

**HOA BINH PROVINCIAL PEOPLE'S COMMITTEE
HOA BINH PROVINCE'S DEPARTMENT OF AGRICULTURE AND RURAL
DEVELOPMENT**

**DAM REHABILITATION AND SAFETY IMPROVEMENT
(DRSIP/WB8)**

**ETHNIC MINORITY DEVELOPMENT PLAN
(EMDP)**

SUB-PROJECT:

**REHABILITATING AND IMPROVING DAM SAFETY OF DAI THANG
RESERVOIR, AN BINH COMMUNE, LAC THUY DISTRICT, HOA BINH
PROVINCE**

HANOI, MAY 2015

**HOA BINH PROVINCIAL PEOPLE'S COMMITTEE
HOA BINH PROVINCE'S DEPARTMENT OF AGRICULTURE AND RURAL
DEVELOPMENT**

**DAM REHABILITATION AND SAFETY IMPROVEMENT
(DRSIP/WB8)**

**ETHNIC MINORITY DEVELOPMENT PLAN
(EMDP)**

SUB-PROJECT:

**REHABILITATION AND IMPROVEMENT OF DAM SAFETY FOR
DAI THANG RESERVOIR, AN BINH COMMUNE, LAC THUY DISTRICT,
HOA BINH PROVINCE**

EMPLOYER

CONSULTANT

HANOI, MAY 2015

TABLE OF CONTENTS

| | Page |
|--|-----------|
| TABLE OF CONTENTS | i |
| LIST OF TABLES | iv |
| LIST OF FIGURES | iv |
| ABBREVIATIONS | v |
| INTERPRETATION OF TERMS | vi |
| SUMMARY OF ACTIVITIES | viii |
| 1. INTRODUCTION | 1 |
| 1.1. Project overview | 1 |
| 1.2. Objectives of Project..... | 2 |
| 1.3. Project components..... | 2 |
| 1.4. Objectives and missions of the project | 4 |
| 1.4.1. Objectives..... | 4 |
| 1.4.2. Missions of the project..... | 4 |
| 1.5 Introduction of the sub-project | 4 |
| 1.5.1. Project site map..... | 4 |
| 1.5.2. Geographical location, topography and geomorphology..... | 6 |
| 1.5.3. General objectives of the sub-project..... | 6 |
| 1.5.5. Specific objectives | 6 |
| 1.5.4. Missions of the project..... | 7 |
| 2. LEGAL FRAMEWORK FOR THE ETHNIC MINORITIES..... | 8 |
| 2.1. Legal framework and policies of Vietnam on ethnic minorities | 8 |
| 2.2. Policies and Programs for the ethnic minorities | 8 |
| 2.2.1. Policies related to ethnic minorities..... | 8 |
| 2.2.2. The democratic participation at grassroots level..... | 9 |
| 2.2.3. Legal documents related to ethnic minorities | 10 |
| 2.3. Operational Policy on Ethnic Minorities of the World Bank (OP 4.10) | 11 |
| 3. RESULT OF SOCIAL IMPACT ASSESSMENT | 13 |
| 3.1. Socio-economic situation of subproject region | 13 |
| 3.1.1. Economy | 13 |
| 3.1.2. Agriculture, forestry and fishery production | 13 |
| 3.1.3. Farm economy..... | 14 |
| 3.1.4. Agriculture, small handicraft production | 14 |
| 3.1.5. Population and labour | 14 |
| 3.2. Overview about ethnic minorities of Hoa Binh Province and in subproject region | 14 |
| 3.3. Features of Muong people in Hoa Binh Province | 15 |
| 3.3.1. Traditional economic activities..... | 16 |
| 3.3.2. Dwelling house | 19 |
| 3.3.3. Costume..... | 20 |

| | |
|--|-----------|
| 3.3.4. Social relations | 21 |
| 3.3.5. Folklore | 21 |
| 3.3.6. Villages, hamlets of Muong people | 21 |
| 3.4. Socio-economic survey results of ethnic minority households | 21 |
| 3.4.1. Survey samples and sampling method..... | 21 |
| 3.4.2. General information about ethnic minority householders | 22 |
| 3.4.3. Information about socio-economic situation of ethnic minority households | 24 |
| 3.4.4. Income level of affected households..... | 27 |
| 3.4.5. Living conditions of ethnic minority households | 29 |
| 3.5. Assets and necessities of households..... | 32 |
| 3.6. Life of ethnic minority households..... | 32 |
| 4. SUMMARY OF CONSULTATION RESULTS WITH ETHNIC MINORITY COMMUNITY | 34 |
| 4.1. Objective | 34 |
| 4.2. Consulted contents | 34 |
| 4.3. Main consultation methods implemented in Ethnic Minority Development Plan | 34 |
| 4.4. Results on information dissemination and community consultation..... | 36 |
| 5. INFORMATION DISCLOSURE AND PUBLIC CONSULTATION..... | 38 |
| 5.1. Consultation process | 38 |
| 5.2. Consultation of ethnic minority people during the project preparation process..... | 39 |
| 5.3. Consultation of ethnic minority people during the project performance..... | 39 |
| 5.4. Information dissemination | 41 |
| 6. ACTION PLAN FOR MITIGATION OR COMPENSATION MEASURES FOR NEGATIVE IMPACTS OF THE PROJECT | 42 |
| 6.1. Plans to mitigate negative impacts | 42 |
| 6.1.1. Solution 1: Support livelihood recovery for community..... | 42 |
| 6.1.2. Solution 2: Communication Programs..... | 42 |
| 6.1.3. Solution 3: Support of clean water program for households..... | 43 |
| 6.2. Proposal on impact mitigation measures | 43 |
| 7. ESTIMATED EXPENDITURE AND BUDGET ALLOCATION PLAN FOR ETHNIC MINORITY DEVELOPMENT PLAN | 45 |
| 7.1. Budget..... | 45 |
| 7.2. Estimated expenditure..... | 45 |
| 8. GRIEVANCE REDRESS MECHANISM | 46 |
| 8.1. Main principles of grievance mechanism | 46 |
| 8.2. Grievance redress mechanism | 46 |
| 8.2.1. First step, CPC | 46 |
| 8.2.2. Second step, DPC | 46 |
| 8.2.3. Third step, PPC..... | 47 |
| 8.2.4. Final step, civil court..... | 47 |
| 9. MONITORING AND EVALUATION..... | 48 |
| 9.1. Monitoring principles | 48 |

| | |
|---|----|
| 9.2. Internal monitoring | 48 |
| 9.3. Independent monitoring | 50 |
| 10. APPENDIX | 52 |
| 1. Objectives of consultation | 52 |
| 2. Contents of consultation | 52 |
| 3. Methods of consultation..... | 52 |
| 4. Summary of consultation results..... | 52 |

LIST OF TABLES

| No. | Name of table | Page |
|-----|--|------|
| | Table 1. List of 12 dams proposed for implementation in the first year | 3 |
| | Table 2. Legal documents related to ethnic minorities of the Government of Vietnam | 10 |
| | Table 3. General information about ethnic minority householders | 22 |
| | Table 4. Information about main employment of ethnic minority people | 23 |
| | Table 5. Number of people in households..... | 24 |
| | Table 6. General information about socio-economic survey results of ethnic minority households | 25 |
| | Table 7. Literacy level | 26 |
| | Table 8. Occupations of ethnic minority people | 26 |
| | Table 9. Income level and structure of ethnic minority households | 28 |
| | Table 10. Spending level and structure of ethnic minority households | 29 |
| | Table 11. Types of houses of surveyed ethnic minority households | 29 |
| | Table 12. Water sources used for production and living of ethnic minority households | 30 |
| | Table 13. Toilets of ethnic minority households | 31 |
| | Table 14. Lighting energy source | 31 |
| | Table 15. Main types of fuels used for cooking | 31 |
| | Table 16. Necessities of households..... | 32 |
| | Table 17. Living standard of affected households | 33 |
| | Table 19. Internal monitoring indicators | 49 |
| | Table 20. Independent monitoring indicators..... | 50 |

LIST OF FIGURES

| No. | Name of chart | Page |
|-----|--|------|
| | Graph 11. Structure of ethnic minority groups in subproject area | 14 |
| | Graph 22: Structure of ethnic minority groups of Hoa Binh Province | 15 |

ABBREVIATIONS

| | |
|------------|---|
| MARD | Ministry of Agriculture and Rural Development |
| MoNRE | Ministry of Natural Resources and Environment |
| MoIT | Ministry of Industry and Trade |
| MoF | Ministry of Finance |
| MPI | Ministry of Planning and Investment |
| MoC | Ministry of Construction |
| SVB | State Bank of Vietnam |
| PsC | People's Committee |
| DRaSIP/WB8 | Vietnam Dam Rehabilitation and Safety Improvement Project |
| DARD | Department of Agriculture and Rural Development |
| PSC | Project Steering Committee |
| PPMU | Province Project Management Unit |
| CPO | Central Project Office |
| EMPF | Ethnic Minority Policy Framework |
| EMDP | Ethnic Minority Development Plan |
| EM | Ethnic Minority |
| ICMB | Investment and Construction Management Branch |
| CPMU | Central Project Management Unit |
| ODA | Official Development Assistant |
| VAWR | Vietnam Academy for Water Resources |

INTERPRETATION OF TERMS

| | |
|--|---|
| <i>Project impact</i> | Means positive and negative impacts on EMs caused by all project components. Adverse impacts are often consequences immediately related to the taking of a parcel of land or to restrictions in the use of legally designated parks or protected areas. People directly affected by land acquisition may lose their home, farmland, property, business, or other means of livelihood. In other words, they lose their ownership, occupancy, or use rights, because of land acquisition or restriction of access. |
| <i>Affected people</i> | Refers to all individuals or organizations, business facilities suffering direct socio-economic impacts by projects financed by the Bank, caused by mandatory acquisition of land and other properties, leading to (i) remove or loss of residential land; (ii) loss of properties or access to properties; or (iii) loss of income sources or means of living, whether the affected people have to move to other place or not. The mandatory land acquisition includes the land ownership when the owner allows and is benefited from ownership/residence in other area. In addition, affected people include those whose livelihoods are negatively affected by mandatory restriction of access to legally designated areas and protected areas; however, this classified type of people is unlikely present in urban area. |
| <i>Indigenous people</i> | (equivalent to the concept of <i>ethnic minority people</i> in Vietnam) means a separate, vulnerable group of people with separate social and cultural characteristics, having the following features, at various levels: (i) identifying themselves as members of a separate indigenous cultural group and this feature is recognized by other cultural groups; (ii) living in groups in separately geographical areas or in lands inherited from the ascendants in the project area and living closely with natural resources in that residential area and territory; (iii) having separate cultural, social, economic and political institutions compared with similar institutions of the prevailing society and culture, and (iv) having a unique native language, usually different from official language of the nation or region. |
| <i>Vulnerable groups</i> | Separate groups of people who may be affected by resettlement more severely or who are exposed to the risk of being far from development process of the society due to impacts of resettlement and include the following specific groups: (i) female householders (widows, whose husband is invalid or lack of labor ability, whose family includes the old or children), (ii) invalids or elderly and lonely people, (iii) the poor (whose living standards are under property threshold), (iv) people without land and (v) ethnic minorities. |
| <i>Culturally appropriate</i> | Refers to considering all aspects of culture and their functional vulnerability. |
| <i>Free, prior and informed consultation</i> | Refers to free and voluntary consultations without any external involvement, interfere or enforcement, in case of which, the consulted parties have advanced access to information of contents and scale of the |

proposed project in manner, form and language appropriate with their culture.

Collectively binding Refers to the presence and economic binding to the land and territory they have and inherit from previous generations, or they use or own based on customs and habits of several generations of the group of EM people concerned, including areas of special significance, such as sacred areas. “Collectively binding” also refers to the binding of EM people who often move/emigrate to the land they use by season or cycle.

Customary rights to lands and resources Refer to the models of long-term use of land and natural resources of the local communities in accordance with customs, values, habits and traditions of ethnic minority people, including the use by season or cycle, other than official legal rights to land and natural resources issued by the State.

SUMMARY OF ACTIVITIES

- **Introduction:**

The Ethnic Minority Development Plan (EMDP) is prepared for the sub-project on Rehabilitation and improvement of safety dam for Dai Thang reservoir in Duc Binh Hamlet, An Binh commune, Lac Thuy district, Hoa Binh province. This sub-project is a component of the project on rehabilitation and improvement of dam safety financed by the World Bank. Objectives of the sub-project consist of:

- Providing irrigation water to 100 ha of rice paddy field in 2 crops and 30 ha of secondary crop field area of 3 hamlets including: Dai Thang, Dai Dong and Thang Loi in An Binh communes, Lac Thuy district;
- Ensuring safety of people and assets for people in the reservoir downstream in rainy season;
- Combining with aquaculture;
- Saving water, increasing work productivity, life of work, contributing to stabilizing economic and political lives to the locality.

