terms of its usage. One of the objective of the meeting was the two way interaction between the study team and the users. The list of participants is attached in the annex.

The meeting was commenced by the introduction of JICA study team by Mr. P.M. Shrestha, DOI Irrigation Engineer. He mentioned about the current irrigation policy, requirement of the formation of Users' Group as per the hydrological boundary of the command area and requirement of the contribution by users as per the irrigation policy. He, explicitly, informed that the present water availability is only for nine months (the wet season) and not for the dry period.

Mr. K. Tanaka briefed the progress made in planning the irrigation system till this date. He explained the blockwise distribution of the command area, and mainly focussed on the Block B, where the venue of the meeting is located. He requested for the formation of the Users' group in each sub-blocks, and blocks, and eventually the representation of the whole system by the representatives from each blocks. He mentioned that a strong users' committee is a requirement for the successful running of an irrigation system. He explained the requirement of the contribution of the investment cost by the users as per the HMGN Irrigation Policy. Since the present project size falls under the joint managed system as per the irrigation policy, he explained the concept of the joint management between DOI and the users. As the cost reduction is one of the objective of such system, he explained the superiority of the alternative 1 alignment from the balancing reservoir of NEA to the original alignment from the aqueduct no.2 in terms of the investment cost reduction. The water availability being critical during the dry period for the generation of the electricity, the irrigation water will be available for the wet season only.

Mr. K. Iwata explained about the technical matter of the proposed irrigation system. He explained the block and sub-block distribution of the command area. He discussed the comparative explanation of the main alignment through the original intake point near the aqueduct # 2 of NEA and alternative alignment through the tail end of the NEA balancing reservoir. He told that the investment cost will be tremendously reduced with Alternative alignment through the NEA balancing reservoir because the former alignment has to pass through geologically fragile stretch and has to cross the Trishuli river twice through the major aqueducts to reach the command area. He proposed a separate independent pumping irrigation system for Pokharephant, Khadgabhanjyang VDC. He explained and displayed the detail planning map and invited the participants for their suggestion for the further improvements.

The presentation was followed by the queries and the suggestions by the user farmers. Farmers had suggested to introduce several chamber tanks within the command area along the main pipe line so as to enable them to lift the water to irrigate the other side of the road where the gravity fed is not possible. One of the concern of the farmers was the bursting of the pipe lines which they had experienced in drinking water supply. Some farmers argued that the investment cost will be tremendously reduced if the water intake is from Sera of Tadi river. The meeting was ended at 9:30 am.

The followings are the outcome of the meeting:

1. Users requested several chamber tanks along the command area so that they can lift water for some nearby portion which is not fed by gravity.

2. Farmers are conscious of the phenomena of bursting the closed pipes in this area.

Annex: List of Participants

A. Farmers

No.	Name	No.	Name
1	Chandra B. Shrestha	25	Biswesor Rijal
2	Chandra b. Shrestha	26	Bhim Sen Bohara
3	Man B. Rai	27	Hem Raj Thapaliya
4	Karna B. Bogati	28	Nava Raj Thapaliya
5	Ran Bahadur Shrestha	29	Govinda Thapaliya
6	Jitendra Thapa	30	Surya Lal Shrestha
7	Santa Kumar Shrestha	31	Hari Sundar Thapa
8	Purna B. Shrestha	32	Baburam Bogati
9	Raju Shrestha	33	Purna Man Shrestha
10	Sabitri Adhikary	34	Suraj Kumar Shrestha
11	Binod Kumar Bhattarai	35	Hari Krishna Shrestha
12	Kapil Rijal	36	Krishna L. Shrestha
13	Purna Lal Shrestha	37	Krishna L Shrestha
14	Sankha Maya Shrestha	38	Krishna Man Shrestha
15	Ratna Lal Shrestha	39	Bhim B. Shrestha
16	Ram kumar Pant	40	Rajendra K. Bhattarai
17	Hari Bahadur Pant	41	Keshar B. Shrestha
18	Raj Kumar Shrestha	42	Hari K. Thapa
19	Mohan Rana	43	Sukuman Shrestha
20	Katak bahadur Thapa	44	Ratna K. Shrestha
21	Ram Prasad Adhikary	45	Krishna B. Bhujel
22	Chandra L. Shrestha	46	Ranje Khatri
23	Dhan B. Shrestha	47	Babu L. Shrestha
24	Govinda Thapaliya	48	Bhajan Das Shrestha

B. JICA Team Members

- 1 K. Iwata
- 2 K. Tanaka

C. DOI Counterparts

- 1 P. M. Shrestha
- 2 N. Gaddal

**Block-wise Farmers' Meetings (C)
Minutes of Meeting
(Battar, Apaghari, Sukumbasitol)**

Date & Time: February 28, 1997, 8:00
Venue: Battar Tol Sudhar Pati, Battar Bazar

After introduction of JICA study team members, Mr. Fujioka, Team Leader, JICA study team explained the progress the system planning and survey within the proposed command area. However, he pointed out two important factors in relation to Trisuli Irrigation Project. They are: (a) water in the irrigation system will be available only for nine months during wet season, (b) the original proposed intake site costs higher cost so alternative intake from balancing reservoir of Trisuli Hydel Project is recommended to the His Majesty's Government of Nepal. No decision has taken place as yet.

Following Mr. Fujioka's introduction, Mr. Tsumura explained the proposed system for Battar area (Block C). Two sub-blocks are sub divided within Block C along with a lift pump for 15 hectare area. He explained the irrigation system from the recommended alternative intake up to the last point of the system at Devighat.

Mr. P. Pradhan explained the provisions of Irrigation Policy of His Majesty's Government. This system will be a joint-management system. Water users associations are to be formed under hydrological basis, based on the proposed blocks and one central committee with the representatives of the Blocks. The beneficiary is to contribute 10% of the construction cost.

After these presentations, discussions between the farmers and study team members took place.

Question: Why is there water only for nine months?

Answer: Water can be available only for wet season. Due to pressure for more power generation during winter, water will not be available during winter. This does not mean that the situation will remain the same for ever.

Question: Has there been the survey of alternatives from Tadi and other rivers ?

