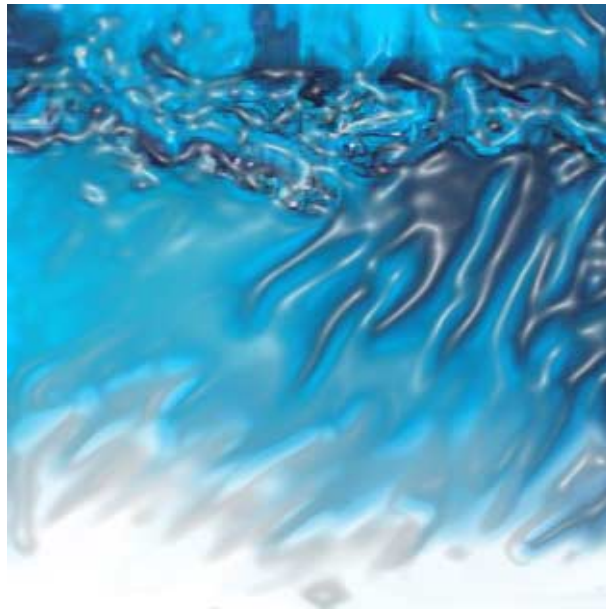

2. 地域会合発表資料



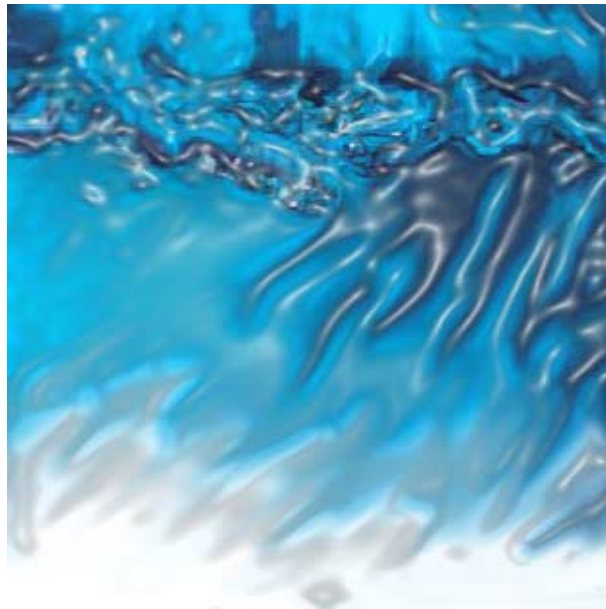
第2次水資源プロジェクト研究計画調査

2.1 水と貧困（ダッカ）

- 1 The Project of Livelihood Improvement in East Sumba of East Nusa Tenggara, Kamanggih Clean Water Supply Project
Japan International Cooperation Agency and IBEKA(NGO)
- 2 The Study on Groundwater Development in Southern Cambodia
- 3 Water and Poverty
The Case Study:
Japan International Cooperation Agency
- 4 The Pilot Project of Rural Water Supply & Sanitation Improvement in Lao PDR
Japan International Cooperation Agency

水と貧困（ダッカ） 1

The Project of Livelihood Improvement in East Sumba of East Nusa Tenggara, Kamanggih Clean Water Supply Project
Japan International Cooperation Agency and IBEKA(NGO)



第2次水資源プロジェクト研究計画調査

The Project of Livelihood Improvement in East Sumba of East Nusa Tenggara

Kamanggih Clean Water Supply Project



By JICA and IBEKA(NGO)

Key Points

- Water Supply Project as the Entry Point
- Integrated Livelihood Development
- Rural Infrastructure Development

Profile of the Area



- Under-developed Infrastructure (non-electrified, water shortage)
- Subsistence-based economy vulnerable to the external environment
- Location 3 day traveling from Jakarta by ship and automobile
- Average monthly household income Rp. 125.000



Kamanggih Life



About 60 km southeast Waingapu, paved, rough road, 2 hours driving

Total area 57.8 sq km, about 250 meters above sea level. Limestone composed, average temp 36°C

Average rain fall 650 mm.