Objectives of the Ethnic Minority Development Plan (EMDP) consist of: (i) minimizing negative impacts on the lives of ethnic minorities in the project area; (ii) ensuring the implementation process of the sub-project respects values, human rights and unique culture of the ethnic minorities in the affected area of the project and also considering economic development expectations and demands of the ethnic minority community.

- **Legal framework:**

The project complies with the legislative and policy framework respecting the Convention of Vietnamese Government in 1946 as amended in 1959, 1980 and 1992 on calling upon equally behaving and respecting all ethnic minorities and World Bank policy on ethnic minorities (OP 4.10).

Legal documents of Vietnamese Government and Hoa Binh province on supporting and developing the ethnic minority community.

- **Socio – economic survey**

The number of households at the time of Rehabilitation and improvement of safety dam for Dai Thang reservoir is 223 ethnic minority households in 3 hamlets including: Dai Dong, Thang Loi and Dai Thang. The evaluation of socio-economic conditions is implemented by investigating and surveying 48 ethnic minority households in total of 223 households affected by water cutting due to dam construction (accounting for 21.5%). The affected rice cultivation land area of ethnic minorities in the subproject area of 223 households is 535,711 m² (53.57 hectares) equivalent to 821 people.

- **Mitigation measures**

Rehabilitation and improvement of Dai Thang reservoir are discussed by technicians, local officials, resettlement consultants, the CPC and possibly affected households including the ethnic minority community in order to mitigate the land acquisition and effect on works, houses and trees and crops.

Many endeavours are taken to mitigate land acquisition and resettlement in the project preparation process. The components requiring land acquisition such as dam upgrade, dam safety corridor, spillway construction are thoroughly considered to minimize acquired land area and effect on water resources for agricultural production of EM households.

- **Information dissemination, public consultation and participation**

Public consultations were publicly and democratically organized in March 2015 through a series of meetings with the ethnic minority community living in the area affected by the sub-project. The Resettlement and Society Consultant has organized public consultation to disseminate, popularize information and introduce the project to the ethnic minority community in the project area. The consultations had been carried out in the free, prior, and informed manner that resulted in board community support to the Project by the indigenous peoples, including the affected people.

The ethnic minority community was notified in advance about project activities including: (i) scope of the project, work schedule, site clearance plan, construction plan; (ii) opinions of EM people on the investment implementation while respecting existing customs, religion and culture; (iii) positive and negative impacts of sub-project and recommendations of the EM community regarding income recovery supporting plan and (iv) acceptance of the EM community for all mitigation measures.

It is assumed to disseminate information and introduce the project to affected people in the project area. Those affected persons are informed in detail about the resettlement activities, including: (i) the contents of the public consultation meeting on the prospect of the sub-projects, the implementation plan, the site clearance and construction plan, (ii) measurement and inventory in detail, (iii) the official and valid list of affected people and their rights, (iv) the compensation volume and rate, (v) payment of compensation and other supports, and (vi) other issues such as complain mechanisms

The results of these consultations unveiled that all affected EM households wish to be supported by cash to restructure crops during rehabilitation and improvement of Dai Thang reservoir dam safety to recover income and develop household business.

- **Benefit solutions**

Two major benefit solutions will be implemented after the affected households are consulted: (i) Programs on supporting varieties and fertilizers to restructure crops when implementing the project; (ii) Communication programs to preserve and develop culture, encouraging the participation of people in supporting the project performance and (iii) The program supports the construction of rainwater tanks for local households

because the drinking water source is contaminated with Asen.

- **Budget and finance:**

The estimated cost of the Ethnic Minority Development Plan is **2,553 billion VND (approximately \$ 118,219)**. This cost includes expenses for specific measures, management and provision expenses. The budget for the Ethnic Minority Development Program will be allocated from WB's loans.

1. INTRODUCTION

1.1. Project overview

Vietnam has one of the largest networks of dams and hydraulic infrastructure in the world alongside China and the United States. This network comprises over 7,000 dams of different types and sizes. More than 750 can be classified as large dams (over 15m in height or between 5 and 15m with reservoir storage in excess of 3 MCM) and with the number of small dams (less than 15m and 3 MCM) estimated to be in excess of 6,000 largely earth embankment dams. Of the total four million hectares of agricultural land, more than three million hectares are irrigated via 6,648 dams.

The development of this infrastructure platform has resulted in a number of inherent challenges. Many of the medium and small-size reservoirs were built in the 1960s-1980s with limited technical investigations, inadequate design, and poor quality construction. These issues have been compounded by limited operations and deferred maintenance. As a result, many of these dams have deteriorated and the safety is below accepted international safety standards, presenting a substantial risk to human safety and economic security. The deterioration of these dams, coupled with the increased risk and uncertainty resulting from hydrological variability due to climate change and rapid upstream development, has placed many reservoirs at risk. The risks are wide spreading, resulting from inadequate cross section e.g. too thin to be stable, through subsidence of the main structure, seepage through main and/or auxiliary dam and around the intake structure, deformation of up/downstream slope, spillway malfunction, and inadequate and ineffective use of safety monitoring devices. Failure to secure the operational safety of the existing network and strengthen the capacity for further development has the potential to undermine Vietnam's economic gains.

Recognizing the importance of securing the foundations for sustained and secure economic growth, the Government first launched a sectorial program focused on dam safety in 2003. The proposed Vietnam: Dam Rehabilitation and Safety Improvement Project with possible the World Bank financing will support the Government of Vietnam's Dam Safety Program. This will be achieved by supporting both the structural safety of the dams and reservoirs themselves, along with the operational safety required to safeguard the populations at risk and downstream socio-economic infrastructure. This is directly aligned with the Government definition of dam safety outlined in Decree 72. The project will also support Government to ensure a more holistic, basin level integrated development planning to improve institutional coordination, future development and operational safety.

1.2. Objectives of Project

The Project Development Objective is to support the implementation of the Government dam safety program by improving the safety of prioritized dams and reservoirs as well as to protect people and assets of the downstream communities.

Specific objectives:

- To improve dam safety and performance by repairing, upgrading, equipping with monitoring equipment, operation planning and maintenance;
- To strengthen institution of dam safety management at national and system levels by completion of institutional framework on dam safety, including the construction and management of databases, addition of regulations, standards, guidelines, building capacity and coordination mechanism between stakeholders.
- Flood management capacity building in the basin level and coordination mechanism of reservoir operation by improving forecasting capacity, developing integrated flood management plan and training capacity building.

1.3. Project components

It is proposed that the project consist of four principle components.

Component 1: Dam Safety Rehabilitation (Expected cost of US\$ 385 million)

This component will improve dam safety through physical rehabilitation of existing infrastructure, including: i) Detailed design, supervision and quality control of rehabilitation works for prioritized dams and associated infrastructure; (ii) rehabilitation works, including civil works, hydro-mechanical works and installation of hydrological and safety monitoring equipment; (iii) preparation of Operation and Maintenance Plans and Emergency Preparedness Plans.

On the basis of proposals from local, approximately 736 irrigation dams in 31 provinces have indentified for participating in the project with investment cost of about 18,700 billion dong. Approximately 400 dams with the risk from high to very high level are supported safety improvement solutions of the project. List of locals and number of dams which are repaired with priority are presented in the Appendix. Approximately 90% of the dam has a height of less than 15m or design storage of less than 3 million m³, 10% of large dams, almost embankment dam. List of dams under this component can be changed by the review, the annual risk assessment. The dams have the lowest risk would be replaced by the emergency dams in Component 4. Approximately 12 dams in 11 provinces out of 31 provinces reviewed have unsafe and highly available for the investment in the first year of the project.

Table 1. List of 12 dams proposed for implementation in the first year

| No. | Dam | District | Province | Year of construction | Command area (ha) | Storage (10 ⁶ m ³) | Crest height (m) |
|-----|-----------|---------------|-------------|----------------------|-------------------|---|------------------|
| 1 | Ngoi La 2 | Yen Son | Tuyen Quang | 1973 | 360 | 3.24 | 15.0 |
| 2 | Ho Ban | Cam Khe | Phu Tho | 1970 | 150 | 1.68 | 11.0 |
| 3 | Dai Thang | Lac Thuy | Hoa Binh | 1960 | 90 | 0.84 | 14.5 |
| 4 | Khe Che | Dong Trieu | Quang Ninh | 1986 | 213 | 12.00 | 12.5 |
| 5 | Dong Be | Nhu Thanh | Thanh Hoa | 1991 | 255 | 2.29 | 11.4 |
| 6 | Khe Gang | Quynh Luu | Nghe An | 1991 | 175 | 2.15 | 12.5 |
| 7 | Khe San | Quynh Luu | Nghe An | 1980 | 120 | 1.42 | 14.5 |
| 8 | Phu Vinh | Dong Hoi | Quang Binh | 1992 | 1056 | 22.36 | 24,4 |
| 9 | Dap Lang | Nghia Hanh | Quang Ngai | 1978 | 100 | 0.38 | 13.1 |
| 10 | Thach Ban | Phu Cat | Binh Dinh | 1978 | 130 | 0.70 | 12.8 |
| 11 | Song Quao | Ham Thuan Bac | Binh Thuan | 1998 | 8120 | 73.00 | 40.0 |
| 12 | Da Teh | Da Huoai | Lam Dong | 1993 | 23000 | 30.25 | 27.5 |

Component 2: Dam Safety Management and Planning (Expected cost of US\$ 60 million)

This component will improve the planning and operational framework for dam management to safeguard the people and socio-economic infrastructure within downstream communities. This would include provision of support to: (i) hydrological observation network and information systems; (ii) integrated development planning and operational coordination mechanisms; (iii) regulatory and institutional support and strengthening on coordination mechanism; and (iv) capacity enhancement, basin-wide integrated dam reservoir operation plans, emergency preparedness plan. This component will support the Ministry of Agriculture and Rural Development, Ministry of Industry and Trade, Ministry of Natural Resources and Environment in the implementation of technical support for national programs, completion of coordination mechanisms between ministries, local authorities and stakeholders.

Component 3: Project Management Support (Expected cost of US\$ 15 million)

The project was implemented with the participation of three Ministries and 31 provinces. The majority of dams located in the remote mountainous areas with very

difficult traffic conditions. Project duration is six years, the allocation of limited management cost is also a difficulty in implementing the project.

The component will provide finance for the project management, monitoring and evaluation, technical assistance, procurement, auditing, information, training, equipment support in project management and implementation.

Component 4: Disaster Contingency (US\$ 0 million - no fixed allocation)

This component will improve the response capacity of the Government in case of an emergency relating to dam failure during project implementation. In the event of an emergency, this contingency component would facilitate rapid utilization of loan proceeds by minimizing the number of processing steps and modifying fiduciary and safeguard requirements so as to support rapid implementation.

1.4. Objectives and missions of the project

1.4.1. Objectives

Objectives of the project are to support the implementation of dam safety program of the Government through improving the safety of prioritized dams and reservoirs as well as protecting human and assets of the downstream communities.

1.4.2. Missions of the project

- (i) Enhancing capacity, institution at national level on management of dam safety by supplementing, amending guidance to ensure dam safety.
- (ii) Improving flood control capacity at basin level and dam operation in coordination with the MARD, Ministry of Industry and Trade and Ministry of Natural Resources and Environment.
- (iii) Ensuring dam safety and stability and rehabilitating designed functions by repairing, upgrading and equipping forecasting and operating equipment.

