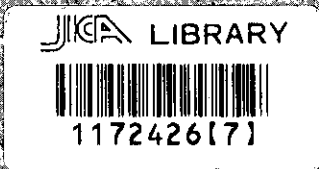


**THE STUDY
ON
AGRICULTURE AND FARM ROAD DEVELOPMENT
IN
THE LHUNTSE AND MONGAR DISTRICTS
IN
THE KINGDOM OF BHUTAN**

**VOLUME I
MAIN REPORT**



March 2003

DOCON CO., LTD

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**JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
MINISTRY OF AGRICULTURE
THE KINGDOM OF BHUTAN**

**THE STUDY
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AGRICULTURE AND FARM ROAD DEVELOPMENT
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PREFACE

In response to a request from the Government of the Kingdom of Bhutan, the Government of Japan decided to conduct a Study on Agriculture and Farm Road Development in the Lhuntse and Mongar Districts in the Kingdom of Bhutan and entrusted the study to the Japan International Cooperation Agency (JICA).

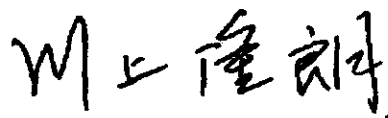
JICA dispatched a study team headed by Mr. Nobuo Sambe of Docon Co., Ltd. to the Kingdom of Bhutan between April 2002 and February 2003.

The team held discussions with the officials concerned in the Government of Bhutan, and conducted field surveys in the study area. Upon returning to Japan, the team conducted further studies and prepared this final report.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials of the Government and those concerned in the Kingdom of Bhutan for the close cooperation they have extended to the study.

March 2003



Takao KAWAKAMI

President

Japan International Cooperation Agency

March 2003

Mr. Takao KAWAKAMI
President
Japan International Cooperation Agency
Tokyo, Japan

LETTER OF TRANSMITTAL

Dear Sir,

We have the pleasure of submitting herewith the report on the Study on Agriculture and Farm Road Development in the Lhuntse and Mongar Districts in the Kingdom of Bhutan.

The study was conducted by Docon Co., Ltd. over seven-month period from April 2002 to March 2003 under a contract with JICA. The purposes of the study are to formulate a master plan on agriculture and farm road development in Lhuntse and Mongar Districts with a target year of 2012 or a period of 10 years, which covers two terms of 9th and 10th Five Year Plans of Bhutan. The master plan consists of two plans, namely, Regional Agriculture Development Plan and Farm Road Development Plan, which aims at improvement of food self-sufficiency, income and living standard in the study area. Each plan has several programs and/or sub-programs to realize the said objectives. Then, action plans were formulated for each program or sub-program so that the proposed programs and sub-programs should be smoothly implemented with full understanding and efforts of stakeholders. All the processes of formulation of the master plan and action plans were conducted through participatory approach, which produces sense of ownership among the beneficiaries and promotes sustainable development.