Kamanggih inhabitant 1031 persons
174 families

Average water consumption below 30 liters per person per day
Main dietary maize and mixed corn and rice



Pareto Diagram



Project Summary

Overall Goal

Improvement of livelihood development

Project Goal

- Development of water supply
- Introduction of income generating activities
- Improvement of life environment

Duration

- 2 Years, from February, 1999 to March, 2001

Activities

- Phase I : Technical Phase
 - Site Survey and Data Collection
 - Detail Design and Engineering
 - Civil Construction and Pump Installation
- Phase II : Social Transformation Phase
 - Project Introduction and Socialization
 - Cooperative Organization Building
 - ↳ Health and Hygienic Extension
 - ↳ Income Generation Activities
 - ↳ Environment and Agricultural Extension

Project Inputs

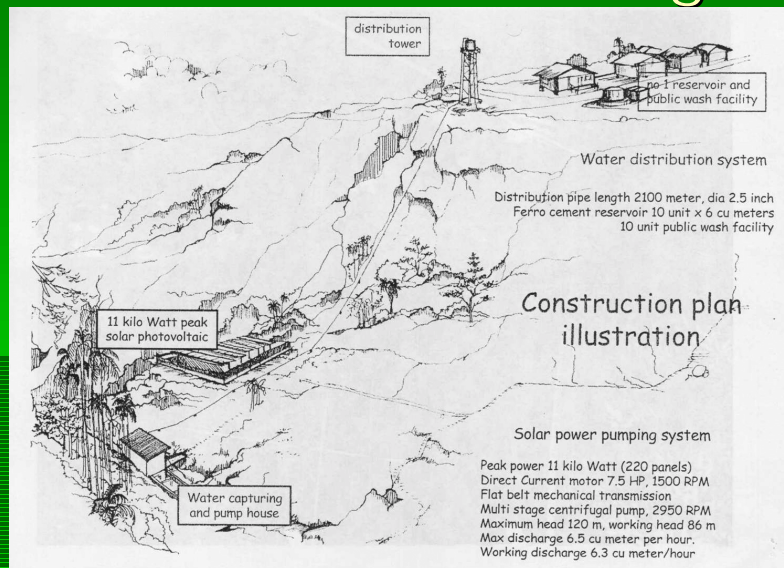
- Japanese Side
 - cost for implementation
 - dispatching experts and local consultant
 - cost for holding seminar
- Indonesian Side
 - ↳ labor for construction
 - ↳ formation of group for water use
 - ↳ technical training
 - ↳ training for management

Design, engineering and construction



- involvement of local villagers from the early project stage
- using local engineering and manufacturing capability
- JICA expert dispatched to assist

Construction Design



Operation and maintenance



- Group formation and training for water use
- Guidance of O & M activity
- Training of accounting

Income Generating Activity



- Planting green vegetables and selling in the market
- Handy craft industry development as off-farm activity

Impact of the Project

- Poverty Alleviation and Livelihood Development

- Drinking Water (174 households, 1081 residents)
- Public Bathing Place and Bridge in Flood Time
- Life Changed by Starting Farming
- Income Generation by Selling Vegetable and Handy Craft
- Improvement of Nutritious Status by Taking Vegetable
- Green Plantation

Impact of the Project

- Saved Time of Collecting Water

<Women>

- Income generating
- Farming

<Men>

- Encouraged for working

<Children>

- Go to school without delay



Impact of the Project

▪ Community Participation

- Training of O & M
- Constructed by community and NGO
- Monitoring of O & M
- Planting of Tree