1.5 Introduction of the sub-project

1.5.1. Project site map



Figure 1. Project site map of Dai Thang Reservoir

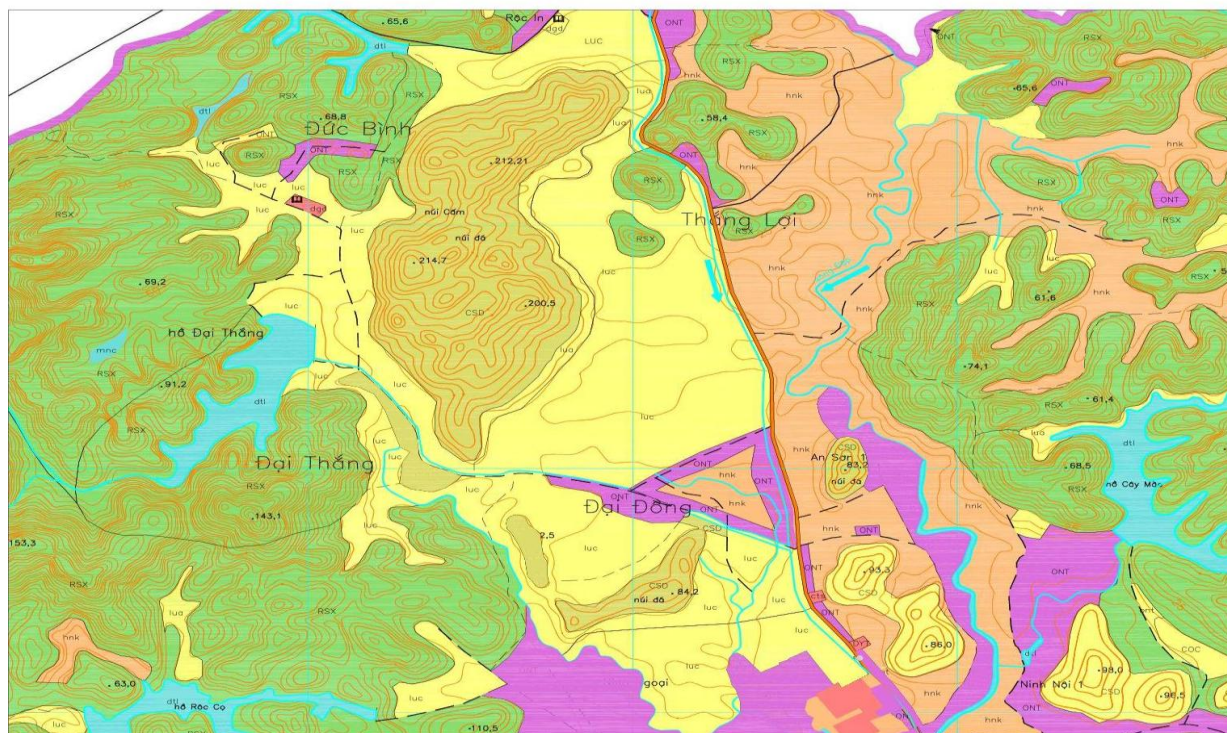


Figure 2: Downstream area of Dai Thang reservoir

1.5.2. Geographical location, topography and geomorphology

Geographical location: The project on “Rehabilitation and improvement of safety dam for Dai Thang reservoir” in Duc Binh hamlet, An Binh commune, Lac Thuy district, Hoa Binh province.

An Binh commune is 24 km far from Lac Thuy district center to the Southwest of the district with the geographical area as follows:

- Adjacent to An Lac commune, Lac Thuy district to the North
- Adjacent to Thach Binh commune, Phu Son commune, Nho Quan district, Ninh Binh province to the South
- Adjacent to Huu Loi commune, Yen Thuy district to the West
- Adjacent to Gia Lam commune, Xich Tho commune, Nho Quan district, Ninh Binh province to the East.

The topography of the commune mainly includes hills and rock mountains with Dap river flowing along the length of the commune. Provincial Road 438B passes the commune with the length of 7 km along the commune.

The natural land area is 3,018.7 ha; including 1,854.34 ha of agricultural land.

1.5.3. General objectives of the sub-project

Ensuring water demand for production and daily lives, improving crop yields, boosting crop restructuring, gradually improving the lives of people in the project area, helping people in the project area get rid of poverty.

Developing aquaculture combined with ecotourism, creating jobs for local people for economic development.

When constructing the project, creating many job opportunities for leisure labours after harvest time to increase their income and developing other services to enhance local economic development and social stability.

The project when put into use will contribute significantly to meeting economic as well as social objectives, at the same time protecting and improving the surrounding environment, restructuring crops, performing intensive cultivation to increase productivity, increasing the number of crops, applying advanced scientific and technological methods to agriculture to promote economic development in the project area and surrounding area, gradually rising living standards of the people.

1.5.5. Specific objectives

- Providing irrigation water to 100 ha of rice in 2 crops and 30 ha of secondary crops of 3 hamlets including: Dai Thang, Dai Dong and Thang Loi in An Binh communes, Lac Thuy district.
- Ensuring safety of people and asset for people in the reservoir downstream in rainy season.
- Combining with aquaculture;
- Saving water, increasing work productivity, life of work, contributing to

stabilizing economic and political lives to the locality.

1.5.4. Missions of the project

- Rehabilitating and upgrading major dams
- Upgrading water intake in the dam body
- Upgrading flood spillways
- Constructing new operation management building
- Handling termites in the dam body
- Building monitoring equipment system such as: penetration monitoring, sinking monitoring, etc.

2. LEGAL FRAMEWORK FOR THE ETHNIC MINORITIES

2.1. Legal framework and policies of Vietnam on ethnic minorities

All ethnic groups of Vietnam enjoy full civil rights and protection of equal rights under the Constitution and Law. The 2013 Constitution of the Socialist Republic of Vietnam recognizes equal rights of the ethnic groups and provides the following general principles:

- Vietnam is a union country of all ethnic groups living in the territory of the country.
- The State applies a policy on equality, unity and mutual assistance among ethnic minorities and prohibits every action of ethnic discrimination and separation.
- All ethnic groups have the right to use their separate language and writing system and have right to preserve their customs and traditional culture.
- The State implements comprehensive development policies to gradually improve and enhance physical and mental lives of EM people.
- The State will be responsible for and will ensure promoting the cultural values of all ethnic groups in Vietnam.
- The State puts priority on development of education and health care for mountainous people and EM people.

2.2. Policies and Programs for the ethnic minorities

2.2.1. Policies related to ethnic minorities

The Government of Vietnam has passed a series of policies related to EM development, especially EM people in mountainous area, remote areas. One of the most relevant policy is Decision No. 134/2004/QĐ-TTg (also known as the “Program 134”) issued by the Prime Minister on 20 July 2004, providing a number supporting policies such as support of agricultural land for production, residential land, housing and clean water for daily lives of the difficult poor EM households.

Decree No. 60/2008/ND-CP issued by the Prime Minister on 09 May 2008 defining functions, tasks, powers and organizational structure of the Committee for Ethnic Affairs (CEMA).

This ministerial-level agency directly under the Government performs the function of state management on ethnic affairs across the country, and the public services within its authority, as well as management of Provincial Committee for Ethnic Affairs. The provinces with significant numbers of EM people have a Committee for Ethnic Affairs under the PPC. The function of CEMA is very diverse, from making laws to carrying out programs, monitoring and acting as a ministerial-level agency of Vietnam and cooperating with international organizations within its authority as prescribed by laws. In 1995, CEMA developed an external supporting framework with the development of EMs. This framework has led to an EM development strategy within the objectives of the Government on stabilization,

sustainable development, and poverty reduction. The main features of this framework are:

- a) Fighting poverty;
- b) Encouraging the positive participation of EM communities in their own development process;
- c) Enhancing institution related to EM people;
- d) Sustainably developing natural resources and human resources; and
- e) Ensuring mutual respect and increasing accountability of the related parties.

The Government has issued and promulgated a number of policies and programs to support ethnic groups to improve their lives, the ethnic minorities are benefited from the following programs and policies:

- Program 134 on supporting residential land, production land and clean water for the poor ethnic minorities in the Mekong Delta.
- Program 135, phase 2 on socio-economic development for poor communes in the ethnic minority community in the remote areas.
- National target program on clean water supply and rural hygiene.
- National target program on population and family planning.
- National target program on prevention of dangerous diseases and HIV/AIDS.
- National target program on education and training.

2.2.2. The democratic participation at grassroots level

Documents of the Government on the issue of grassroots democracy and the participation of local people are directly related to this EM Development Framework. Ordinance No. 34/2007/PL-UBTVQH11 issued on 20 April 2007 (in lieu of Decree No. 79/2003/ND-CP issued on 07 July 2003) on the exercise of democracy at commune, ward, and town level, providing the basis for the participation of the community in the preparation of development plans and supervision of the community in Vietnam. Decision No. 80/2005/QĐ-TTg issued by the Prime Minister on 18 April 2005 regulates the investment monitoring of the community.

The formulation of socio-economic policies for each region and each group of subjects should consider the needs of EM people. Socio-economic development plans and socio-economic development strategy of Vietnam call for special attention to EM people. The major programs affecting EM people include the programs on education, health, infrastructure development; economic development ... has always been enacted to improve the lives of ethnic minorities.

2.2.3. Legal documents related to ethnic minorities

Table 2. Legal documents related to ethnic minorities of the Government of Vietnam

| | |
|------|--|
| 2013 | Constitution of the Socialist Republic of Vietnam 2013 |
| 2014 | Decree No. 43/ND-CP dated 15 May 2014 on guiding the implementation of the Land Law 2013. |
| 2014 | Decree No. 47/2014/ND-CP dated 15 May 2014 on regulating resettlement compensation and support in case of land acquisition by the State. |
| 2013 | Decision No. 2356/QD-TTg dated 04 December 2014 of the Prime Minister promulgating the action program to implement the EM affair strategies to 2020. |
| 2013 | Decision No. 449/QD-TTg dated 12 March 2013 of the Prime Minister on approving the ethnic affair strategies to 2020. |
| 2011 | Resolution No. 80/NQ-CP dated 19 May 2011 on orientation of sustainable poverty reduction in the period of 2011-2020. |
| 2011 | Decree No. 05/2011/ND-CP dated 14 January 2011 on ethnic affairs. |
| 2010 | Decree No. 82/2010/ND-CP dated 20 July 2010 of the Government on teaching and learning of language and writing of ethnic minorities in secondary educational facilities and continuing education centers. |
| 2010 | Decision No. 52/2010/QD-TTg of the Government on legal support policy to raise awareness and knowledge of laws on poor ethnic minorities in poor districts in the period of 2011-2020. |
| 2009 | Law No. 32/2009/QH12 . Law amending and supplementing a number of articles of cultural heritage law. June 18, 2009 . |
| 2008 | Decision No. 30a/2008/NQ-CP dated 27 December 2008 of the Government on rapid and sustainable poverty reduction program for 61 poor districts. |
| 2008 | Decision No. 74/2008/QD-TTG dated 09 June 2008 of the Prime Minister on some policies supporting the settlement of residential land, production land and creating jobs for the poor and difficult ethnic minorities in the Mekong Delta. |
| 2008 | Decision No. 126/2008/QD-TTg on amending some articles of Decision No. 32/2007/QD-TTg dated 05 March 2007 on providing loans for developing production of specially difficult ethnic minority households. |
| 2008 | Decree No. 60/2008/ND-CP dated 09 May 2008 of the Government on functions, duties, powers and structure of the Committee for Ethnic Affairs. |
| 2007 | Decision No. 112/2007/QD-TTg dated 20 July 2007 on policies on service support, improving and enhancing the lives of people, legal support to raise awareness of laws in Program 135 phase II. |
| 2007 | Decision No. 33/2007/QD-TTg dated 05 March 2007 of the Prime Minister on policy of migration assistance, performing settled cultivation and residence for the ethnic minorities in the period of 2007-2010. |
| 2007 | Decision No. 01/2007/QD-UBDT dated 31 May 2007 of the Committee for Ethnic Affairs on recognizing mountainous, highland communes, districts due to adjustment of administrative border. |
| 2007 | Decision No. 05/2007/QD-UBDT dated 06 September 2007 of the Committee for Ethnic Affairs on recognizing 3 ethnic minority and mountainous areas based on development level. |

| | |
|------|---|
| 2007 | Circular No. 06/2007/TT-UBDT dated 20 September 2007 of the Committee for Ethnic Affairs on guiding the implementation of service support level, improving and enhancing the lives of people, legal support to raise awareness of laws in accordance with Decision No. 112/2007/QD-TTg. |
| 2007 | Decision No. 06/2007/QD-UBDT dated 12 October 2007 of the Committee for Ethnic Affairs on promulgating the Communication Strategy for Program 135 phase II. |
| 2007 | Decree No. 84/2007/ND-CP dated 25 May 2007 of the Government on providing additional regulations on issue of land use right, land acquisition, implementation of land use right, order and procedure of compensation, assistance, resettlement when the State acquires land and solving grievances on land. |
| 2001 | Decree No. 70/2001/ND-CP: all documents on registration of assets of the family and land use right shall under the name of both husband and wife. |

2.3. Operational Policy on Ethnic Minorities of the World Bank (OP 4.10)

- The Operational Policy OP 4.10 (on EMs) of WB requires carrying out extensive consultation, prior consultation and information dissemination consultation process. WB only provides loans when the outcome of the extensive consultation, prior consultation and information dissemination consultation show widespread support of EM communities affected by the sub-project. The World Bank-funded projects must take measures to (a) avoid the potential negative impacts on the EM community; or (b) in case of inevitable to avoid, limit, minimize or compensate for these impacts. At the same time, the World Bank-funded projects must be designed to ensure that EM people receive culturally appropriate and gender-based sustainable economic and social benefits.

As a prerequisite for the approval of an investment project, OP 4.10 requires the borrower to organize free consultation, prior consultation and information dissemination consultation with ethnic minorities possibly affected and builds a form of large community support for the project and the project objectives. It is important to note that OP 4:10 heads towards the groups and social communities and not towards individuals. The main objectives of OP 4.10 are:

- To ensure that the EM groups are created opportunities to participate in planning the project activities which affect them;
- To ensure the opportunities provided to EM groups considering culturally appropriate benefits; and
- To ensure that any negative project impact on them shall be avoided or mitigated and compensated.