Answer: The Terms of Reference given for this study team is from Aqueduct No.2 of Trisuli Hydel Power canal so we are following our Terms of Reference.

Question: Since the irrigation system will be pipe system, we are afraid that it might break and burst frequently. We have similar problem in drinking water project at Battar.

Answer: It will not happen such problem in the irrigation system.

Question: Will there be volumetric measurement of water for distribution ?

Answer: Some kind of measurement device will fixed. However, cropping calendar is to be fixed by the water users association of the Block.

Question: How much would be the farmers contribution ?

Answer: Detail costing is yet to be done. However, the preliminary costing indicates about Rs. 1500-2000 per ropani.

Question: Will it be only cash contribution or labour contribution is also allowed ?

Answer: Cash or labour could be contributed.

Question: Can there be provision of loan to the farmers for the payment of farmers contribution ?

Answer: This question is to be discussed further. Some of the farmers suggested that it is to be decided by the WUA about the form of payment of farmers contribution.

Question: When will this project be implemented ?

Answer: Within one to two years. His Majesty's Government of Nepal has to decide. Once construction starts, water will be delivered within two years.

At the end farmers said that they are willing to do whatever is required for the implementation of the project.

Annex: List of Participants

A. Farmers

No.	Name	No.	Name
1	Babu Kagi Dongol	44	Keshav B. Shrestha
2	Dhal Nath dabadi	45	Lal Bahadur Ojha
3	Govinda Dongol	46	Madhav Pandey
4	Bishnu Bahadur Kumal	47	Bircha Bahadur Kumal
5	Ratna Bahadur Tamang	48	Ram Kumar Pradhan
6	Biswa Ram Giri	49	Bhimsen Kumal
7	Janak Bahadur Kumal	50	Mangeley Sarki
8	Najer Man Shrestha	51	Tilak Bahadur Lawat
9	Chandra Lal Lama	52	Shiva Ram Rimal
10	Basan Lal Shrestha	53	Bal Mukunda Adhikary
11	Rana Bahadur Kumal	54	Indra bahadur Thapa
12	Ganga Ram Gajurel	55	Krishna P. Dhungel
13	Surendra Pradhan	56	Bishnu Shrestha
14	Guna Nidhi Paudyal	57	Purna Lal Pradhan
15	Naryan Prasad Rimal	58	Ms. Kalpana Shrestha
16	Indra Bahadur Koirala	59	Ms. Keshari Shrestha
17	Damodar Lal Pradhan	60	Kiranman Dongol
18	Basant Man Shrestha	61	Chet Nath Neupane
19	Shyam Sunder Shrestha	62	Jagat Shrestha
20	Bate Kumal	63	Lombodhar Shrestha
21	Madhav Lal Pradhan	64	Himal B. Shrestha
22	Ram Prasad Rimal	65	Bishnu Acharya
23	Tika Prasad Rimal	66	Ananda Lal Pradhan
24	Krishna Bahadur Kumal	67	Dhan N. Chitrakar
25	Ganga Lal Shrestha	68	Mangal Lal Pradhan
26	Ghyan Shyam Shrestha	69	Gebe Kumal
27	Madan Raj Bhakdary	70	Ms. Thuli Tamang
28	Rabi Kumal	71	Naryan D. Shrestha
29	Ganga Bahadur Kumal	72	Hari Neupane
30	Anrit bahadur Kumal	73	Karna B. Kumal
31	Bishnu Prasad Nepal	74	Jeevan Lal Shrestha
32	Keshav Lal Pradhan	75	Gopal Shrestha
33	Madhusudan Adhikary	76	Surendra Shrestha
34	Mahesh Shrestha	77	Ganga Lal Shrestha
35	Chaturman Shahi	78	Jhanka Nath Rimal
36	Srikrishna Shrestha	79	Hem Raj Bajracharya
37	Tulsiman Dongol	80	Bishnu B. Shrestha
38	Shyam Loho	81	Chuniya Lal Shrestha
39	Bhimsen Koirala	82	Anrit Man Shrestha
40	Navraj Shrestha	83	Hari Prasad Paneru
41	Dase Kumal	84	Sita Ram Rimal
42	Dinesh Dongol	85	Mukunda P. Adikary
43	Bharat Bhattarai	86	Gopi Nath Rimal

B. JICA Team Members

- 1 M. Fujioka
- 2 K. Tsumura
- 3 Dr. P. Pradhan

C. District Irrigation Office (DIO), Nuwakot

- 1 Keshab Prasad Adhikari Association Officer (A.O.)

Block-wise Farmers' Meetings (D)
Minutes of Meeting
(Inarpati, Degoan, Dukuntar, Ilasantar, Charghere, Machele and Gharigoan)

Date & Time: February 26, 1997, 8:00
Venue: Sundaradevi Primary School, Degaun

The Tenth farmers' meeting was organized to exchange the ideas with the farmers of the command area about the progress and outcome made by the study team till this date and possible feed back during the interaction with the beneficiary farmers to make the irrigation system more successful in terms of its usage. The list of participants is attached in the annex.

The meeting was started by introducing the study team members by Dr. Pradhan.

Mr. Fujioka, Team leader greeted the participants of the meeting. He highlighted about the present finding of the survey and the study. He added that the availability of the water is only for 9 months during the wet season only.

He added that the proposed original intake point is from Aqueduct no. 2, but after finding of the study, the study team proposed intake the new intake at the d/s of the balancing reservoir to the government of Nepal. He added that the new proposed intake is not yet decided. He added that the cost is expensive in case of the original proposed one.

Mr. K. Iwata explained about the irrigation system with the help of the topographical map. He briefed about the proposed intake. He added that the proposed intake is costly and hence the study as well as design are being done from alternative one.

He briefed about the balancing reservoir of NEA, Trisuli Hydropower, Main canal alignment along Bidur, army camp, Inarpati and the Control Chamber and canal system.

He added that the existing canal system does not cover the whole area, hence there will be another canal along the ridge. He added that there will be the main canal for Pipaltar, Tallo Pipaltar, Devighat from the control chamber.

Dr. Pradhan informed that the command areas are divided in a separate units. He pointed out that the user beneficiaries need to be active from now onwards for the development of the irrigation.