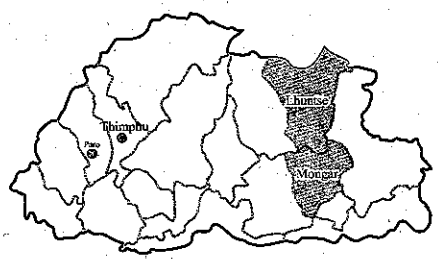
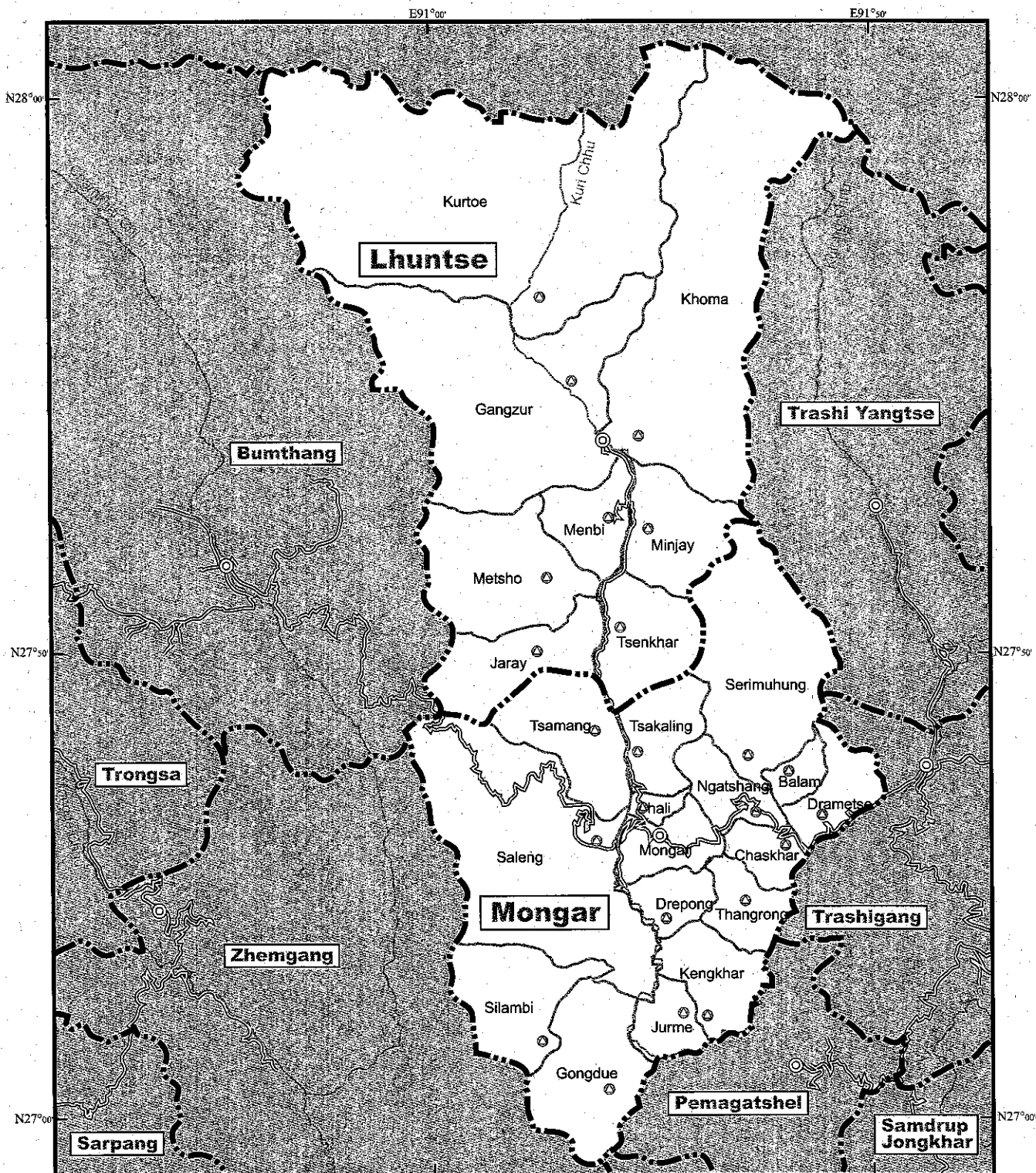
We believe that the implementation of the project will help i) to improve income and living standard of the rural population in the study area, ii) to attain the national goal of Bhutan, namely, Gross National Happiness, and iii) to prosper the cordial relations and good-will between Japan and Bhutan.




Finally, we take this opportunity to convey our deep appreciation and sincere gratitude to the personnel concerned of your Agency, the Ministry of Foreign Affairs, and Ministry of Agriculture, Forestry and Fisheries for the kind cooperation extended to us. We also wish to express our deep gratitude to your Bhutan Office, the Embassy of Japan in India, the Ministry of Agriculture and other authorities concerned of the Government of the Kingdom of Bhutan, and the people in the study area for the close cooperation and assistance extended to us during our field investigations and studies.

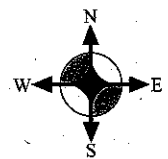
Very truly yours,

三郎 信雄

Nobuo SAMBE
Team Leader
The Study on Agriculture and Farm Road
Development in the Lhuntse and Mongar
Districts in the Kingdom of Bhutan



-  International Boundary
-  Dzongkhag Boundary
-  Gewog Boundary
-  Roads
-  Rivers
-  **Mongar** Name of Dzongkhag
-  Silambi Name of Gewog
-  Dzongkhag Capital
-  Gewog Centre