In the context of the project, the EM groups in the sub-project area will enjoy long-term benefits from Dai Thang reservoir system to be upgraded and the disaster prevention capacity is enhanced. However, they suffer negative effects by the construction to upgrade dams when the production water is cut and those effects will be addressed through a development plan for ethnic minorities.

Basic principles for the EM community in the sub-project area include:

- The EM people are encouraged and arranged to ensure their participation in sub-project activities which have direct and indirect impacts on them whether positive or negative.
- The sub-project will ensure facilitating cultural activities, including focusing on separate cultural characteristics of language, traditional customs and production forms.

3. RESULT OF SOCIAL IMPACT ASSESSMENT

3.1. Socio-economic situation of subproject region

3.1.1. Economy

The total value of production in 2014 reached 182,928 million VND. In which:
- Agriculture, forestry and fishery reached: 87,817 million VND accounting for 48% of economic proportion.

- Industry and construction reached: 40,249 million VND accounting for 22% of economic proportion.

- Trade - Services achieved: 54,886 million VND accounting for 30% of economic proportion.

Per capita income reached 24 million VND/ person / year. Average food reached 530 kg / person / year.

3.1.2. Agriculture, forestry and fishery production

3.1.2.1. Agriculture production

a. For cultivation

- The total cultivated area of the whole year is 1,383 ha.
- Rice with an area of 515 ha; yield of 54 quintals/ha; output of 2,781 tons.
- Maize with an area of 227 ha; yield of 55 quintals/ha for output of 1,249 tons.
- Sweet potato with an area of 72 ha, yield of 72.1 quintals/ha for output of 519.1 tons.

- Cassava with an area of 28 ha, yield of 100 quintals/ha for output of 280 tons.

- Sugarcane with an area of 25 ha, yield of 460 quintals/ha for output of 1,150 tons.

- Ground-nut with an area of 285 ha, yield of 26.88 quintals/ha for output of 766.1 tons.

- Artemisia annual with an area of 84.5 ha, yield of 40 quintals/ha for output of 338 tons.

- Vegetables with an area of 102.5 ha, yield of 85.4 quintals/ha for output of 875.4 tons.

- Bean of various types with an area of 20 ha, yield of 16.8 quintals/ha, output of 33.6 tons.

Total output of grain crops estimated as 4,040 tons reaching 25,051 million VND.

b. Breeding

- Total herbs are 1,800 heads, pigs are 6,200 heads, goats are 1,370 heads, poultry are 63,000 heads, honey bee are 900 hives, honey production estimated as 9,000 kg. Aquaculture output is estimated as 55 tons.

3.1.2.2. Forestry production

The exploitation of 96.1 ha of forest valued 6,412 million VND.

Production of afforested area reached 95 ha

3.1.3. Farm economy

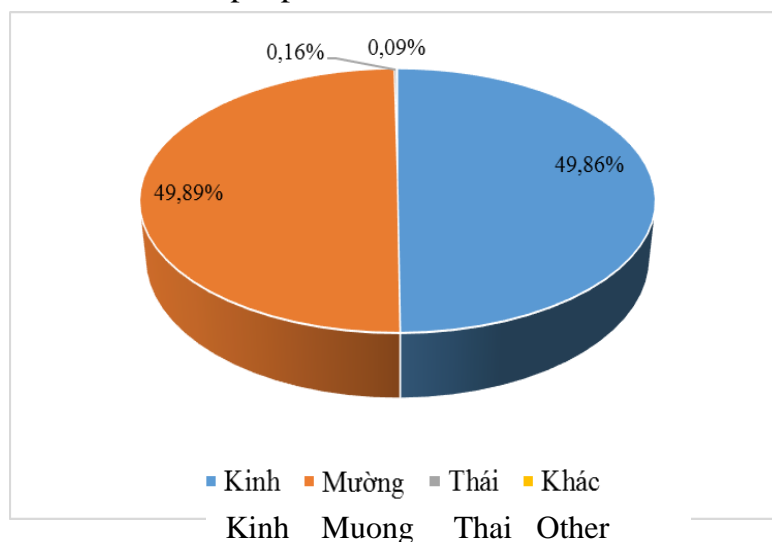
The entire commune currently has 5 farms, including a pig farm in excess of 2,000 heads/ farrow. 4 chicken farms have scope of 6,000 heads/ farrow. In general, the farms operate effectively, environment work is ensured in accordance with regulations.

3.1.4. Agriculture, small handicraft production

Deploy plans and urge establishments to promote the production of industrial, small handicraft products in the communal area. The business production situation of production establishments in the commune has many difficulties due to the shortage of capital investment and traffic infrastructure which has not really satisfied to the requirements.

3.1.5. Population and labour

The population of the entire commune has 7,547 people with 1,723 households, 4 - 5 people/household on average, natural population growth rate is 1.1%; population density of 257 people/km²; Kinh ethnic group accounts for 49.86% with 3,763 people; Muong ethnic group accounts for 3,765 people and a number of other ethnic groups account for 0.25% rate with 19 people. The whole commune has 19 residential areas.



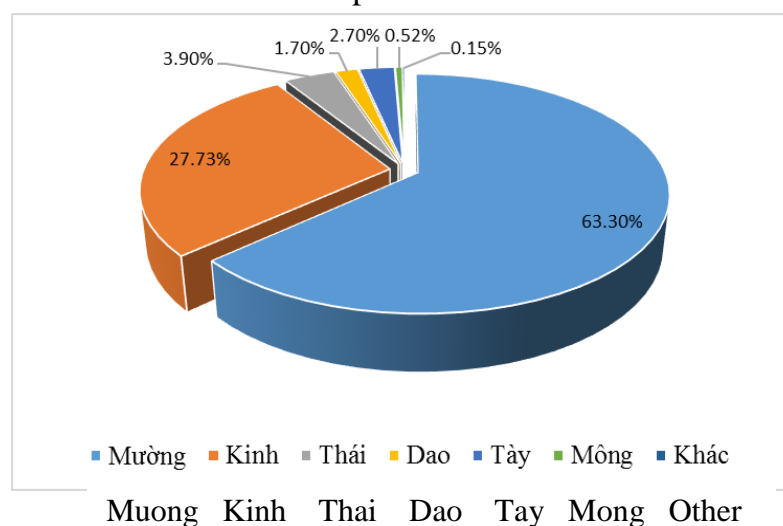
Graph 11. Structure of ethnic minority groups in subproject area

The entire commune has 3,045 labours, including 1,968 male labours accounting for 49.89% labours of the whole commune; 1,977 female labours accounting for 50.11%. Labors are mainly in the Agriculture and forestry production sector, with 3,471 labours (occupying up to 87.98% labours of the entire commune). The commune's number of trained labours is 331 labours, accounting for 8.39%.

3.2. Overview about ethnic minorities of Hoa Binh Province and in subproject region

- In the province of Hoa Binh has 7 living ethnic groups, the largest is Muong

people accounting for 63.3%; the Vietnamese (Kinh) accounting for 27.73%; Thai people accounting for 3.9%; Dao people occupying 1.7%; Tay people accounting for 2.7%; Mong people accounting for 0.52%; There are also Chinese people living sparsely in localities of the province. Chinese people previously concentrated in Ngoc Luong, Yen Thuy; but after 1979 left some families and now they are living sparsely in Yen Tri, Ngoc Luong and Phu Lai of Yen Thuy district. In addition, there are a number of people from other ethnic groups mainly due to marrying with Hoa Binh people who work in other mountainous provinces.



Graph 22: Structure of ethnic minority groups of Hoa Binh Province

In the subproject Region and the entire of An Binh Commune in general, the ethnic minority group occupies mainly as Muong people. There are 04 hamlets located in the Project region, in which, up to 71% is ethnic minority group (Muong), only 4 families are Thai ethnic group but remarkably, such 04 households have son or daughter marrying with Thai people and at present, they still stay with their parents, the remaining 29% is Kinh people.

3.3. Features of Muong people in Hoa Binh Province

Muong ethnic group is an ethnic minority which remains the most populous in the province (62.8%). They settle in the low mountains. Village is a base unit of Muong society consisting of many patriarchal subfamilies that family cell is parents and children, in which, the hereditary rights belong to the eldest son. Each village of Muong people often cluster many families.

A special feature of the Muong is community character, expressed on many aspects of village life. The collective production forms are formed popularly and greatly meaningful to each family economic unit. Such as: organizing labour groups without the participants, gathering temporarily in farming season, with the willingness of members to meet the urgent needs of manpower in the form of mutual-help. Families are in the shortage of manpower, misfortune, or crop failure, poverty, the villagers often help and do not take into consideration of cost, etc.

3.3.1. Traditional economic activities

Rice field agriculture occupies a top position and rice is a main food crop. Common tillage tools are a plough and a single and small rake with wooden or bamboo teeth. Ripe rice is gathered and bundled into fetters, carried on back to home, then dry it and place on upstairs, when need to use, take each fetter, crush it to collect grains and then grind them. In rice field cultivation, Muong people have experienced in minor irrigation.

In addition to rice field, Muong people also make milpa, breeding livestock, hunting, fishing, gathering and handicrafts production (weaving, knitting, etc.).

In particular: Wet rice farming is conducted in places where have flat areas near rivers and streams. Those are is valley plains or narrow promontories at the foot of the mountains, along the low hills. Muong people place a great importance on sticky rice, as in life, sticky rice is the major food source in the traditional meal. Besides, Muong people also cultivate ordinary rice and increasingly spread this rice with high yield. In addition to the water fields in plain, Muong people mostly cultivate in terraced rice field to take advantage of slope land and hills foot. This type of field is often narrow in width, but as long as the bows around the hills. Due to terraced rice fields located at high position, difficult irrigation water resource, therefore, Muong people have dug ditches and built troughs, made water wheels to make use of the flow of rivers, streams, canals to bring water upper location, providing for the long-twisting rice fields.

Terraced rice field mainly grows only a crop for the year, it is seasonal crop. The other crops are used by Muong people to grow corn, potatoes, vegetables, etc. These crops are suitable for dry season with little water. A type of field that Muong people make use of clearing land to grow rice called the field in hollows. These are fields in wetlands, slime and water located in bottom, wild grasses grow into layer, class at the top surface. The field in hollows is usually very deep, to waist and even chest. Therefore, this type of field is often very difficult in cultivation because they cannot easily be ploughed like a terraced rice field or water field in plain. To facilitate farming as well as harvesting, Muong people often have to cut banana, bamboo to make a raft to cling or overlap for weeding, transplanting and harvesting. However, due to the absence of a favourable area for agricultural cultivation, the types of field in hollows also occupy a significant position in the life of Muong people.

Besides the water fields, Muong people also burn off land for cultivation with the old fashioned farming form of hole poking and grain applying type. Muong people have valuable experience in the selection of land for cultivation. They selected forest patches with thick growing bamboos, neohouzeauas, fertile humus planting or black soil flaps along the hills. When land is selected, they often cut down a neohouzeaua tree or bevelled wood tree to thrust into ground. If puncture is deep, it proves thick humus layer. Another experience is to consider what colour soil, if the soil sticky on hands and flexible, glossy as grease is good soil. Choosing a satisfactory hill piece,

Muong people shall conduct a zoning as demarcation to prevent other people from taking. Muong people burn such forest patch to take humus and facilitate in clearing milpa.

The cultivation work was conducted around March, April when the first rains start to appear. Muong people cultivate upland rice not by ploughing but by taking a tree segment as large as twist sharpened at one end to poke holes and apply grains. Seeding is done, they cut a neoheozeaua top, sprig to scan a surface humus layer to cover the hole. The upland rice cultivation is relatively simple, but requires a lot of effort, especially weeding and looking after to not be destroyed by birds. In milpa cultivation, Muong people are especially conscious of limiting spread forest fire. This stems from the traditional concept of "animism". According to Muong people, forests, trees, rivers, streams, etc., also have a soul, governed by divine or devil. So, they prevent milpa cultivation in forest patches, ancient trees considered as sacred - where the forest god, tree god reign no matter how fertile the land there is. From that notion, therefore in the production of Muong people in general, Muong people in particular have many agricultural customary rituals such as rice spirit procession, seasonal ceremony, celebration of the new rice to forest door closing practice, etc., along with taboo prohibition custom featuring supernatural divine.

Along with farming rice (wet and upland rice) as a main, Muong people also increase production with economic activities for families from breeding, gardening, weaving, knitting, etc., to hunting and gathering. Need to say that although these activities are not a main productive labor to ensure the life of Muong people, this extra job play a relatively important role in the provision of basic necessities of their daily lives.