He emphasised the need of WUA. He added that the command areas are divided into blocks based on hydrological boundaries. He added that the the members will be either the land owner or the water user.

He said that the study team had observed some land belonging to school and Guthi Sansthan. He added that the cost sharing by the user beneficiaries will be around 10% of the construction cost.

Mr. M. B. Pradhan informed that for 100 - 200 ropani of land, there will be one outlet. He added that there is the provision of the active participation of the user beneficiaries from the very initial stage according to the Irrigation Policy. The farm level irrigation system is to be built by the user beneficiaries themselves along with the land for the canal system.

The followings are the outcome of the meeting:

1. The study team understood that the system needs secondary and tertiary canal. The study team would like to decide more in the field itself before the construction.
2. For irrigating 1380 ropani of land from the branch canal, there will be an additional system.

3. The decision already done by the government is to take water from intake no.2. The opening at the Aqueduct no.2 was provided during the re- construction of NEA as decided by the government of Nepal.

4. Some alternative was taken for the intake point because the proposed intake is expensive.

5. WUA is to established before the implementation. WUA can contribute to work as part of the construction cost either by cash or volunteer labour.

6. The water will come as a gravity flow for this block .They donot need to bear the cost of lift in the area.They need to bear the cost of construction but not the electrical energy.The user beneficiaries have to decide the type of work they can carry.

7. The cost sharing of the user beneficiaries will be high due to high cost of construction in case of the original proposed intake.The study teams are the technicians and had to follow the decision of the government.

8. Even the availability of water for 9 months is quite better irrespective of unavailability of water for 3 months in dry season.

9. Phokhare Phant won't be irrigating by this system but the package for irrigation is the same. Before it was from the same system but now there will be a separate system for that area.

Annex: List of Participants

A. Farmers

No.	Name	No.	Name
1	Bharat Sadaula	52	Ms. Juthi M. Kumal
2	Bishnu P. Adhikary	53	Ms. Sukumaya Kumal
3	Budhifal Dongol	54	Ms. Ranumaya Dongol
4	Ram P. Rimal	55	Ms. Suntali Kumal
5	Goyinda rai	56	Ms. Budha Maya Kumal
6	Ram B. Rai	57	Ms. Savitri Kumal
7	Lal B. Rai	58	Ms. Suntali M. Kumal
8	Shankar Rai	59	Ms. Khunti Maya Kumal
9	Sahila Rai	60	Ms. Champamaya Kumal
10	Bharat Rai	61	Ms. Radha Rimal
11	Surya Rai	62	Ms. Durgadevi Malla
12	Govinda Rai	63	Ms. Biswa Maya Kumal
13	Ms. Thulimaya Rai	64	Ms. Fulmaya Kumal
14	Narayan B. Rai	65	Ms. Iswari Kumal
15	Krishna B. Rai	66	Ms. Indramaya Kumal
16	Dhan B. Rai	67	Ms. Chinumaya Kumal
17	Bom b. Rai	68	Ms. Lalumaya Kumal
18	Bhakta B. Dongol	69	Ms. Khemi K. Devkota
19	Krishna B. Dongol	70	Ms. Golfimaya Kumal
20	Mak B. Dongol	71	Ms. Sitamaya Kumal
21	Sambhu P. Ghemere	72	Sm. Sarinila Kumal
22	Madhusudan Ghemere	73	Sm. Nilkumari Kumal
23	Naryan P. Rimal	74	Sm. Gyanumaya Kumal
24	Naryan P. Adhikary	75	Dhan B. Kumal
25	Naryan P. Khanal	76	Kale Kumal
26	Chakrapani Adhikary	77	Hom B. Kumal
27	Ram P. Khanal	78	Ram B. Kumal

28	Bal Ram Dixit	79	Haribhagat Kumal
29	Govinda Kumal	80	Keshar B. Kumal
30	Bharat B. Kumal	81	Purna B. Kumal
31	Bom B. Laneechane	82	Haribahadur Kumal
32	Ram P. Devakota	83	Reshan B. Kumal
33	Jham P. Devakota	84	Ms. Gautami Kumal
34	Dhal B. Malla	85	Bhirab B. KC
35	Jit B. Kumal	86	Bakhat B. Kumal
36	Krishna B. Mudwari	87	Juthey Kumal
37	Suba B. Kumal	88	Som B. Kumal
38	Krishna B. Dongol	89	Ms. Purna Maya Kumal
39	Bhakta B. Dongol	90	Chet P. Timilsina
40	Ram Chandra Adhikary	91	Hari P. Timilsina
41	Madhav Adhikary	92	Krishna P. Timilsina
42	Laxhman Kumal	93	Gyan B. Kumal
43	Krishna B. Kumal	94	Khem B. Ghemere
44	Hari P. Kumal	95	Ms. Mithudevi Khanal
45	Julum Kumal	96	Kedar Adhikary
46	Ms. Nani maiya Ghemere	97	Govinda B. Dongol
47	Ms. Bishnu M. Kumal	98	Narayan B. Shrestha
48	Ms. Ram kumari Kumal	99	Ms. Santu Maya Kumal
49	Ms. Shiva M. Kumal	100	Sanu Samser Tamang
50	Ms. Januka Kumal	101	Julum Kumal
51	Ms. Kamala Kumal	102	Ram Pd Kumal

B. JICA Team Members

- 1 M. Fujioka
- 2 K. Iwata
- 3 Dr. P. Pradhan
- 4 K. Tanaka

C. DOI Counterparts

- 1 M. B. Pradhan

D. District Irrigation Office (DIO), Nuwakot

- 1 Keshab Prasad Adhikari Association Officer (A.O.)

**Block-wise Farmers' Meetings (E)
Minutes of Meeting
(Maharanidi and Chandipokhari)**

Date & Time: February 26, 1997, 16:00
Venue: Laxmi, Naryan Temple, Maharanidi

The 12th farmers' meeting was organized to exchange the ideas with the farmers of the command area about the progress and outcome made by the study team till this date and possible feed back during the interaction with the beneficiary farmers to make the irrigation system more successful in terms of its usage. The list of participants is attached in the annex.

The meeting was started by introducing the study team members by Dr. Pradhan.