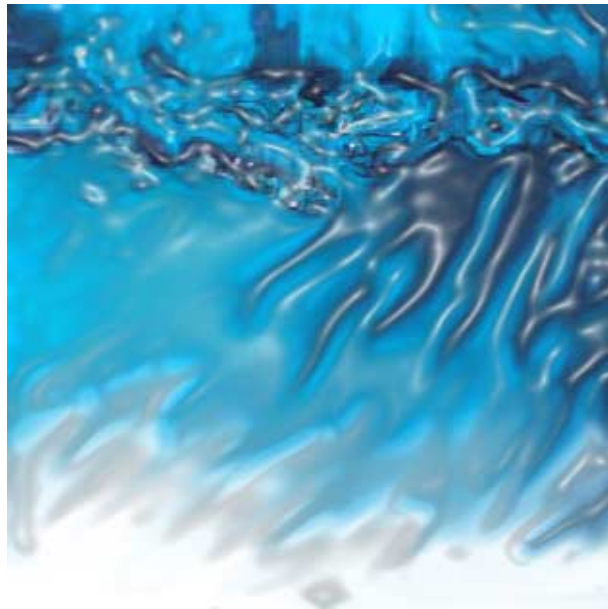


Lesson Learned

- As the relevant entry point of the livelihood development program, water supply facility installment was done by Local NGO initiative.
- Integrated rural development program with water supply project resulted in the significant livelihood improvement and pro-poor economy development.
- Infrastructure development such as installment of water supply facilities, bridge improvement, promoted overall rural development.

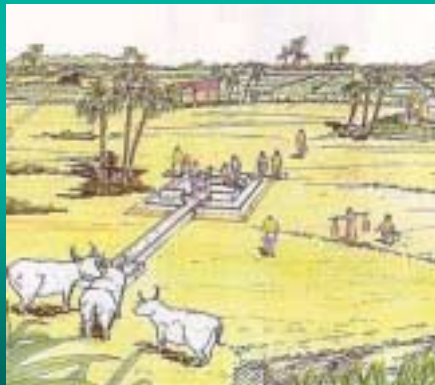
水と貧困（ダッカ）2

The Study on Groundwater Development in Southern Cambodia



第2次水資源プロジェクト研究計画調査

The Study on Groundwater Development in Southern Cambodia



Profile of Area



- Devastated rural infrastructure occurred by extensive civil strife
- GDP per capita US\$240
- Widening gap between urban and rural area
- Residents use natural water resources
- Water contaminated in dry season

Project Summary

- F/S including Pilot Study
- 5 Years, December 1996 to January 2002
- Due to the civil strife, the project discontinued in 1997, and again started in 1999
- 24 pilot wells were constructed and 20 wells were monitored after two years.



Japan International Cooperation Agency

Objectives of the Study

- To evaluate the potential for the development of groundwater resources in the Study area
- To select and prioritize the villagers to be developed
- To formulate the groundwater development plan and water supply for the selected villages
- To transfer technology to the counterparts throughout the Study

Activities



·Phase I : Baseline Study and Field Study

·Phase II : Analysis and Evaluation of Groundwater Resource Potential

·Phase III: Groundwater Development Planning

·Phase IV: Pilot Study Monitoring

Activity and Gender Perspective

- Extensive gender analysis and needs survey were done in the baseline survey.
 - Before construction of water facility, women's staff of PDRD (Provincial Department of Rural Development) and survey team participated in the social survey and interviewed the women's needs
 - Some of the request from women's need on place of washing and bathing was reflected in the designing of pilot facility.

Activity and Gender Perspective

- Gender Stereotyping on O & M
 - Village Water Committee (VWC) and Water Point Committee (WPC) were established. At the selection of members of the committee, 80% of VWC were men and half of WPC were men. Women member consisted of half of WPC act as cleaner. Therefore, 100 % of cleaners of water supply facilities were women. Instead, most of caretakers in charge of hand pump maintenance were men.

Monitoring Results



- Time saving for domestic water collection (0.55 hours per day per household)
- Hygiene and health improvement as a result of improved water quality and increased use of water



Tasks for Gender Mainstreaming

- More participation of women is required in O & M activities
- Women would like to join decision-making not only as member of Village Water Committee (VWC) but Village Committee to solve problems by themselves.