The livestock and poultry herbs are often bred to a herd by Muong people, set free in the forest. The Muong people breed livestock which are mainly buffalo, beef to provide product in the great festivals as well as traction effort in productive labor. For Muong people, cattle have a special place in daily life, because for them, cattle are all property, inheritance, reflecting the economic potential of the individual household in hamlet and between hamlets one another. Cattle were herded into the forest for a long time that sometimes brings interesting surprises in the number of increase or decrease due to their fertility. Besides, Muong people also breed pigs, chickens for meat and eggs. They are herded by Muong people. Muong people do not have the habit of making stables for cattle and poultry. They tie the cattle for plough under the floor and make stables for poultry. As for the pigs, they are seldom confined under the floor but shed away from home, water sources. The Muong people also know to take advantage of ponds, lakes, rivers and streams to fish farming. However, due to mountainous and semi-midland residential area, therefore, the ponds and lakes are less common in places where Muong people live. They mainly rely on catching natural fishes, shrimps in rivers, streams and their tributaries. Tool used to catch are mainly net, traditional fish trap. But perhaps the type of traditional fishing of Muong people is to use a

poisonous leaf kind called as "coi" leaf crushed to spread at a stream section to make shrimps and fishes drunken and floated to the surface and then catch them.

Muong people do not pay much attention to the economic effect from gardening. Garden of Muong people grows enough crops like palm, jackfruit, grapefruit, bananas, star fruit, lime, betel, bamboo, big-size bamboo and bananas, etc. It can be said, in addition to other forms of subordinate earning, a garden becomes familiar to Muong people as a part of life. For Muong people, almost households have a small garden around the house enough to plant trees, each one a little to cater for family in the way of "specific food for each season". Women in the family very take care of the plants in the garden. Sometimes the men are also very interested in gardens around their home. They decide plant seeds and care of them. However, the garden of the Muong people is mostly a mixed garden type. But today, the plants in the garden are gradually paid attention to economic value by Muong people. They plant the seeds with high yield and economic efficiency such as longan, litchi or lemon-tree and tangerine for sale on the market. Therefore, Muong people increasing pay attention to transform their small garden. In addition to the garden, the Muong people also take advantage of small land flaps along streams for easy irrigation and fertilization. They plant vegetables and fruits such as sweet potatoes, squashes, and cabbage stalks to improve their simple meal. The Muong people have known to plant crop rotation intercropping trees, in addition to improving the daily meal, the Muong people also garden for the purpose of household economic development and annual income rise.

The Muong people are particularly skilful in weaving supplies for domestic use from raw materials as bamboo, neohouzeaua, maclurochloa and rattan as weaving knife shell to go to the forest, baskets, panniers, large and flat basket, etc. In the traditional craft of Muong people, the fabric weaving should be mentioned at first. In every family of Muong people, there are looms for weaving cotton, linen in service of garments to members. Cotton growing and fabric weaving are mainly undertaken by women. However, the fabric weaving of Muong people has not carried with many goods factors. They mainly produce at agricultural leisure but have not spent a considerable time for it. Materials used for fabric weaving are not only cotton but also silk. Mulberry, cassava cultivation and silkworm breeding are relatively common in every household. Besides, the carpentry is relatively developed too. Almost in every village of Muong people have their own carpentry team to serve in building home, shrines or making coffin to the funeral, etc. Muong men are very handy in this profession. They have made the unique relatively product like knife shell, bow, crossbow, sticky rice blowing instrument from wood and other items for life.

Hunting and gathering are subordinate economic activities close with daily life of Muong people. Forest vegetable source such as *Gynura crepidioides* Benth, *Cyclosorus acuminatus* (Houtt) Nakai, Osmundaceae, *Clerodendrum cyrtophyllum* Turcz, bamboo sprout, etc., is exploited reasonably for a long-term provision. The powdered bulb plants such as Dioscoreaceae, *Dioscorea persimilis* Prain et Burkill,

etc., are only exploited by Muong people for the years of famine, crop failure. Forest vegetables gathering is usually made along with other works such as firewood collection, milpa doing or pig vegetable collection, etc. They make use of this work after having completed other works that are more important to them. Hunting birds to supplement to meals is a regular work and privilege of Muong men. In addition, the hunting also stems from the need of milpa protection from destroying by birds as well as the loss of domestic animals. In the Muong people's family, a man often takes his own gun and crossbow. They are very proud of and care for instrument that they consider it proves masculinity as well as their role in the family. Since childhood, Muong men followed their father and grandfather every time hunting and trapping, so they are very proficient in hunting as become adults. The Muong people know how to make many types of trapping with different designs to trap large animals, small animals and birds. Out of the traps of Muong people, the most common type is stabbed trap, plunged trap and collapsed trap. This type of trap used for trapping large animals such as stag, deer, bear or forest pig. And the small traps as "ngọ đánh", "ngọ cắp", "ngọ rô" used to catch small animals such as forest chickens, birds, squirrels, etc., placed around the terrace to protect crops. In particular, the products of Muong people from the forest is not only enough for domestic use but also used to exchange with the merchants from the plains like bamboo shoots, wood ear mushroom, mushroom, aloe wood, amomum, and precious woods such as peg, iron, ship, *Phoebe cuneata*, *Machilus bonii* Lecomte, etc., and all kinds of medicinal herbs like *Codonopsis pilosula*, *Smilacaceae*, *Dioscorea persimilis* Prain et Burkill, etc. The Muong people change the products from forest exploitation for the household items like salt, kerosene, needles and threads, tripods, dishes, pots, knives, hoes, mirrors, combs. Besides, every year, Muong people also sell to the merchants a large number of cattle. Trading activities have increasingly crept into the far villages, gradually creating relationships between lowland and mountainous domain, between the Muong people, Kinh people and other ethnic groups, contributing to cultural - economic exchange among ethnic groups closer together.

3.3.2. Dwelling house

The Muong people often concentrate on into villages at the foot of the mountain, hillside, where slope land is near rivers and streams, etc. Each village has a few tens of roofs, each family's site usually highlights the arecas, jackfruits. The majority of people live in stilt house, type of 4-roof house. The upper part of floor for people's residence, the bottom part is placed livestock, poultry stable, rice mortar and other productivity tools.

Making a new home, setting up kitchen pylons, Muong people do a fire ceremony. The homeowners get a banana tree bark to cut into 3 large fishes and clamp to the neohouzeaua bar to tie up the kitchen pylons, at principal pylon of the kitchen where a green pumpkin is also put. Before cooking in the new home, homeowners do a fire ceremony to beg the kitchen god for setting 3 vegetable head balls and principal

stone That night, the homeowners invite people to drink wine in the light of a flame

The stilt house is the Muong people's traditional house, four-roof architecture, with two stairs at each end of home: the main staircase is guest staircase at home top wall in the right, and the showing staircase is end stairs in the left; a stilt house often has three-side window, the most important and holiest window is placed above the ancestor altar - where placed under taboo not to step over or move objects in the house through this window.

3.3.3. Costume

Muong people have a distinctive feature of shaping and aesthetic style in costume.

The oracle wears specific costume upon celebrating ceremony. It is a 5-body long shirt buttoned at right armpit, dyed green or black, wearing a white belt, wearing a top acuteness coif. The oracle often wears a round hat upon worshipping and curing disease.

Menswear: Men wear chest split blouse, round neck, horn button, two lower pockets or additional two upper pockets on the left chest. This is a kind of short blouse that covers the buttock. Head is maintained short hairs or wraps a white towel. Trouser with wide swifts using a abdominal sash called as trouser sash. Once there was custom of remaining bun long hair. During the festival using purple silk or yellow silk, purple scarf, coat them with outer black double jacket as long as to the knee, armpit button and right flank.

Women wear: Women's costume set is more diverse than that of men and still remain unique. Turban is a rectangular piece of white cloth not embroidered; bib, blouse (commonly white) their body is very short and usually chest-split and ankle-length skirt consists of two main parts of skirt body and skirt hem. Skirt hem is famous thanks to the sophisticated woven patterns. Jewellery includes bracelets, beads and silver chain of 2 or 4 silver wires hanging a peach box, silver-sealed bear and tiger claw.

Daily clothing is named as short shirt This is kind of short blouse, chest-split, shorter body than Kinh people's blouse, long sleeves, brown or white shirt (latter other colours are added and not traditional fabrics). The inside is a kind of shirt, along with skirt top emerged between two short shirt flaps. The head usually wear white, green turban with a non-fastidious style as some other ethnic groups. Skirt is tight black dress. The entire decorated unit is skirt top and hem, upon wearing displays patterns between the body center. This is a less common decorating and expressing style in other ethnic groups of linguistic groups and neighbouring areas. Part of decorative patterns on the skirt hem is composed of elements: upper teeth, lower teeth and height. During the holidays and New Year, they bring a chest-sawed tunic, often do not close the overcoat outer to daily dress that is both elegant and exposes the inner skirt hem's patterns. The group wearing short cut blouses usually carries a chest-sawed brassiere

inside. Basically, it is similar to Kinh women's brassiere but shorter.

3.3.4. Social relations

Village relations are mainly neighbouring relations. The family of two, three generations are popular. Children take father's family name. The right of the eldest son is respected and sons in the family are inherited assets. The Muong people do not follow the notion of younger brother's and older brother's children, and whoever born earlier shall be older brother or sister, ranked by age.

3.3.5. Folklore

Folk art treasure of Muong people is relatively rich, with the long poem categories, fairy tales, folk songs, proverbs. Muong people also have lullaby, children's folk song, puzzle singing, etc. Gong is a unique instrument of the Muong people, and delicate, drum flute in addition. The Muong people also use bamboo tube to knock wooden panels on the floor, forming the sound to enjoy called "trough-knocking". Belief: The Muong people worship their Ancestors.

Xec bua singing (some places call as "Xac bua" or "Khoa rac") is a favourite of many people. Thuong (some places call as "Rang thuong" or "Xuong") is a folk type praising labour, and the beauties of ethnic customs. "Bo meng" is a form of singing of love talking. Vi Dum singing is a popular type of folk song.

Besides, Muong people also have other types of singing such as lullaby, children's folk song. Especially, in the Muong people should include ceremony singing. That is prayers in writing read and song by the oracle in the funeral.

In addition to flute, drum, trumpet, etc., the gong is a unique instrument.

3.3.6. Villages, hamlets of Muong people

Muong people live in traditional stilt house, residential area focusing mainly on narrow valley plains, promontory along rivers, at the foot of the mountains or on the low hills. Muong people's villages are concentrated in each cluster, each village, hidden under green of the trees planted around the house. Muong people's village often has about 20 to 30 curb roofs, and if a large village may have more ones. The villages are usually set up near water resource, rice field, conveniently for production labour. Even though, Muong people's village is rarely revealed to outsiders' easy detection because it is surrounded by bamboos and fruit trees. Access road to the village is usually tortuous small trails that create a easy feeling of mistake and mislaying. And for the Muong people, who do not place an importance on building house and setting up village so that it is easy for transport. For that reason, if desiring to enter a village or house of the Muong people often have to cross a small road connecting the village to the main road or wade through streams, rivulets.

3.4. Socio-economic survey results of ethnic minority households

3.4.1. Survey samples and sampling method

The socio-economic survey of ethnic minority households is conducted with a

proportion of 21.5% in the total number of households affected by the water cut-off owing to the dam construction (surveying 48 households in the total number of 223 ethnic minority households affected).

Households surveyed are selected randomly in three hamlets with ethnic minority people affected by the water cut-off owing to the dam construction.

3.4.2. General information about ethnic minority householders

According to the survey results, of the total 48 surveyed households, the number of male householders always occupies a large proportion with 43 people, accounting for 89.6% while only 5 households have female householders, making up 10.4%. Of 5 households with female householders, 2 householders are single women.

The average age of households is 47.1 years old. Based on the age, the number of householders at the age from 18 to 30 years old is the lowest with 2 people, accounting for 4.2%; the number of householders at 31 to 40 years old is 14 people, making up 29.2%; the number of householders at 41 to 50 years old is the highest with 17 people, representing 35.4%; the number of householders at the age from 51 to 60 is 10 people, accounting for 20.8%; and the number of householders from 60 years old (out of working age) upward is 5 people, representing 10.4%.

Table 3. General information about ethnic minority householders

| No. | Content | Unit | Quantity | Proportion (%) |
|------------|--|------------------|-----------------|-----------------------|
| I | Total number of surveyed households | Household | 48 | |
| II | Gender | | | |
| 2.1 | Male householder | person | 43 | 89.6 |
| 2.2 | Female householder | person | 5 | 10.4 |
| III | Age | | | |
| 3.1 | Average age | years old | 47.1 | |
| 3.2 | From 18 to 30 | person | 2 | 4.2 |
| 3.3 | From 31 to 40 | person | 14 | 29.2 |
| 3.4 | From 41 to 50 | person | 17 | 35.4 |
| 3.5 | From 51 to 60 | person | 10 | 20.8 |
| 3.6 | Over 60 years old | person | 5 | 10.4 |
| IV | Literacy of householders | | 48 | 100.0 |
| 4.1 | Illiteracy | person | 0 | 0.0 |
| 4.2 | Primary school | person | 9 | 18.8 |
| 4.3 | Secondary school | person | 28 | 58.3 |
| 4.4 | High school | person | 8 | 16.7 |
| 4.5 | Intermediate/vocational training school | person | 3 | 6.3 |

| No. | Content | Unit | Quantity | Proportion (%) |
|----------|-----------------------|--------|-----------|----------------|
| 4.6 | College/University | person | 0 | 0.0 |
| V | Marital status | | 48 | 100.0 |
| 5.1 | With husband/wife | person | 41 | 85.4 |
| 5.2 | Single | person | 1 | 2.1 |
| 5.3 | Widowed | person | 5 | 10.4 |
| 5.4 | Divorced | person | 1 | 2.1 |

Source: Survey data

Regarding the literacy of householders, it can be seen that most householders study up to the secondary school level with 28 people, accounting for 58.6%, followed by primary school level with 9 people, accounting for 18.8%, and high school level with 8 people, representing 16.7%. The number of householders with intermediate school level only represents 6.3% with 3 people. There is no household with illiteracy level or university/college level.