Mr. Fujioka, Team leader greeted the participants of the meeting. He highlighted about the present finding of the survey and the study. He added that this canal system gets water from the NEA canal and the availability of the water is limited only for 9 months during the wet season.

He informed that the proposed intake point is aqueduct no.2 and based on the findings of the study, the study team planned to shift the intake from aqueduct no.2 to d/s of the regulating reservoir.

He added that the decision for the new proposed intake is not yet made. One of the basic condition of the study team is that the original proposed intake is expensive.

Mr. K. Iwata explained that there are at present 2 intakes as shown in the map. He added that at present the alternative intake is located downstream of the balancing reservoir.

He briefed about the present canal alignment through aqueduct, Bidur, Army camp, Battat, Dihigaun and the control chamber. He added that for this block, water will be delivered by the gravity system.

Dr. Pradhan explained that Water will be made available as per the necessary to irrigate the command area. He added that the block is based upon the hydrological boundary. He said that the members will be either the land owner or the water user and the WUA is necessary for this purpose.

He emphasised the need of WUA is to be established before the implementation and Joint management will be launched as per the irrigation policy for this area. He added that it is necessary that the User should know that the WUA have to bear 10% of the construction cost either by cash or volunteer labour.

He explained that canal itself means that it constitutes both the social and the technical matters. He said that the design will be based in the technical matters and in the meantime the user beneficiaries have to look in the social aspects.

He informed that the area is delineated based on the hydrological boundaries. He added that the system should be lasting and the responsibility lies with the user. He said that there will be the gravity system and hence it will be cheaper here than those using the lift schemes in this system.

Mr. M.B. Pradhan said that for the area upto 10 ha. of land, the farm level canal need to be constructed at the farmer cost. He informed that now the new revised Irrigation policy had come and accordingly it will be carried out.

He added that there is cost sharing by both the Govt and WUA for the construction of the main canal.

The followings are the findings of the meeting:

1. The beneficiaries are ready to do all the works and to establish the WUA before implementation of the project. The user beneficiaries were distributing water in the previous Battar system and are experienced. Still they will be doing the distribution works. They are ready to work because it belongs to them.

2. Battar Lift scheme was launched as a pilot project. The agricultural productivity will be tremendous if irrigation water is available, so Govt. should consider for this alternative.

3. For irrigating throughout the year, It depends upon the power system in Nepal in the future. At present, the situation is not improved. In case some other power stations are constructed and improved, in that case the water may be available throughout the year.

Annex: List of Participants

A. Farmers

No.	Name	No.	Name
1	Sher B. Sadaula	36	Ms. Kanchi Thapa
2	Bishnu Kumar KC	37	Ms. Thulimaya Sadauli
3	Lala B. Sadaula	38	Thulo Scr B. Sadaula
4	Netra B. Sadaula	39	Bishnu B. Thapaliya
5	Chetra B. Sadaula	40	Ms. Til k. Sadaula
6	Madan B. Sadaula	41	Ms. Nanimaiya Sadaula
7	Tek Bahadur Sadaula	42	Ms. Kabita Sadaula
8	Guna B. Sadaula	43	Ms. Binda Tiwari
9	Dan B. Sadaula	44	Ms. Thulo Sidaula
10	Rudra B. Sadaula	45	Ms. Chanchala Sidaula
11	Bom B. Sadaula	46	Ms. Goma Pandit
12	Lalit B. Sadaula	47	Ms. Tej K. Thapa
13	Jit B. Sadaula	48	Ms. Mithu Dhital
14	Dil B. Sadaula	49	Ms. Thulimaya Paudyal
15	Rambabu Sadaula	50	Ranchandra Paudyal
16	Sanubabu Sadaula	51	Dipak Kumal
17	Raju Sadaula	52	Pradip Sadaula
18	Dipak Sadaula	53	Ms. Savitri Sadaula
19	Iswar Acharya	54	Ms. Mahili Sadaula
20	Tej B. Sadaula	55	Basu Sadaula
21	Bishnu B. Tiwari	56	Tanka B. KC
22	Shyam Raja KC	57	Navin KC
23	Basu KC	58	Thulobhai KC
24	Navaraj KC	59	Budhihal Amatya
25	Pradip KC	60	Dipak Sadaula
26	Batu KC	61	Budhi B. Sadaula
27	Dipak KC	62	Keshav KC
28	Lava B. Dhital	63	Ms. Kanchi Sadaula
29	Santa B. Sadaula	64	Ms. Thulimaya Sadaula
30	Bakti KC	65	Ms. Savitri Sadaula
31	Bhakta B. KC	66	Devendra Thapaliya
32	Ms. Chinmaya Kumal	67	Bhaghat KC
33	Ms. Savitri Khatri	68	Shyam Kumar KC
34	Ms. Mahili Tiwari	69	Surendra Thapaliya
35	Ms. Misri Acharya		

B. JICA Team Members

- 1 M. Fujioka
- 2 K. Iwata
- 3 Dr. P. Pradhan
- 4 K. Tanaka

C. DOI Counterparts

- 1 M. B. Pradhan

D. District Irrigation Office (DIO), Nuwakot

- 1 Keshab Prasad Adhikari Association Officer (A.O.)

**Block-wise Farmers' Meetings (F and G)
Minutes of Meeting
(Lambagaicha and Tallo Pipaltar)**

Date & Time: February 25, 1997, 10:00
Venue: Athaghere, Tallo Pipaltar

The seventh farmers' meeting was organized to make the farmers of the command area aware of the progress and outcome made by the study team till this date and possible feed back during the interaction with the beneficiary farmers to make the irrigation system more successful in terms of its usage. The list of participants is attached in the annex.

The meeting was started by introducing the study team members by Dr. Pradhan.

Mr. M. Fujioka, Team Leader of the study team greeted the participants.

He explained about the two main factors namely

1. Intake point
2. Water availability during wet season only.

He explained about the findings of the survey and study for Trisuli Irrigation Project. He said that the length of the proposed intake from Aqueduct no.2 is long and difficult at different places.

He added that the study team recommended DOI to negotiate to shift the intake to d/s of the balancing reservoir. He added that unless the shifting of the proposed intake, the construction cost will be high.