Changing Society

Baseline Survey



Pilot Project



Monitoring

Gender Mainstreaming

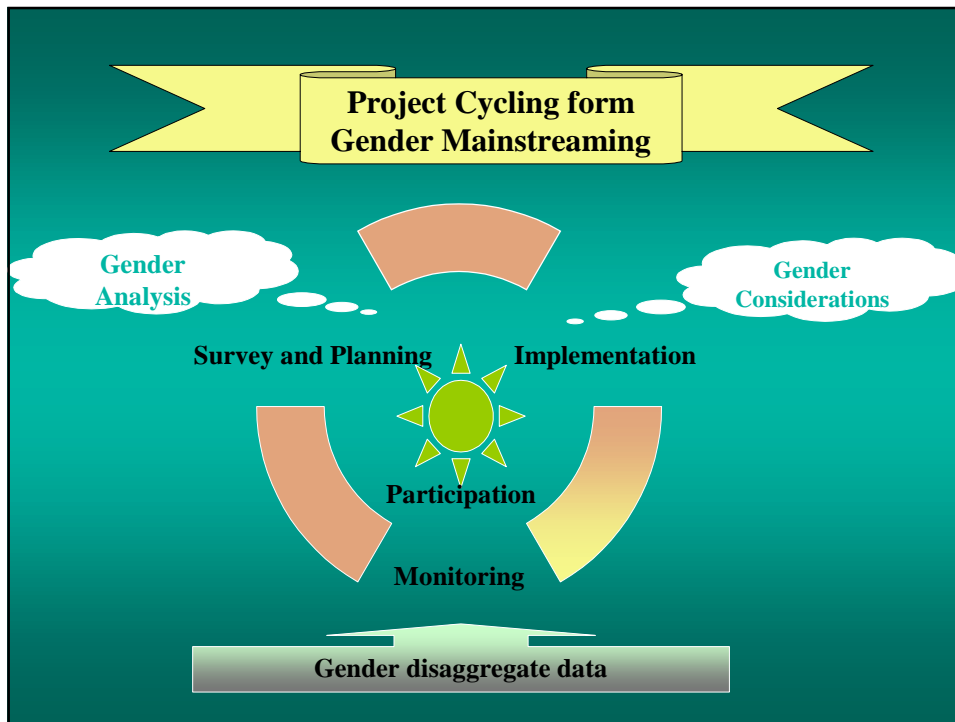
<Socio-economic Change>

- Reconstruction of the Economy
- Widening rural and urban gap
- Migration began



<Gender Role Change>

- Women have to manage maintenance.
- Women become more hard working in both household activities and farming



Lessons Learned

- Not being misled by the stereotypes or existing differences of gender roles
- Gender mainstreaming at all stages of the project can play an important role in the project's sustainability.
- Revision of the O & M plan are required in accordance with socio-economic changes.

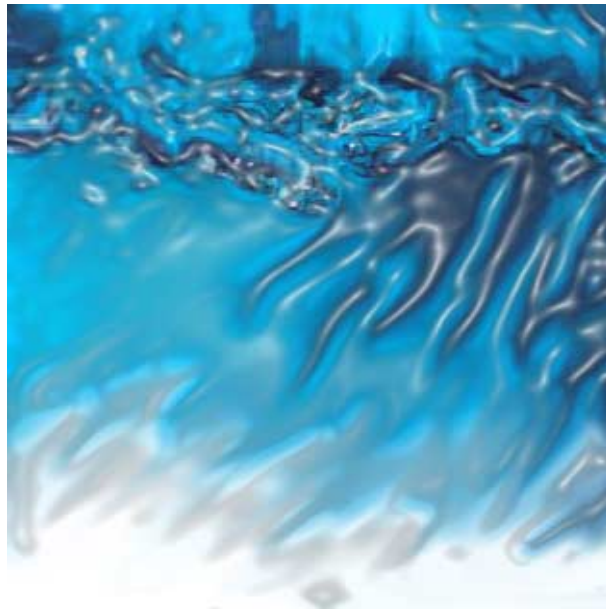
Lessons Learned



- Gender-disaggregated data is required on any information of the record.
- Organization has to consider gender-balanced activity for water supply and improvement.
- Following-up support program will be considered if necessary

The End

水と貧困（ダッカ）3
Water and Poverty
The Case Study:
Japan International Cooperation Agency



第2次水資源プロジェクト研究計画調査

Water and Poverty The Case Study:


By Japan International Cooperation Agency

1

The Study on Groundwater Development for Altai City in Mongolia




2



Basic Information

- **Scheme:**
Development Study and Feasibility Study
- **Counterpart Agency:**
Ministry of Infrastructure Development
- **Study Period:**
From September, 1999 to March , 1999
- **Target beneficiaries:**
Residents in Altai city in the Study area

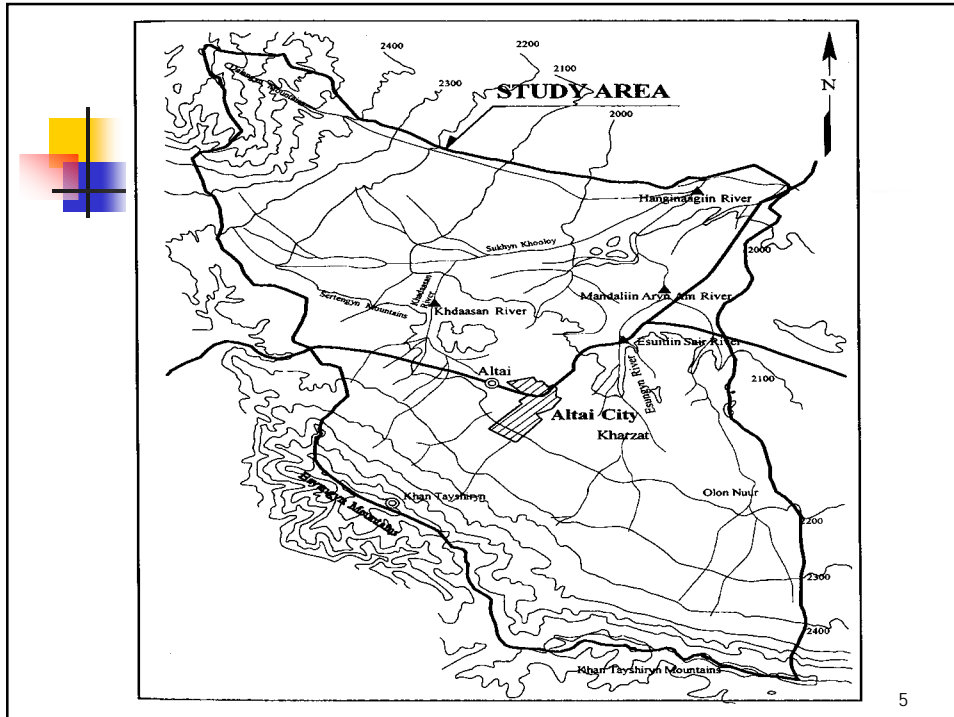
3



Target Area

- The Study area covers an area of about 600 km² in harzat" and "Sukhyn Hooly". Tsagaantokhoy and Taishyr along the Zavkhan River.

4



Development Goal

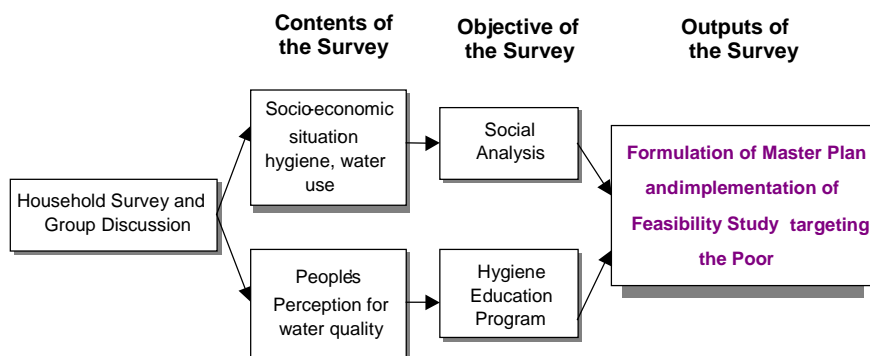
- To improve living standard of the residents in Altai City through groundwater development

Objective of the Study:

- To formulate a master plan on water resources development (focusing on groundwater) and improvement of water supply system for Altai City for the target year of 2015
- To conduct a feasibility study for the priority project identified in the master plan for the target year of 2005
- To pursue the technology transfer to the counterpart personnel in the course of the Study