With respect to marital status of householders, 41 people have wife/husband, accounting for 85.4%. There are 5 widowed householders and 1 single householder, making up 14.6% for both subjects.

The current employment situation of householders in table 3 shows that a large number of householders work in the agricultural sector with 36 people, accounting for 75%, followed by hired labourers with 5 people, making up 10.4%. The number of householders with labour incapacitation and State officers & staffs is 3 people, making up 6.3%. There is 1 householder trading/providing service, representing 2.1%. Especially, there is no householder working in the field of small industry and handicraft in the 3 affected hamlets of ethnic minority people.

Table 4. Information about main employment of ethnic minority people

| No. | Employment | Unit | Quantity | Proportion (%) |
|-----|--------------------------------------|--------|----------|----------------|
| 1 | Labour incapacitation person | person | 3 | 6.3 |
| 2 | Agriculture and forestry farmer | person | 36 | 75.0 |
| 3 | Trading, service supplier | person | 1 | 2.1 |
| 4 | State officer & staff | person | 3 | 6.3 |
| 5 | Student, pupil | person | 0 | 0.0 |
| 6 | Small industry & handicraft labourer | person | 0 | 0.0 |
| 7 | Worker | person | 0 | 0.0 |
| 8 | Armed force | person | 0 | 0.0 |

| No. | Employment | Unit | Quantity | Proportion (%) |
|-----|-------------------|---------------|-----------|----------------|
| 9 | Housewife | person | 0 | 0.0 |
| 10 | Retiree | person | 0 | 0.0 |
| 11 | Hired labourer | person | 5 | 10.4 |
| 12 | Unemployed person | person | 0 | 0.0 |
| 13 | Inappropriate | person | 0 | 0.0 |
| | Total | person | 48 | 100.0 |

Source: Survey data

3.4.3. Information about socio-economic situation of ethnic minority households

The subproject on “Rehabilitation and improvement of safety dam for Dai Thang reservoir” is implemented in An Binh commune, Lac Thuy District, Hoa Binh province. The construction of the project will have temporary impact on the agricultural land of 244 affected households during the repair of dam because there will be no water source for agricultural production. Of them, there are 223 ethnic minority households.

The survey results on socio-economic situation of ethnic minority households show that the number of members in households are as follows: The number of households with only 1 person is 1 household, accounting for 2.1%, the number of households with from 2 to 4 people makes up the highest proportion with up to 85.4%, and the number of households with 5 people upward represents 12.5% with 6 out of 48 surveyed households.

Table 5. Number of people in households

| No. | Number of people | Unit | Quantity | Proportion (%) |
|-----|----------------------|-----------|-----------|----------------|
| 1 | 1 person | Household | 1 | 2.1 |
| 2 | 2-4 people | Household | 41 | 85.4 |
| 3 | From 5 people upward | Household | 6 | 12.5 |
| | Total | | 48 | 100.0 |

Source: Survey data

Of 48 surveyed households, there are 165 people with 51.5% males and 48.5% females. Of 165 people of 48 households, there are 2 Kinh people, accounting for 1.2%. The two Kinh people are women who got married to ethnic minority people. The age groups of affected people are as follows:

- Below 18 years old: 42 people, accounting for 25.5%;
- From 18 to 30 years hold: 24 people, making up 14.5%;
- From 30 to 40 years old: 36 people, occupying 21.8%, this group has highest

proportion in the age structure;

- From 40 to 50 years old: 26 people, representing 15.8%;
- From 50 to 60 years old: 23 people, making up 13.9%
- Over 60 years old: 14 people, accounting for 8.5%.

Most people in surveyed households have got married. The number of people with husband/wife is 91 people, accounting for 55.2%, followed by single people with 63 people, making up 38.2%. There are 10 widowed people, accounting for 6.1% owing to old age and 01 divorced person out of the total 165 surveyed people.

Table 6. General information about socio-economic survey results of ethnic minority households

| No. | Content | Unit | Quantity | Proportion (%) |
|----------|--|------------------|------------|----------------|
| 1 | Total number of surveyed households | Household | 48 | |
| 2 | Number of surveyed people | person | 165 | 100,0 |
| | Male | person | 85 | 51,5 |
| | Female | person | 80 | 48,5 |
| 3 | Ethnic group | | 165 | 100,0 |
| | Kinh | person | 2 | 1,2 |
| | Muong | person | 163 | 98,8 |
| 4 | Age group | | 165 | 100,0 |
| | Below 18 years old | person | 42 | 25,5 |
| | From 18 to 30 years old | person | 24 | 14,5 |
| | From 30 to 40 years old | person | 36 | 21,8 |
| | From 40 to 50 years old | person | 26 | 15,8 |
| | From 50 to 60 years old | person | 23 | 13,9 |
| | Above 60 years hold | person | 14 | 8,5 |
| 5 | Marital status | | 165 | 100,0 |
| | Single | person | 63 | 38,2 |
| | With husband/wife | person | 91 | 55,2 |
| | Divorced | person | 1 | 0,6 |
| | Separated | person | 0 | 0,0 |
| | Widowed | person | 10 | 6,1 |

Source: Survey data

Regarding the literacy, of 165 people, there is no illiterate person; there are 32 people who are studying/studied at primary school, accounting for 19.4%; 74 people who are studying/studied at secondary school, making up 44.8% - this is the highest proportion in all studying grades of affected ethnic minority people. There are 41

people studying at high school, representing 24.8%; there are 7 people studying intermediate/vocational training school, marking up 4.2%. There is no person studying at college/university. The number of children under school age is 10 people, occupying 6.1%.

Overall, the literacy level of affected households is quite high compared to the common level of Hoa Binh province. This will be a favourable factor for the economic development of households, especially for the application of science and technology into production and occupation shifting of households with affected agricultural land.

Table 1. Literacy level

| No. | Literacy level | Unit | Quantity | Proportion (%) |
|-----|---|--------|------------|----------------|
| 1 | Illiteracy | person | 0 | 0,0 |
| 2 | Primary school | person | 32 | 19,4 |
| 3 | Secondary school | person | 74 | 44,8 |
| 4 | High school | person | 41 | 24,8 |
| 5 | Intermediate/vocational training school | person | 7 | 4,2 |
| 6 | College/University | person | 0 | 0,0 |
| 7 | Under school age | person | 10 | 6,1 |
| 8 | Unknown | person | 1 | 0,6 |
| | Total | | 165 | 100,0 |

Source: Survey data

The main occupations of affected people in the ethnic minority people community at present are as follows: There are 89 people doing farm work, accounting for 53.9% in the total of 165 people; followed by 39 people being students and pupils, making up 23.6%; and 10 people being hired labourers, occupying 6.1%. The proportion of people with labour incapacitation is 4.8%, the proportion of State officers & staffs is 2.4%, and the proportion of people trading and providing service is 1.2%. The remaining of people with other occupations makes up a small proportion, including retirees, armed forces and workers with a proportion of 0.6%. Particularly, there is no person working in the small industry and handicraft.

Table 2. Occupations of ethnic minority people

| No. | Main occupation | Unit | Quantity | Proportion (%) |
|-----|---------------------------------|--------|----------|----------------|
| 1 | Labor incapacitation person | person | 8 | 4.8 |
| 2 | Agriculture and forestry farmer | person | 89 | 53.9 |
| 3 | Trading, service supplier | person | 2 | 1.2 |
| 4 | State officer & staff | person | 4 | 2.4 |
| 5 | Student, pupil | person | 39 | 23.6 |

| No. | Main occupation | Unit | Quantity | Proportion (%) |
|-----|--------------------------------------|--------|------------|----------------|
| 6 | Small industry & handicraft labourer | person | 0 | 0.0 |
| 7 | Worker | person | 1 | 0.6 |
| 8 | Armed force | person | 1 | 0.6 |
| 9 | Housewife | person | 0 | 0.0 |
| 10 | Retiree | person | 1 | 0.6 |
| 11 | Hired labourer | person | 10 | 6.1 |
| 12 | Unemployed person | person | 0 | 0.0 |
| 13 | Inappropriate | person | 10 | 6.1 |
| | Total | | 165 | 100.0 |

Source: Survey data

3.4.4. Income level of affected households

The average income per capital in the sub-project area is VND 24 million/year/person. According to the survey data, the living standard and income of households affected by the sub-project in the commune are as follows:

The average income of affected households is VND 53.754 million/year/household which is low compared to the general average income/year/household of the commune.

The number of households with the income of below VND 10 million/year/household is 01 household, accounting for 2.1%; for one of VND 10-20 million/year/household, there are 6 households, accounting for 12.5%; for one of VND 20-40/million/year/household, there are 15 households, accounting for 31.3%; for one of VND 40- 60 million/year/household, there are 11 households, accounting for 22.9%; for one of VND 60-100 million/year/household, there are 10 households, accounting for 20.8%; and for above VND 100 million/year/household, there are 5 households, accounting for 10.4%.

The income structure shows that the income from salary/wage always makes up the highest proportion with 55.5%, followed by income from agriculture with 38.1%. Especially, no household has income from small industry and handicraft because the project area is a completely agricultural commune, so small industry and handicraft are undeveloped.

The income structure also indicates that the higher the income level is, the lower the proportion of income from agriculture is and the higher the proportion of income from salary/wage is. Specifically, with the income level of below VND 10 million/year/household, 100% of the main income source comes from agriculture. Of the income level from VND 20 to 40 million/year/household, the income from agriculture decreases to 59.1% while the income from salary and wage rises to 52.9%.

Moreover, with the income level of above VND 100 million/year/household, the income from agriculture drops to just 8.3% while the income from salary/wage climbs to 85.2%. Meanwhile, other income sources only represent small proportions.

In short, the highest the income level is, the smaller the proportion of income from agriculture is, implying that agriculture only occupies a small proportion in the income of high-income households.

Table 3. Income level and structure of ethnic minority households

Unit: %

| No. | Income level | General | Below VND 10 million/year | VND 10-20 million/year | VND 20-40 million/year | VND 40-60 million/year | VND 60-100 million/year | Above 100 million/year |
|----------|---|-----------|---------------------------|------------------------|------------------------|------------------------|-------------------------|------------------------|
| 1 | Number of households (household) | 48 | 1 | 6 | 15 | 11 | 10 | 5 |
| | Proportion | 100.0 | 2.1 | 12.5 | 31.3 | 22.9 | 20.8 | 10.4 |
| 2 | Income sources | | | | | | | |
| | Agriculture | 38.1 | 100.0 | 89.9 | 59.1 | 46.9 | 35.1 | 8.3 |
| | Trading, service, business | 4.3 | 0.0 | 0.0 | 0.0 | 0.0 | 8.5 | 6.5 |
| | Small industry and handicraft | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Salary/wage | 55.5 | 0.0 | 4.9 | 40.9 | 52.9 | 50.6 | 85.2 |
| | Saving, donation, deposit | 0.2 | 0.0 | 4.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Aids for poor and state-favoured families | 1.9 | 0.0 | 0.0 | 0.0 | 0.2 | 5.8 | 0.0 |

Source: Survey data

In parallel with income level, the spending level of households also shows enormous differences. The number of households with the expenditure of below VND 10 million/year/household is 01 household, accounting for 2.1%; for one of VND 10-20 million/year/household, there are 6 households, accounting for 12.5%; for one of VND 20 – 40/year/household, there are 24 households, accounting for 50.0%; for one of VND 40-60 million/year/household, there are 9 household, accounting for 18.8%; for one of VND 60-100 million/year/household, there are 5 households, accounting for 10.4% and for above VND 100/year/households, there are 3 households, accounting for 6.3%.

The spending structure shows that spending on living always makes up the highest proportion with 36.8% followed by spending on construction and repair of houses with 29.2% although the construction activity is only implemented by some households on an irregular basis over the year because this spending item always occupies the highest proportion among spending items of households. In general, all households have regular spending for education, health care, production, etc. over the year.