Mr K. Iwata explained about the proposed canal system and the new proposed intake from d/s of the balancing reservoir of NEA. He added that water will be brought in this block by gravity system without any lift.

Dr. Pradhan explained about the need of WUA to convey the irrigation water in a joint effort. He added that WUA member will be either the water user or the landowner.

He added that as per Irrigation policy for cost sharing, if alternative 1 is followed, the cost sharing will be automatically reduced. He added that areas are divided by blockwise based on hydrological boundaries.

Mr M.B.Pradhan said that available irrigation should be well managed by the farmers.

The followings are the outcome of the meeting:

1. The farmers need just irrigation water. The farmers will do all necessary repair works like in the protection of forest in this area to the maximum extent possible.
2. Irrigation water will come by gravity system for this block as per the result of the survey.
3. When water will be made available, it will be for 24 hours in a day.
4. WUA need to be organised before the implementation. Basically the use of water, distribution of water and the control need to be done by the user beneficiaries.
5. The farm level canal is to be constructed by the WUA itself. The farmers need to be united themselves.

6. Care should be taken to minimise the water loss. The excess water need to be drained through the existing drainages with the protective measures.

7. The farmers would like to grow rice, vegetables etc if irrigation water is made available.

Annex: List of Participants

A. Farmers

No.	Name	No.	Name
1	Man B. Dongol	38	Bir Man Kumal
2	Devi Prasad Paneru	39	Gopini Kumal
3	Hastaman Dongol	40	Suku Kumal
4	Rajesh Dongol	41	Feksi Kumal
5	Pahalman Dongol	42	Kanchi Maya Kumal
6	Nakaman Dongol	43	Nimnala Kumal
7	Shyam Man Dongol	44	Kali Kumal
8	Kale Majhi	45	Sante Kumal
9	Dhana Maya Dongol	46	Sahili Kumal
10	Laxmi Devi Dongol	47	Chayakti Kumal
11	Marich Man majhi	48	Kanchi
12	Ram Lal Dongol	49	Pahalman Majhi
13	Shyam Kumal	50	Maite Kumal
14	Ms. Bhunti Majhi	51	Raje Kumal
15	Lila Bahadur Kumal	52	Kamal Kumal
16	Ganesh Man Dongol	53	Gajabe Kumal
17	Chakra B. Kumal	54	Gyan Prakash Kumal
18	Lahar Man Kumal	55	Mangale Kumal
19	Ms. Sunita Kumal	56	Samu Chaure
20	Krishna Maya Kumal	57	Ms. Prithivi Dongol
21	Hiradevi Dongol	58	Ms. Santa Dongol
22	Ram Kumari Dongol	59	Chaure Kumal
23	Lila Maya Dongol	60	Lalbira Kumal
24	Geeta Dongol	61	Ms. Kanchi Kumal
25	Badi Man Dongol	62	Lal Bahadur Kumal
26	Tile Kumal	63	Ms. Kanchi Kumal
27	Sopey Kumal	64	Mankaji Kumal
28	Madhubane Kumal	65	Gopi Kumal
29	Tulsi Majhi	66	Hari B. Budhathoki
30	Yudha Man Kumal	67	Chakra B. Kumal
31	Bahadure Kumal	68	Gothc Kumal
32	Indra Man Dongol	69	Dhal B. Kumal
33	Ram Bahadur Kumal	70	Ms. Sanumaya Kumal
34	Jhamkumari Kumal	71	Ms. Ujeli Kumal
35	Maite Kumal	72	Ms. Dilnaya Kumal
36	Ram Bahadur Kumal	73	Ms. Bindu Kumal
37	Sita . Kumal		

B. JICA Team Members

- 1 M. Fujioka
- 2 K. Iwata
- 3 Dr. P. Pradhan
- 4 K. Tanaka

C. DOI Counterparts

1 M. B. Pradhan

D. District Irrigation Office (DIO), Nuwakot

1 Keshab Prasad Adhikari Association Officer (A.O.)

Block-wise Farmers' Meetings (II)
Minutes of Meeting
(Devighat)

Date & Time: February 25, 1997, 8:00
Venue: Prithivi Smarak, Devighat

The sixth farmers' meeting was organized to make the farmers of the command area aware of the progress and outcome made by the study team till this date and possible feed back during the interaction with the beneficiary farmers to make the irrigation system more successful in terms of its usage. The list of participants is attached in the annex.

The meeting was started by introducing the study team members by Dr. Pradhan.

Mr. M. Fujioka, Team Leader of the study team addressed about the progress made during the study for Trisuli Irrigation Project. He said that the length of the proposed intake from Aqueduct no.2 is long and the cost is also high due to topography. He added that the study team recommended DOI to negotiate to shift the intake to d/s of the balancing reservoir. He said that the construction cost for this alternative will be lower than the original proposed intake. He added if the shifting of the intake to d/s of the balancing reservoir is not done, it might be quite difficult to implement the project.

He added that the availability of water is only for the wet season. During dry season water will not be made available and the team is carrying the study according on hydrological boundaries.

Mr. M.B. Pradhan said that the study team is carrying survey from d/s of the balancing reservoir in addition to the previous Aqueduct no.2. He added that Department of Irrigation had informed through District Development Committee that Irrigation water can be made available only for nine months.

He further added that Superintending Engineer and Divisional Engineer of DOI had recently visited the site and were briefed about the outcome of the surveys.

Mr. K. Iwata explained about how the system is going to work. He briefed about the proposed canal system with the help of topographical map. He added that water can come in this area by gravity system, in case of battar system, water came by lift scheme after Majhitar.

Dr. P. Pradhan explained that water conveyance was not efficient while taking by wardwise and now the blocks are developed based on hydrological boundaries. He added that the WUA member will be either the water user or the landowner.

He added that there is a provision of 20% women participation. The investment, operation and maintenance will be based on land coverage. He added that cost sharing by User beneficiaries is 10%. He added that in addition to the user group, there will be another Main committee. There will be pipe system for water distribution and it will be underground. If open canal, there is a chance of damages by the people.