Location Map

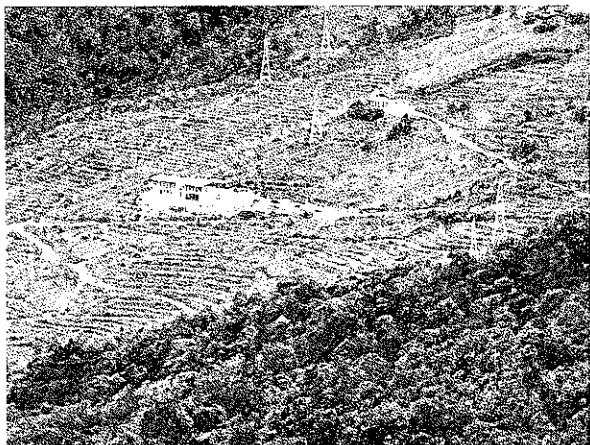
Photographs of Present Conditions of the Study Area and Activities of the Study (1/3)



Terraced paddy field in Lhuntse Dzongkhag.



Foot path to Khoma village in Lhuntse.



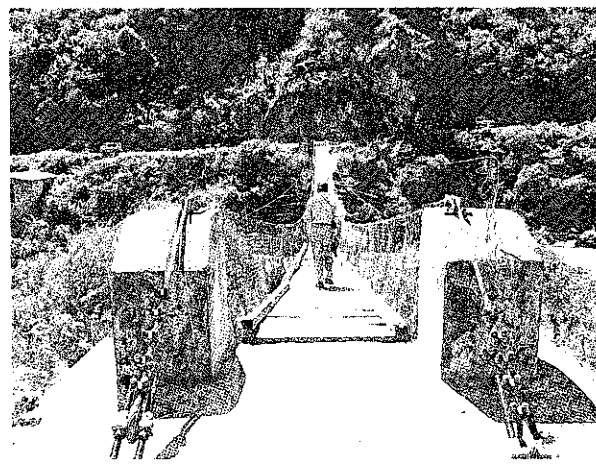
Renewable Natural Resources Research Center, East (RNR RC East) in Mongar.



A power tiller with cart provided through Kennedy Round-2 project by Japan. Light-load bridge and farm mule track were proposed to improve rural access with this type of transport.



Transplanting of paddy rice in Mongar. Women's role in farming activities is quite large.

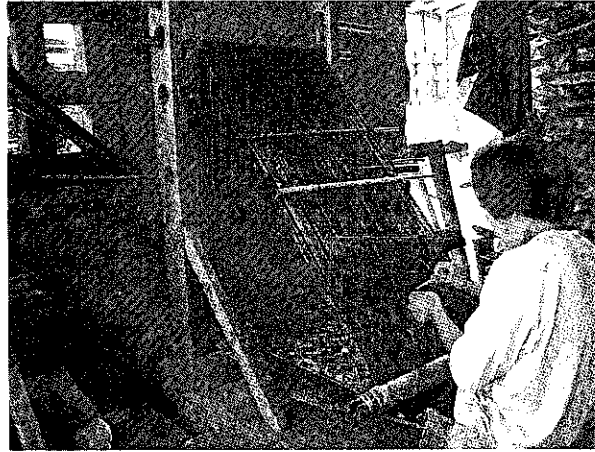


An existing suspended bridge at Khoma over the Kuri Chhu River. This bridge is proposed to be replaced with a light-load suspended bridge in the Master Plan.

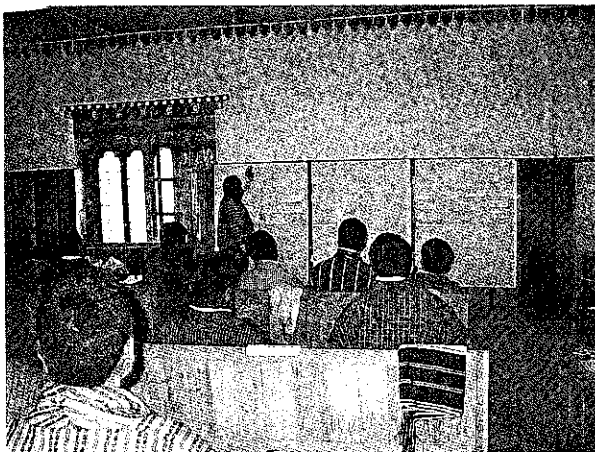
Photographs of Present Conditions of the Study Area and Activities of the Study (2/3)



Farm road construction with construction machinery of the Ministry of Agriculture. The farm roads are generally constructed at steep and rocky hill side.