The spending structure also reveals that with the low expenditure of below

VND 10/year/household, the spending on living accounts for as much as 71.4%, followed by spending on community with 28.6%. When the expenditure increases, the spending on living will decrease and there will be many other spending items. For instance, with the expenditure of VND 20 - 40 million/year/household, the spending on living just makes up 53.2%, followed by spending on production with 15.1%, spending on community with 14.1% and other spending items. With the highest expenditure of above VND 100 million/year/household, the spending on construction and repair of houses is the highest with as much as 77.6%, followed by spending on living with 11.9%, spending on health care with 3.6%, spending on education with 3.2%, spending on production with 2.4% and spending on community with 1.3%.

Table 4. Spending level and structure of ethnic minority households

Unit: %

| No. | Spending level | General | Below VND 10 million/year | VND 10-20 million/year | VND 20-40 million/year | VND 40-60 million/year | VND 60-100 million/year | Above 100 million/year |
|----------|---|-----------|---------------------------|------------------------|------------------------|------------------------|-------------------------|------------------------|
| 1 | Number of households (household) | 48 | 1 | 6 | 24 | 9 | 5 | 3 |
| | Proportion | 100.0 | 2.1 | 12.5 | 50.0 | 18.8 | 10.4 | 6.3 |
| 2 | Spending items | | | | | | | |
| | Living | 36.8 | 71.4 | 55.4 | 53.2 | 53.5 | 39.9 | 11.9 |
| | Construction and repair of houses | 29.2 | 0.0 | 0.0 | 2.8 | 0.0 | 7.5 | 77.6 |
| | Education | 7.6 | 0.0 | 10.9 | 8.2 | 9.6 | 13.8 | 3.2 |
| | Health care | 7.3 | 0.0 | 1.3 | 6.6 | 8.8 | 17.1 | 3.6 |
| | Community | 9.3 | 28.6 | 20.9 | 14.1 | 13.1 | 11.6 | 1.3 |
| | Production of household | 9.7 | 0.0 | 11.5 | 15.1 | 14.9 | 10.1 | 2.4 |
| | Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Source: Survey data

3.4.5. Living conditions of ethnic minority households

Regarding houses of surveyed ethnic minority households, of the total 48 households, 15 households have solid houses, accounting for 31.3%; 30 households have semi-solid houses or 4th-grade houses (62.5%); 02 households have barracks or thatched houses (4.2%); and only 01 household has temporary house (2.1%).

Table 5. Types of houses of surveyed ethnic minority households

| No. | Type of house | Quantity (household) | Proportion (%) |
|-----|---------------------------|----------------------|----------------|
| 1 | Solid house | 15 | 31.3 |
| 2 | Semi-solid house | 30 | 62.5 |
| 3 | Barrack or thatched house | 2 | 4.2 |

| | | | |
|---|-----------------|-----------|--------------|
| 4 | Temporary house | 1 | 2.1 |
| 5 | Homeless | 0 | 0.0 |
| | Total | 48 | 100.0 |

Source: Survey data

The water sources used for drinking, bathing, washing and production of households are as follows:

- 95.8% of surveyed households have water sources for drinking, bathing and washing from bored wells and dug wells; 2.1% of households have drinking water source from reservoirs and natural canals.

- 100% affected households use water from reservoirs for production.

Table 6. Water sources used for production and living of ethnic minority households

| No. | Water sources used for households | Quantity (households) | Proportion (%) |
|----------|---|--------------------------|-------------------|
| 1 | Water source for drinking | 48 | 100.0 |
| 1.1 | Natural river/canal | 1 | 2.1 |
| 1.2 | Reservoir | 1 | 2.1 |
| 1.3 | Bored well/dug well | 46 | 95.8 |
| 1.4 | State's clean water supply system | 0 | 0.0 |
| 1.5 | Irrigation system | 0 | 0.0 |
| 1.6 | Rainwater | 0 | 0.0 |
| 2 | Water source for bathing and washing | 48 | 100.0 |
| 2.1 | Natural river/canal | 1 | 2.1 |
| 2.2 | Reservoir | 1 | 2.1 |
| 2.3 | Bored well/dug well | 46 | 95.8 |
| 2.4 | State's clean water supply system | 0 | 0.0 |
| 2.5 | Irrigation system | 0 | 0,0 |
| 2.6 | Rainwater | 0 | 0,0 |
| 3 | Water source for production | 48 | 100,0 |
| 3.1 | Natural river/canal | 0 | 0,0 |
| 3.2 | Reservoir | 48 | 100,0 |
| 3.3 | Bored well/dug well | 0 | 0,0 |
| 3.4 | State's clean water supply system | 0 | 0,0 |
| 3.5 | Irrigation system | 0 | 0,0 |
| 3.6 | Rainwater | 0 | 0,0 |

Source: Survey data

According to the socio-economic survey results of 48 ethnic minority households, 03 households have no toilets, making up 6.3%; 06 households have detritus/semi-detritus toilets (12.5%); 19 households have two-compartment toilets (39.6%); 19 households use simple toilets (39.6%); and 01 household has other type of toilet (2.1%).

Table 7. Toilets of ethnic minority households

| No. | Type of toilet | Quantity (households) | Proportion (%) |
|------------|-------------------------------|----------------------------------|---------------------------|
| 1 | No toilet | 3 | 6.3 |
| 2 | Detritus/semi-detritus toilet | 6 | 12.5 |
| 3 | Two-compartment toilet | 19 | 39.6 |
| 4 | Simple toilet | 19 | 39.6 |
| 5 | Other | 1 | 2.1 |
| | Total | 48 | 100.0 |

Source: Survey data

With respect to lighting energy source, 48 surveyed households use grid electricity (100%) and all households in the commune use grid electricity for lighting.

Table 8. Lighting energy source

| No. | Lighting energy source | Quantity (household) | Proportion (%) |
|------------|--|---------------------------------|---------------------------|
| 1 | Grid electricity | 48 | 100.0 |
| 2 | Kerosene | 0 | 0.0 |
| 3 | Gas | 0 | 0.0 |
| 4 | Battery, generator, small hydropower plant | 0 | 0.0 |
| 5 | Other | 0 | 0.0 |
| | Total | 48 | 100.0 |

Source: Survey data

Being a mountainous commune, most of affected households have forest area, so the main source for cooking of households is firewood. Of the total 48 surveyed households, 44 households often use firewood for cooking, accounting for 91.7%; and 04 households often use gas for cooking (8.3%).

Table 9. Main types of fuels used for cooking

| No. | Type of fuel used for cooking | Quantity (household) | Proportion (%) |
|------------|--------------------------------------|---------------------------------|---------------------------|
| 1 | Firewood | 44 | 91.7 |
| 2 | Coal | 0 | 0.0 |
| 3 | Kerosene | 0 | 0.0 |
| 4 | Gas | 4 | 8.3 |

| | | | |
|---|--------------|-----------|--------------|
| 5 | Straw, leave | 0 | 0.0 |
| 6 | Biogas | 0 | 0.0 |
| 7 | Electricity | 0 | 0.0 |
| 8 | Other | 0 | 0.0 |
| | Total | 48 | 100.0 |

Source: Survey data

3.5. Assets and necessities of households

Regarding assets and necessities of affected ethnic minority households, the socio-economic survey results show that:

93.8% of affected households have televisions; 01 household has automobile for supplying transportation service (2.1%); 31 households have refrigerators (64.6%). 41 households have motorbikes (85.4%) and only 04 households have no motorbike. 3 households have telephones, making up 6.3%; and 47 households have mobile phones (97.9%). 19 households have gas stoves, but only 04 households usually use gas in daily cooking activity; 01 household has computers and 01 household has washing machine (2.1%).

There is no household with Internet connection, air-conditioner and heater.

Table 10. Necessities of households

| No. | Type of asset | Have | | Do not have | |
|-----|--------------------------|--------------------------|-----------------------|------------------------------|-----------------------|
| | | Household (household) | Proport ion (%) | Household (household) | Proport ion (%) |
| 1 | Television | 45 | 93.8 | 3 | 6.3 |
| 2 | Motorboat | 0 | 0.0 | 48 | 100.0 |
| 3 | Automobile | 1 | 2.1 | 47 | 97.9 |
| 4 | Refrigerator | 31 | 64.6 | 17 | 35.4 |
| 5 | Motorbike /electric bike | 41 | 85.4 | 7 | 14.6 |
| 6 | Telephone | 3 | 6.3 | 45 | 93.8 |
| 7 | Mobile phone | 47 | 97.9 | 1 | 2.1 |
| 8 | Gas stove | 19 | 39.6 | 29 | 60.4 |
| 9 | Internet | 0 | 0.0 | 48 | 100.0 |
| 10 | Air-conditioner | 0 | 0.0 | 48 | 100.0 |
| 11 | Computer | 1 | 2.1 | 47 | 97.9 |
| 12 | Washing machine | 1 | 2.1 | 47 | 97.9 |
| 13 | Heater | 0 | 0.0 | 48 | 100.0 |

Source: Survey data

3.6. Life of ethnic minority households

The socio-economic survey results of ethnic minority households indicate that:

- 01 household has wealthy living standard (2.1%);
- 36 ethnic minority households have average living standard (75.0%);
- 06 households have straitened living standard (12.5%);
- 05 households have poor living standard (10.47%). Therefore, given the general living standard of the whole province, the proportion of poor households of the commune is relatively high.

Over the past year, 15 households still lacked foods in which 04 household lacked foods for 1-2 months (8.3%); 09 households lacked foods for 3-4 months (18.8%) and 02 households lacked foods for over 4 months (2.4%). Meanwhile, 33 households (68.8%) did not lack foods over the past 12 months.

28 households think that their living conditions have become better over the past three years (58.3%); 13 households (27.1%) think that there is no change; and 07 households (14.6%) think that their living conditions have been worse over the past 3 years.

Table 11. Living standard of affected households

| No. | Living standard | Quantity (households) | Proportion (%) |
|------------|--|----------------------------------|---------------------------|
| 1 | Type of living standard of households | 48 | 100.0 |
| | Wealthy | 1 | 2.1 |
| | Average | 36 | 75.0 |
| | Straitened | 6 | 12.5 |
| | Poor | 5 | 10.4 |
| 2 | Lack of foods over the past 12 months | 48 | 100.0 |
| | Yes, 1-2 months | 4 | 8.3 |
| | Yes, 3-4 months | 9 | 18.8 |
| | Yes, over 4 months | 2 | 4.2 |
| | Do not lack | 33 | 68.8 |
| 3 | Living conditions over the past 3 years | 48 | 100.0 |
| | Unchanged | 13 | 27.1 |
| | Better | 28 | 58.3 |
| | Worse | 7 | 14.6 |

Source: Survey data

4. SUMMARY OF CONSULTATION RESULTS WITH ETHNIC MINORITY COMMUNITY

4.1. Objective

The announcement and dissemination of information, consultation and participation of affected people in the EM community and main relevant parties will:

- a. Mitigate possible conflicts;
- b. Minimize risks due to the project delay;
- c. Allow the project to design the resettlement and recovery program into a comprehensive construction program in accordance with the demands and priority of affected people so as to maximize the socio-economic benefits of the project development; and
- d. Ensure that the preparation and implementation of the Ethnic Minority Development Plan is implemented in a transparent manner.

Announcement and dissemination of information is not only requirement of international sponsors, but also is prescribed by Vietnamese Government at Article 67, Law on Land (2013) and Article 17 of Decree no. 43/2014/ND-CP; Articles 19, 20, 21 of Decree no. 47/2014/ND-CP and Decree no. 44/2014/ND-CP and Decree no. 45/2014/ND-CP.

General objectives of the Community Consultation Program and Communication Campaign are disseminating information & collecting feedbacks from main relevant parties regarding compensation, support and resettlement planning for affected households.

4.2. Consulted contents

- Information about the project and the sub-project.
- Typical cultural features of each ethnic group.
- Current livelihood activities of people.
- Issues related to disasters and disaster prevention.
- Issues related to compensation and support.
- Assessment on people's support to the sub-project.

4.3. Main consultation methods implemented in Ethnic Minority Development Plan

As part of the social assessment, where ethnic minority (EM) peoples are present in the subproject area –as confirmed by the EM screening (as per Bank's OP 4.10), consultation with them were carried out in a free, prior, and informed manner (FPIC), to confirm if there is broad community support from affected EM peoples for the subproject implementation. EM screening was conducted as per Bank's OP 4.10, and was done the scope and coverage of the social assessment vis-à-vis the environmental assessment (OP 4.01).

- **Languages used for consultation:** Language of Kinh ethnic group (All EM households know and can listen, understand, read and write language of Kinh ethnic group).

- **Voting:** The implementation of the sub-project, compensation-support policies of the sub-project are proposed to consult ideas from participation of meeting by voting method: agree or disagree. If there are any objections, objectors will be collectively interviewed in the meeting or individually interviewed depending on their expectations to record specific ideas. In the community consultation meeting, there is no ethnic minority person objecting the implementation of the sub-project.