The followings are the outcome of the meeting:

1. The proposed intake is long and costly. Water will be available only for nine months.
2. Alternative 1 also covers the same command area by gravity system. Hence the cost/ha. of land for the alternative 1 will be cheap.
3. Lifting from Tadi is not feasible due to topography for this area.

4. Water availability is the same both for the proposed intake and the alternative 1 which will be available only for nine months.
5. To minimise the waterloss, conflict etc, water management will be done by the user beneficiaries themselves after discussion.
6. costt sharing of 10% according to Irrigation Policy is to be done by the WUA but all the works of the farm level canal is to be done by WUA.
7. Underground pipe system is generally followed for the main canal to minimise theft of water, damages of the canal etc.
8. There will be one Central Committee which will be represented by the user beneficiaries of each block.
9. The gate system will be managed and controlled by the user beneficiaries in consultation with DIO, Main committee. Main control will be generally done by providing Tank.
10. WUA is to be established before the implementation of the project. Related training will help to built the farmers capability.

Annex: List of Participants

A. Farmers

No.	Name	No.	Name
1	Surat B. Chitrakar	20	Ganeshlal Chitrakar
2	Bharat P. Khataucka	21	Balram Gajurel
3	Ranabhadur Chitrakar	22	Man B. Dongol
4	Sete Chitrakar	23	Ramlal Chitrakar
5	Chet B. Shrestha	24	Reshma Chitrakar
6	Bhuban N. Chitrakar	25	Purnachandra Karanjit
7	Ratna B. Chitrakar	26	Sukumaryan Chitrakar
8	Dhansundar " "	27	Ms. Rama Rimal
9	Chandralal Chitrakar	28	Bharatlal Chitrakar
10	Birman Chitrakar	29	Ranyakwal Yadav
11	Ratna B. Chitrakar	30	Tika Prasad Adikary
12	Ms. Maya Rimal	31	Ram B. Chitrakar
13	Punya Dongol	32	Ram B. Chitrakar
14	Ms. Gyanmaya Chitrakar	33	Ratnaman Chitrakar
15	Ms. Chandrabati "	34	Samser B. Dongol
16	Samber Lal Chitrakar	35	Reshamlal Chitrakar
17	Ms. Hiradevi Rimal	36	Sahila Chitrakar
18	Ms. Sabitri Chitrakar	37	Krishna P. Sapkota
19	Samibu P. Rimal	38	Lumadi P. Gajurel

B. JICA Team Members

- 1 M. Fujitoka
- 2 K. Iwata
- 3 Dr. P. Pradhan
- 4 K. Tanaka

C. DOI Counterparts

- 1 M. B. Pradhan

D. District Irrigation Office (DIO), Nuwakot

- 1 Keshab Prasad Adhikari Association Officer (A.O.)

Block-wise Farmers' Meetings (I)
Minutes of Meeting
(Majhitar, Bellar and Dhansar)

Date & Time: February 27, 1997, 8:00
Venue: B.P. Srimiti Primary School, Majhitar

The second set of FLAG meeting was conducted in view of presenting the basic design commenced by the study team till this date and to incorporate the suggestions by users in the design procedures. The list of participants is attached in the annex.

The meeting was commenced with the introduction of the JICA Study Team members and DOI counterparts by Dr. P. Pradhan. He requested the users for their suggestions as it is a need of the two way interaction. He pointed out that the formation of users' association is necessary as the present project falls under the joint management of HMG and the users as per The Irrigation Policy. He mentioned that each blocks of the system should be considered as a separate block and the cost sharing may be different in different blocks because of the technological difference in the conveyance of water in different blocks in this project. He also made aware of the fact that as per HMG Irrigation Policy the users should be involved in the contribution of a portion of the investment cost during the construction and the implementation phase.

Mr. M. Fujioka mentioned that the basic design is now completed. He pointed out two basic conditions for the successful implementation of the project:

- Water availability for 9 months only. (April to december)
- Position of the intake point.

He told that the original intake from the NEA aqueduct no. 2 being long , costly and has to pass through a stretch of a geologically fragile area, the team has recommended a new intake at the downstream of the NEA balancing reservoir.

Mr. K. Iwata briefed the whole irrigation net works and the blocks in the map and particularly the block I. He discussed the technological findings of the study team and recommended the alternative intake at the downstream of the NEA reservoir. He mentioned that the option of the original intake at the NEA aqueduct no. 2 is costly because the alignment has to pass through a very fragile geological formation and has to cross the Trishuli river twice through the major aqueducts. He mentioned that the study team has recommended a lift irrigation at Majhitar (Block I) because it located at the higher elevation. He invited all the user participants for the discussion and suggestions for the better usage of the proposed system.

Farmers were quite curious about any option of gravity irrigation to the presently proposed lift system. The main concern of the farmers were the timely inavailability of the spare parts of the pump. But, it has been mentioned by the study team that there will be support and training of the pump operator . As per the suggestions of the farmers the Dhansar has been shifted from Block I to Block D. The meeting was over by 9:30 am.

The followings are the outcome of the meeting:

As per the users' suggestions, Dhansar has been shifted to Block D from Block I.

Annex: List of Participants

A. Farmers

No.	Name	No.	Name
1	Bishnu Acharya	27	Harka B. Rai
2	Shivahari Gajurel	28	Dal Bahadur Kumal
3	Rajendra Aryal	29	Bhim B. Majhi
4	Rajaram K. C.	30	Krishna B. Dangol
5	Harikrishna Chitrakar	31	Yadunath Acharya
6	Ram B. Aryal	32	Bishnu P. Acharya
7	Prem B. KC	33	Janaki P. Rimal
8	Ram Saran Lamchane	34	Dinesh Acharya
9	Vikas Lamchane	35	Bhim B. Pudasaini
10	Umesh Nepali	36	Upendra Ojha
11	Suman Nepali	37	Saligram Rimal
12	Santa B. Nepali	38	Purusottam Aryal
13	Mohan B. Aryal	39	Bachu Majhi
14	Dhruba Dhakal	40	Raj Kumar Acharya
15	Karna B. Kumal	41	Nava Raj Aryal
16	Shyam B. Kumal	42	Krishnath Kuwar
17	Keshar Kumal	43	Gokul Pudasaine
18	Chandra B. Nepali	44	Sundannan Duwal
19	Harisaran Aryal	45	Harikrishna Shrestha
20	Shyam Kaji Aryal	46	Ganesh Acharya
21	Ram Chandra Aryal	47	Ram Raja Aryal
22	Ram Shrestha	48	Ms. Min K. Alenagar
23	Govinda Karanjit	49	Man Bahadur Kuwar
24	Chandra B. Thapa	50	Gopal Acharya
25	Indra B. Aryal	51	Iswar B. Acharya
26	Udav Shrestha	52	Krishna B. Aryal

B. JICA Team Members

- 1 M. Fujioka
- 2 K. Iwata
- 3 Dr. P. Pradhan
- 4 K. Tanaka
- 5 K. Tsumura

C. DOI Counterparts

- 1 P. B. Shrestha

D. District Irrigation Office (DIO), Nuwakot

- 1 Keshab Prasad Adhikari Association Officer (A.O.)