Weaving is commonly carried out at rural households. Most of the people use the woven cloth for their own clothes but not for sale.



Problem analysis workshop was held at the initial stage of the study in order to identify problems, objectives and approaches of development.



Rapid rural appraisal (RRA) survey was carried out at four locations in the study area.



Bi-weekly meeting held in Mongar Dzongkhag. The meeting was held every two weeks both in Lhuntse and Mongar. Technical transfer was done on specific issues by the experts in turn.



Farm road construction seminar. Skilled labor such as blaster, mason, and construction supervisor were arranged by Gewog. The study provided construction equipment and technical support. Labor contribution will be available during off-season for agriculture.

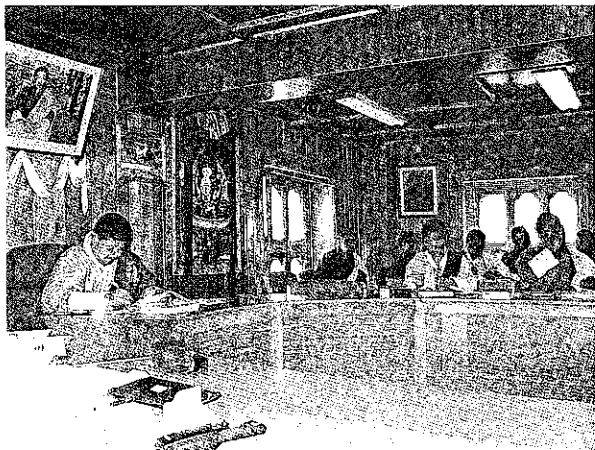
Photographs of Present Conditions of the Study Area and Activities of the Study (3/3)



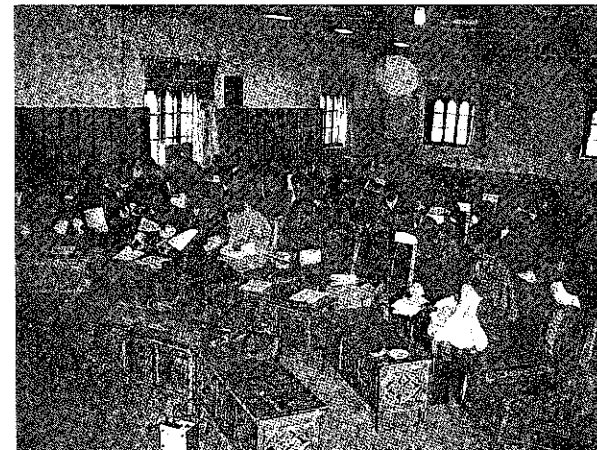
Workshop for formulation of action plans. The action plan was formulated for each program and sub-program through due discussions with stakeholders in accordance with the Guidelines for Formulation of Action Plans.



“Small Scale Irrigation Support” was one of the OJT activities. An MOA counterpart instructed how to use the engine pumps to beneficiaries’ groups.



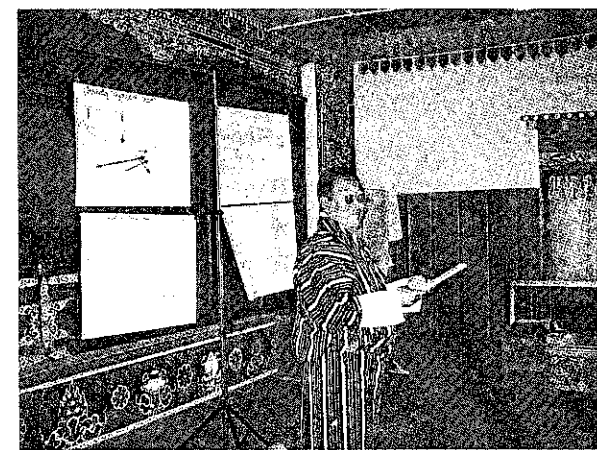
Steering committee was held inviting officials of the agencies concerned. The meeting was held five times in total.



Seminar on Formulation of Action Plans was held inviting all the Gups, Mangmis and Chimis. Guidelines for formulation of Action Plans were distributed and explained



Guidelines of Light-load Bridge were also prepared by the Study Team. Based of the guidelines, three bridges were designed through OJT of the counterparts.



Gup of Drepong Gewog (Chairman of Gewog Development Committee) of Mongar presented their action plans to the participants in the Seminar on Formulation of Action Plans.