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Survey Method for Poverty Reduction



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Poverty in Altai City

- The poverty population accounts for **23%** of the total population of the Altai City.
- **85 %** of 2,661 out of 3,149 households depend on the delivery of the water from the water wagon (**non-piped households**). The number of **piped households** in Altai City is 488 or **15%** of the total households (3,149).
- The average family size is **5.6** members/family though the poor family is **6.3**.
- Among the poor, working women tend to suffer double burden of house work including carry water and washing

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Data Analysis 1

Crosstab Table for Water Supply Type and Dwelling Pattern

	Apartment	Non-ger	Ger	Total
Piped	37	0	0	37
Non-piped	0	36	124	160
Total	37	36	124	197

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Data Analysis 2

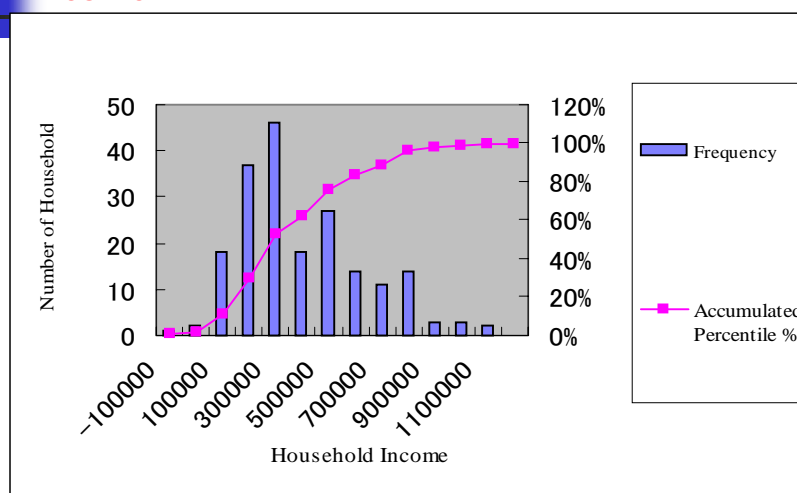
Comparison of Variables between Lower Income Group and Higher Income Group

	Lower Income		Higher Income		t-value	P-value	X ²	df
	mean	N _i	mean _j	N _j				
Household income*	213,688	105	516,523	91	-	-	-	-
No. of household's members	5.8	106	4.3	91	5.71	4.18×10^{-8}	-	195
Volume of water used by per day per capita	7.9	91	9.3	69	-2.1	<u>0.035</u>	-	158
% of increase with the present tariff	148%	105	131%	88	0.55	0.57	-	191
Volume of water used for drinking and cooking	22.3	106	18.1	91	3.11	<u>0.02</u>	-	195
Volume of water used for personal hygiene and laundry	28.6	106	30.9	91	-1.099	0.27	-	195
No. of households that have diarrhea	10	106	6	91	-	-	0.529	1
No. of respondents with higher education	43	15	59	89	-	-	<u>12.4</u>	1
No. of households that has health or hygiene education	23	105	24	89	-	-	0.67	1

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Presenting Findings 1

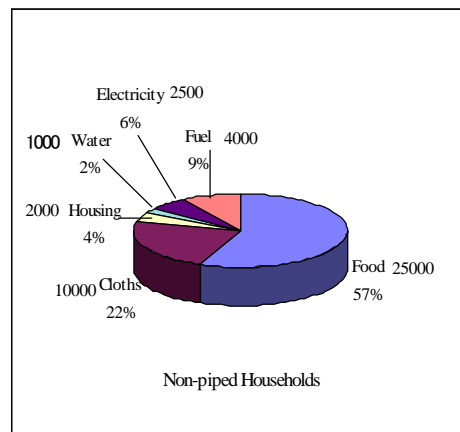
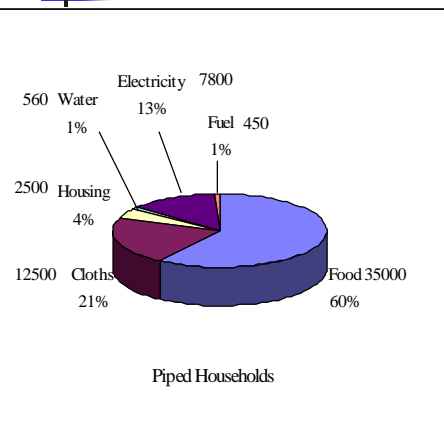
Frequency Distribution of Sampled Household by Income