**Block-wise Farmers' Meetings (J and K)
Minutes of Meeting
(Pipaltar)**

Date & Time: February 25, 1997, 16:00
Venue: Nagarpalika Gate, Pipaltar

The Ninth farmers' meeting was organized to make the farmers of the command area aware of the progress and outcome made by the study team till this date and possible feed back during the interaction with the beneficiary farmers to make the irrigation system more successful in terms of its usage. The list of participants is attached in the annex.

The meeting was started by introducing the study team members by Dr. Pradhan.

Mr. Fujioka, Team leader greeted the participants of the meeting. He highlighted about the present finding of the survey and the study.

He added that the this canal system gets water from the NEA canal. The availability of the water is only for 9 months during the wet season only.

He added that the proposed original one may be quite expensive and the imolementation may be difficult. So Jica study team strongly recommended to shift d/s of the reservoir.

He added that final decision is to made by the government of Nepal for the implementation. If shifting is not possible, such cooperation for economic grant from Japan is not easy because the cost of the project seems too high. So the project implementation depend upon the government of Nepal.

Mr. K. Iwata briefed about the basic planning of the irrigation system. He briefed about the Intake point, Main canal alignment, He briefed about the command area of K and J blocks, location of Devighat Hydropower, DIO office, Pumping station of Battar lift system.

He also briefed about the alignment of the main branch canal and conveyance of water by Battar lift system. He informed that the existing canal will be used to the maximum extent.

He explained about the new canal system. He said that after pumping from P2, the water will be delivered by the gravity system. The cost of the energy for the pumping will be around Rs 474/ropani.

Mr. M. B. Pradhan said that for this area lift as mentioned P2 in Chwadi is the only alternative. During Battar lift scheme, it was a combined area. But right now in consideration of the operation and maintenance and the past experience, it will be a separate system from P1 pumping station with leeser area than before.

The followings are the outcome of the meeting:

1. The proposed alternative will minimise 3-4 km length. Due to cost sharing the beneficiaries have to look for low cost and quick return. The cost incurred from aqueduct no.2 will burden twice e.g more cost sharing and the electricity cost.
2. The beneficiaries are ready to meet any cost and even to sell their land and to push the government for the implementation of the project.
3. There should not be any sand coming. Only 2 crops not 3 crops will be possible during 9 months availability of water.

4. The shifting of the intake and the availability of water for more than 9 months will be decided by the government of Nepal.

5. According to Irrigation policy, 10% of the total construction cost is to come by the WUA. If the canal is from Aqueduct no.2, the cost is around Rs 3000/rop. If the canal is from Alternative 1, the cost will be around Rs. 2000/rop.

6. The quantity of water availability will be enough for all the areas for this block.

7. During the procurement of pumps, spareparts of 10 -20 years will be done. For small amendment of the pumps, there will be the provision of training to the mechanics. They will be trained by mechanic coming from Japan during implementation. In this case there will be no wear and tear due to silt and some stabiliser will be provided to prevent from coil burning.

Annex: List of Participants

A. Farmers

No.	Name	No.	Name
1	Ram Bahadur Bhatt	28	Krishna P. Ghemere
2	Ram Bahadur Kumal	29	Devi P. Neupane
3	Loknath Bhatt	30	Bhaimaraj Gajrel
4	Madhav Pd. Pandey	31	Chandra Gajrel
5	Hitendra Gajurel	32	Shiva P. Neupane
6	Krishnahari Gjurel	33	Rajan P. Neupane
7	Pokharaj Bhatt	34	Krishna Neupane
8	Krishna P. Gjurel	35	Ram C. Neupane
9	Sitaram Bhatt	36	Ms. Kamala Nepane
10	Krishna P. Gajurel	37	Sukre Kumal
11	Ram C. Pudasine	38	Mrs. Gajmati Kumal
12	Tanka P. Neupane	39	Madhav P. Gajurel
13	Gopinath Neupane	40	Motiram Kumal
14	Surendra Gjurel	41	Shyam B. Kumal
15	Balbhadra Neupane	42	Maghanath Paneru
16	Sukdev Paneru	43	Ganga P. Gajurel
17	Bhairab Ghemere	44	Krishna P. Gajurel
18	Chranjibi Gajurel	45	Krishna P. Neupane
19	Kashinath Gjurel	46	Shiva P. Gajurel
20	Madhav Gajurel	47	Bhakta P. Neupane
21	Mrs. Savitri Dungal	48	Krishna P. Neupane
22	Chatra Raj Dongol	49	Ramkrishna Kumal
23	Tulsi Gajurel	50	Bishnu Kumal
24	Rani Krishna Bhatt	51	Keshav Gajurel
25	Tilak P. Gajurel	52	Kedar Nepali
26	Ram P. Gajurel	53	Tula B. Kumal
27	Balram Gajurel	54	Bishnu P. Gajurel

B. JICA Team Members

- 1 M. Fujioka
- 2 K. Iwata
- 3 Dr. P. Pradhan
- 4 K. Tanaka

C. DOI Counterparts

- 1 M. B. Pradhan

D. District Irrigation Office (DIO), Nuwakot

- 1 Keshab Prasad Adhikari Association Officer (A.O.)