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Presenting Findings 2

Proportion of Monthly Expense on Water



13

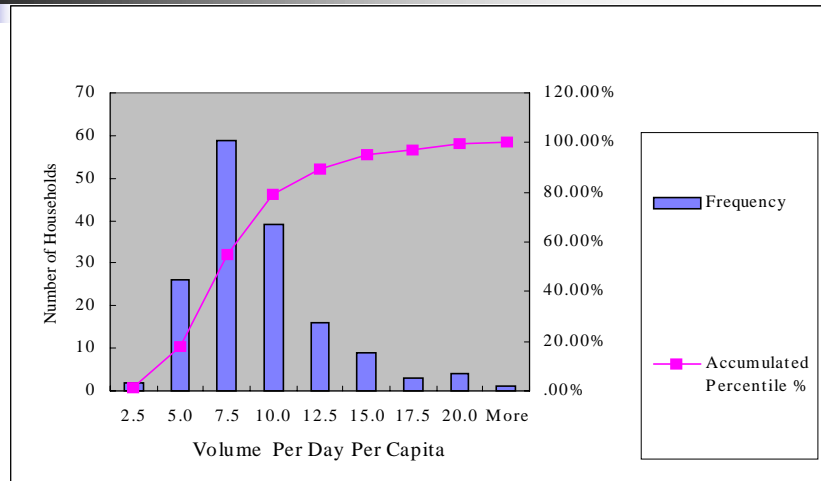
Social Analysis 1

- Lower income dwellers consume less volume of water, that is very near to the minimum requirement for human life.
 - ➡ Waving system of water charge
- Social disparity between non-piped households and piped households in terms of
 - ◆ burden of work for fetching water,
 - ◆ volume of water consumption
 - ◆ unit water price
 - ➡ Introduction of equity objectives in a plan

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Social Analysis 2

Frequency Distribution of Non-piped Household by Water Consumption Per Day Per Capita



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Activities to be taken

- Development of hygiene education with Public Health Center
- Conduct of seminar for understanding health conditions and water quality
- Conduct of trainers training on hygiene education for children and mothers for school teachers and health volunteers
- Conduct of seminar on social survey approaches for counterparts and academics

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Hygiene Education

- **Participation** of local people is one of the important objectives for social development
- People in Altai were **actively involved** in the process of producing hygiene education material



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Important Remarks

- In the beginning, the Study did not intend to target ger dwellers.
- However, as a result of social survey, it was identified that there was a significant gap in **living condition and water consumption between ger dwellers and apartment dwellers.**
- This result led to formulating the master plan and feasibility study, **targeting ger dwellers** who economically have disadvantage.

20



Lessons Learned

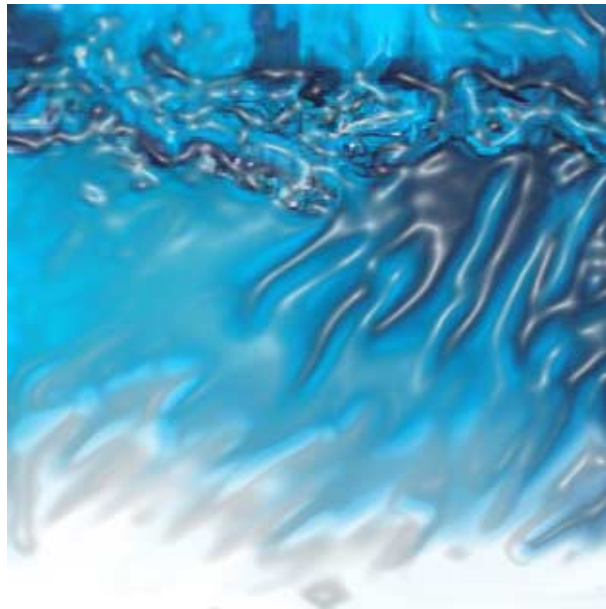
- **Targeting**, identification of the poor, is a first step to succeed for poverty reduction
- **Problem identification** and **needs-assessment** from target beneficiaries should be done
- **Social survey** should be conducted to make a **social analysis** to integrate into a master plan
- **Qualitative survey method** and **quantitative survey method** should be combined

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水と貧困（ダッカ）4

The Pilot Project of Rural Water Supply & Sanitation Improvement
in Lao PDR

Japan International Cooperation Agency



第2次水資源プロジェクト研究計画調査

The Pilot Project of Rural Water Supply & Sanitation Improvement in Lao PDR



Features

- **Community Participation**
 - Baseline Survey
 - Planning
 - Construction
 - Monitoring
- **Pro-poor and Pro-remote Approach**
- **Gender Mainstreaming and Minority Considerations**



Presentation Outline

1. Site information and water related problems
2. Project summary and activities
3. Impacts of the project
4. Lessons learned for gender mainstreaming

Profile of the Target Area



- Least developed remote area
- Subsistence economy depending on rain water
- Undeveloped infrastructure (unpaved, non-electrified)

<Water related problems>

- Water borne disease in dry and rainy season
- Water shortage in dry season

Presentation Outline

- 1. Site information and water related problems**
- 2. Project summary and activities**
- 3. Impacts of the project**
- 4. Lessons learned for gender mainstreaming**

Pilot Project Summary

- Pilot Project in the F/S**
- JICA and Namsaat**
- 51 Villages received benefits of pilot projects, by implementing GFS (Gravity-fed System)**



Japan International Cooperation Agency

Project Inputs



Japanese Side

- Materials and equipments

Lao Side

- Local materials (sand, gravel and timber) by community
- Accommodation and foods for construction team by community
- Participation
 - CBOs
 - village survey, sanitation and hygiene education, monitoring
 - Counterpart organization at all levels
 - training,, technical supports, village survey, sanitation and hygiene education, monitoring



Baseline Survey



- Gender lecture was held for the counterpart staff and CBOs in the training for the participatory baseline survey.
- CBOs participated in the needs survey and PRA survey for situation analysis with gender-disaggregated method in the baseline survey
- Trained Women's Union provided villagers with guidance on the gender mainstreaming
- Women's Union interviewed women regarding their situation and water related problems.



Planning

- Community dialogue by staff and community at each village
- Making community action plan and scheduling for construction by each village

Construction



- Constructing supervisors are all men, however, women were well participated actively in the procurement of the materials
- In some minority villages women worked more than men.
- According to the record and monitoring results, about half of total participants were female who were digging the pipe line and preparation food in the construction site

Presentation Outline

1. Site information and water related problems
2. Project summary and activities
3. Impacts of the project
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Impact of the Projects

<Socio Economic Life Aspect>

- 91% of the pilot villages reduced water fetching time.
- Quality of water improved
- Frequency of washing and bathing increased, Children's diarrhea reduced.
- Children do not have to fetch water so often.



Impact of the Project



<Pro-poor Aspect>

- Minorities living in the hill or mountainous areas gained large benefits by the project.
- Water shortage in dry season was solved.
- Reduced time was spent for farming and other activities.
- Hygiene and health situation improved significantly by increasing the amount of water.

Impact of the Project



<Other Impacts>

- Community ownership of each facility through experiences of involvement
- Dissemination workshop for sharing experiences among donors and NGOs
- Capacity building of staff through implementation of the pilot study

Presentation Outline

- 1. Site information and water related problems**
- 2. Project summary and activities**
- 3. Impacts of the project**
- 4. Lessons learned for gender mainstreaming**

Lessons Learned from Gender Perspective

- Gender balanced approach has to be clearly notified and agreed by all stake holders before project start.**
- Gender lecture to aware gender issues at initial stage was very effective.**
- Women's substantial and functional participation are required in decision-making involvement.**
- Needs of capacity building of the women's staff in the organization, especially for technical staff.**