**Block-wise Farmers' Meetings (I.)
Minutes of Meeting
(Majgoan and Pokhephant)**

Date & Time: February 25, 1997, 13:00
Venue: Chautara, Pokhephant

The Eighth farmers' meeting was organized to make the farmers of the command area aware of the progress and outcome made by the study team till this date and possible feed back during the interaction with the beneficiary farmers to make the irrigation system more successful in terms of its usage. The list of participants is attached in the annex.

The meeting was started by introducing the study team members by Dr. Pradhan.

Mr. M. Fujioka, Team Leader of the study team greeted the participants. He explained that the study team had listened their opinions in the previous meeting.

He added that the proposed intake is from Aqueduct no. 2 of NEA Hydropower. He added that the opinion of the study team is that some of the main canal alignment along this route is not good and is expensive. He informed that the study team plan to provide irrigate to this block by Pumping system. He added that a separate pumping system was hence proposed for this block.

He added that the cost of operation and maintenance for the pumping system will be quite expensive compared to gravity system in terms of money. He added that Trisuli Irrigation Project came as a package including this block not as a isolated one.

Mr K. Iwata explained about the canal system for this area and the pumping scheme. He explained about the lifting head as 66m. He added that the tentative energy required is 264 KW. He added that the pumping cost will be around Rs 756/ropani for electricity charge. The proposed cost is for 12 hrs/day, 25 days in a month and it is for 6 months.

He added that during the survey, some of the beneficiaries wanted to lift the water to some higher elevation with the help of diesel pumps.

Mr. M. B. Pradhan said that the lifting will be able to provide irrigaion facilities for 12 months than that of the prposed intake through gravity system at present. He added that whenever there is no need of water due to rain etc, the user beneficiaries will be able to reduce the electricity.

Dr. Pradhan explained about the formation of WUA. He added that according to the Irrigation Policy, 10% cost sharing is to be done by the user beneficiaries and the user beneficiaries will be taking the responsibility for the operation and the maintenance of the project.

The followings are the outcome of the meeting:

1. There are a lot of Kholas and Kholsi along the terrain in this area and taking canal upto the far end is difficult. The user beneficiaries can construct the branch canals but the main canal is to be constructed by the government.
2. About the pumping cost more study is needed for the cost of operation and maintenance.
3. Upto the the middlle in the difficult terrain just upstream of sirkhali, they need the canal. Rest they can built themselves for the earthen canal.
4. To minimise the cost of electricity, there should be two seperate lift systems namely

- a. one for the low lying 70% areas which is only 25m lift.
- b. second is for the upland which need 65m lift.

5. The pump operators will be the local beneficiaries with experiences mentioned below:

Name	Experience
1. Mr. Ram Hari Rimal	35 years
2. Mr. Bal Ram Adhikari	7 years
3. Mr. Narayan Rimal	7 years
4. Mr. Ram Saran Rimal	5 years

6. There are so many user groups belonging to the same beneficiaries for different sector such as forest, water supply. They will co-ordinate for the good function of the Water Use organisation. Unanimously the member of the executive committee will be selecting the most capable leaders from different users and outside. The quality and the experience of leadership so far gained will be equally useful for the WUA.

7. WUA will be responsible for the system management. So far surveyed, the women group are good for the saving of the money. Hence to keep management for the payment of electricity charge, the beneficiaries will then be keeping women in the post of treasure. They have different community development group to collect the money, to expense the money, banking system, saving group.

8. The 10% cost sharing in cash may be difficult for the beneficiaries because the cost incurred in the lift scheme will be mostly the capital cost of the pumps.

Annex: List of Participants

A. Farmers

No.	Name	No.	Name
1	Mohan Lal Shrestha	34	Ms. Radhika Rimal
2	Indra Prasad Adhikary	35	Ms. Sushila Adhikary
3	Krishna P. Adhikary	36	Ms. Radha Rimal
4	Keshav Rimal	37	Ms. Chet K. Adhikary
5	Ram P. Rimal	38	Ms. Menuka Rimal
6	Chabi P. Rimal	39	Ms. Gyan K. Rimal
7	Shiva P. Neupane	40	Ms. Maiya Rimal
8	Ram B. Dhungel	41	Madhusudan Rimal
9	Indra P. Adhikary	42	Shyam Lal Shrestha
10	Tej P. Dhungel	43	Som Lal Shrestha
11	Govindalal Chitrakar	44	Prakashjung Saha
12	Tika P. Adhikary	45	Yam B. Majhi
13	Hari P. Adhikary	46	Tek P. Adhikary
14	Shiva P. Rimal	47	Ms. Bhawani Rimal
15	Shiva P. Acharya	48	Ms. Deuti Rimal
16	Achyut Adhikary	49	Ms. Anjira Dahal
17	Bhabanath Adhikary	50	Ms. Durga Rimal
18	Iswari Rimal	51	Ms. Sita Rimal
19	Bhismanath Adhikary	52	Ms. Sabitri Nepal
20	Chetnath Rimal	53	Ram Hari Sharma
21	Purna P. Nepal	54	Ms. Hem K. Rimal
22	Ms. Kamala Adhikary	55	Ms. Gangadevi Rimal
23	Ms. Nanimaiya Gautam	56	Shiva P. Adhikary
24	Ms. Saraswati Sharma	57	Dilli P. Rimal
25	Ms. Lila Adhikary	58	Padma N. Rimal
26	Ms. Saraswati Adhikary	59	Ram P. Rimal
27	Ms. Bhawani Rimal	60	Ms. Devaki Rimal
28	Ms. Sabitri Adhikary	61	Ms. Indra K. Rimal
29	Ms. Min K. Adhikary	62	Ms. Durga Rimal
30	Ms. Shanta Majhi	63	Ms. Sita Rimal
31	Ms. Ganga Adhikary	64	Keshav P. Rimal
32	Ms. Bhim Kumari Rimal	65	Bishnu P. Rimal
33	Ms. Shita Rimal		

B. JICA Team Members

- 1 M. Fujioka
- 2 K. Iwata
- 3 Dr. P. Pradhan
- 4 K. Tanaka

C. DOI Counterparts

- 1 M. B. Pradhan

D. District Irrigation Office (DIO), Nuwakot

- 1 Keshab Prasad Adhikari Association Officer (A.O.)