- **Interview with questionnaire (Questionnaire sample is attached in the appendix):** Questionnaires (according to sample) will be delivered to all the people attending the interview (in collective meeting, group discussion, individual/household interview) to collect information about (i) socio-economic situation of households, (ii) assessment on policies of the sub-project, (iii) expectation on compensation, support and resettlement, and (iv) support on the sub-project performance. During the interview with questionnaire, PPMU, all experts and support officers will attend to support and answer questions of interviewed people to ensure that they understand the questions and options.

- **Group discussion:** Each discussion group will consist of 5-8 EM people with varieties of genders, income levels of households, ages, literacy, etc. Each group will be instructed to discuss by at least 01 expert or officer to conduct the discussion about the implementation of the sub-project, impacts from the implementation of the sub-project, and support policies. The group discussion is carried out freely and publicly without any external intervention or coercion. Group discussions are implemented in each hamlet.

- **Private interview with individual/household:** In addition to consultation implemented in community meetings, the consulting unit also conducts the consultation under the form of direct interview with affected households. Interviews include open discussion and interviews with questionnaires to collect information and expectations of EM people. Individuals/households are selected on a random basis.

- **Participatory Rural Appraisal (PRA):** EMDP uses Participatory Rural Appraisal tools to help the community easily define issues which need priority for settlement related to the enhancement of knowledge on the objectives, potential positive & negative impacts of the project.

Consultation meetings and group discussions are organized at Dai Dong, Dai Thang and Thang Loi hamlets of An Binh commune. All consultation meetings and group discussions have the participation of representatives of An Binh commune People's Committee, representatives of Fatherland Front Committee, representatives of Women's Union and Farmers' Union. Especially, General Secretary of Commune and heads of hamlets also attend consultation meetings.

4.4. Results on information dissemination and community consultation

Consultation meetings of RAP and EMDP between the consulting group and the local community are conducted during the Inventory of Loss. Below are contributed ideas and expectations of ethnic minority community about the project.

- **Summary of ideas**

Ethnic minority households agree with the project performance for following reasons:

Dai Thang Reservoir in the locality has degraded and failed to solve all issues related to water supply for agricultural production and living of Dai Thang, Thang Loi and Dai Dong hamlets.

“Rehabilitation and improvement of dam safety for Dai Thang reservoir” is more effective and can change the crop structure more efficiently as well as raise yield and increase number of crop seasons. However, many affected households concern that the land appropriation and temporary water cut-off during the construction process will may affect their agricultural production and income.

The ethnic minority community is facilitated to access public services by the Government. Nonetheless, they remain poor because of lacking land for production and having many dependents in family. This factor results in a high proportion of poor households, high number of pupils quitting school, etc.

Many households have diseases related to the poor quality of living water or shortage of living water. They still have the habit of using unhygienic toilets or have no toilets due to lacking living water.

There is broad community support from EM peoples in Dai Dong hamlet, Dai Thang hamlet, Thang Loi hamlet for the sub-project implementation

- **Summary on expectations of ethnic minority people**

Support for adverse affection, income recovery: All households were interviewed and those who participated in the consultation would like to be supported by materials such as seeds, fertilizers or cash, affected area when closing the dam’s entrance for construction and borrow money to invest in agricultural production such as buying seeds, raising livestock and poultry, etc.

In addition, they also wanted to be provided with amenities for the cultural house and public speaker system to promote and mobilize people to participate in community’s activities better including the dissemination and propagation the project implementation.

Supply of clean and hygienic water: Most affected households are using water from bored wells and dug wells and rainwater for living; however, the number of households using rainwater in three villages having ethnic minorities is very little. So the desire of ethnic minority community in subproject area is to use clean water from existing water sources in the villages in which giving the top priority to the support by

materials for households to build rainwater tanks used in everyday life because the groundwater from bored wells and dug wells have been contaminated with Arsenic.

During the implementation of the project's works items, in addition to the income recovery programs for people, the project needs to apply the labor mobilization program from the community so that they can participate in working and gain more income.

In summary, the EM screening shows that there are 223 households with 821 EM people affected from the water cut during the dam construction period. After consulting EM households affected by the Dai Thang reservoir rehabilitation project, all affected households agreed with EMDP as follows: 1) Support livelihood recovery for community (switch from growing rice to corn and peanuts in three-month time to adapt with water cut during dam construction in spring season); 2) Communication programs; and 3) Support of clean water program for households

5. INFORMATION DISCLOSURE AND PUBLIC CONSULTATION

5.1. Consultation process

One of the purposes of the regular consultation process is conducting meetings of people to minimize the dissatisfaction level of people affected by the project by integrating perceptions and concerns of relevant people in the design and implementation of the project. The participatory approach will encourage EM people to raise any concern before any conflict may arise and give out their acceptance.

For the sub-project on Rehabilitation and improvement of safety dam for Dai Thang reservoir, a two-step consultation process is designed to ensure the compliance of World Bank's Indigenous Peoples Policy (OP4.10):

Step 1: Consultations during the project preparation process with EM people groups in SP areas where they live through broad consultation, pre-consultation and information dissemination consultations to assure that SP proposes to receive the wide support of affected EM groups; and to define the perception of EM people on a large scale. Social experts will work with officers of PMU, Department of Agriculture and Rural Development and the local authority to identify potential affected EM communities and conduct consultations. Women in EM communities are selected on a random basis to carry out private group discussions with them. Topics for discussion consist of information about the project; cultural identities of affected EM communities; social networks; and communities' expectations to avoid risks of disasters through the project's intervention activities and the wide support of communities to the sub-project.

Step 2: Consultations during the project performance process with EM people groups aim to collect information about specific demands and challenges facing EM people, and determine any potential areas which may need more support and/or other types of support. In the project on rehabilitating and improving dam safety, CPO will select a social consulting team to implement these consultations. The consulting team will design consultation programs and instructions to ensure that consultations will be implemented timely at right places and in a manner which can approach the EM communities as well as ensure that all EM people groups can participate in the consultation process and create a consultation environment with open and honest discussions without any external interventions or threats.

The consultation process needs to ensure that affected EM communities (i) give a broad support to the project's objectives; (ii) be aware of the project's benefits and believe that those benefits are compatible with their culture and religion; (iii) have sufficient opportunities to determine their priorities and restrictions related to the compensation, resettlement, support for losses and disaster prevention.

During EMDP is prepared, the tools used in the public consultation include meetings,

personal interviews and group discussions. People in the affected villages are willing to discuss and share information. Women and youth are invited and encouraged to give ideas. The ethnic minority groups affected in the villages are all consulted. The ethnic minority groups in the project area all have the representative organizations taking the role of a bridge with organizations such as the Women's Union, Farmers Association, and Youth Association at commune and village level.

5.2. Consultation of ethnic minority people during the project preparation process

To implement the first step of the consultation process, it is required to conduct broad consultation, pre-consultation and information dissemination consultation with EM communities in an appropriate manner with their culture in SP areas where EM people live. The consultation is implemented through concentrated group discussion with some small EM people samples (from 10 - 12 people/hamlet). Participants are selected on a random basis with purposive sampling to be able to collect more viewpoints and perspectives. Group discussion is a proper method for consultation because it encourages the sharing as well as debate about viewpoints and ideas related to SP proposals.

Social experts have conducted a free consultation, pre-consultation and information dissemination consultations in 3 hamlets with EM people under the affected scale of the sub-project, private consultations with EM women groups. Discussed topics included: (i) provide information about sub-project, compensation and resettlement for affected people; (ii) get to know disaster history (flood and drought), characteristics of annual disasters, disaster prevention and rescue capability of the people & local authority, aftermaths of annual disasters, get to know about social networks in disaster risk prevention and recovery activity after disasters; (iii) expectations of EM households when implementing the project and substitute activities to recover income; (iv) select forms of compensation and resettlement of affected people with revoked land; and (v) get the people's broad agreement & support as well as recommendations or proposals to the project.

The general and specific objectives of the project are presented to participants and all participants express their expectations and concerns over risk mitigations for disasters such as typhoons, flood, drought, etc. facing them annually. All participants support the project and hope that the project will be implemented soon to protect them from annual disaster risk. The summary on contents of consultations of the three hamlets is attached in the Appendix.

5.3. Consultation of ethnic minority people during the project performance

In the project performance stage, EM people will be consulted about all SP activities which may have potential positive or negative impacts on them during the SP phases. All attempts will be made to involve EM people in the planning, design,

implementation and supervision of measures to maximize benefits from the project or avoid negative impacts; and restrict, minimize or compensate for unavoidable impacts.

The provincial PMU (PPMU) will be responsible for ensuring the engagement of the community through CPC, community groups, leaders of locality, EM people, Women's Union, Fatherland Front and local agencies being in charge of ethnic minorities affairs. The participation of all people in hamlets in meetings and organization of private meetings with EM women are very important to know their perspectives on project's activities as well as define positive and negative impacts of the project on their life.

PPMU will regularly organize meetings with CPC, Women's Union, heads of hamlets and local community to ensure that all relevant people have sufficient awareness and understand about contents of the project. The purpose of the consultation is that all EM people to be affected by the project will receive sufficient and early information about the project, project scale, and potential impacts on the local community, mitigation measures, grievance redress mechanisms and implementation plan. These meetings will be scheduled in accordance with the set milestones during the SP phases. PPMU will work with the provincial Committee for Ethnic Minorities Affairs or officers in charge of district ethnic minorities' affairs to ensure that all impacts are identified and solved timely.

Through the consultation process, PPMU will inform EM people about their rights, project scale and potential impacts on the economics, environment and natural resources. PPMU will submit documents about the participation and consultation process to WB for consideration and inspection. When there is great difference or conflicts between EM people and project management unit, PPMU will adapt a "friendly" negotiation to handle those differences. The friendly negotiation consists of mutual respects with regard to cultural differences and discussions of issues with the legal representative of EM people, provide sufficient time for making decision, are willing to compromise and record the results. Without the broad support of the community to the SP, WB will not fund the SP.

It should be noted that not all EM people in Vietnam, especially women, the elderly and people living in EM communities in remote rural areas can speak Vietnamese and their Vietnamese reading skills may be very limited. The literacy as well as affected EM people's ability to read and write will be determined through social impact assessment. Suitable communication/media methods and modes with the culture and gender will be employed to abolish communication barriers. This activity may include the translation of document to the language of ethnic minority people, use of interpreters in community meetings, adaptation of more communication method in picture in SPs with illiterate or low-literate EM communities; and organize private meetings for women and men in accordance with local customs and culture in needed

places.

5.4. Information dissemination

Once preparation of an EMDP is completed, it needs to be disclosed to affected EM peoples and their communities. The EMDP needs to be disclosed in an appropriate manner to ensure affected EM people and their community can conveniently access and can fully understand. In addition to public disclosure of the EMDP, meetings need to be given at the community where EM peoples are affected by the subproject. Where needed, meetings should be conducted using the language of the EM affected to ensure they fully understand the EMDP objective and can provide feedback.

Please note that all EMDP prepared during project implementation must be disclosed locally in a timely manner, before appraisal/approval of these subprojects. The EMDP need to be disclosed in an accessible place and in a form and language understandable to affected EM as well as key stakeholders, and in Vietnam Development Information Center (VDIC) in Hanoi. For subprojects that are categorized by the Bank (at the time of appraisal of the subproject) as Category A (by Environmental screening), the EMDPs for such sub-projects must be translated into English by PPMU and submitted to the Bank for Bank's disclosure at Bank's VDIC and Infoshop.

6. ACTION PLAN FOR MITIGATION OR COMPENSATION MEASURES FOR NEGATIVE IMPACTS OF THE PROJECT

6.1. Plans to mitigate negative impacts

All measures aim to ensure that ethnic minority people receive proper social and economic benefits in accordance with their culture, gender and economic development conditions. Remaining risks to ethnic minority people need to be defined and receive appropriate resolving orientations.

If the external supervisors find out that the general measures listed below are insufficient for solving risks, other measures will be supplemented and the relevant budget will be allocated. Specific measures are funded by EMDP budget.

6.1.1. Solution 1: Support livelihood recovery for community

Results of consultations in the villages of affected ethnic minorities showed different needs in order to improve incomes as affected agricultural could not be produced with rice. The wish of affected ethnic minority households in three villages is to switch from growing rice to corn and peanuts within three-month time because water cut during dam construction is very necessary.

So as to implement this program, supporting corn and peanut seeds with fertilizers is the indispensable measure to help affected households in terms of agricultural land for rice cultivation to switch to grow corn and peanuts to recover income and develop household economy. Because water cut will be conducted in crop of spring which is not rainy season so natural water source (rainwater) is not adequate to provide for rice cultivation in the crop of spring. Rice cultivation area is switched to grow corn and peanuts. Because corn and peanuts do not need much water, natural water sources in the crop of spring guarantees the good growing of corn and peanuts during the water cut time for dam construction in the crop of spring.

The support rate is calculated based on the area of one ha. Specifically as follows:

Support for seed per 1 hectare averagely is 13,500,000 dong consisting of corn and peanuts.

Support of fertilizer per 1 hectare is 5,500,000 dong including organic and inorganic fertilizers.

Total support cost per 1 hectare is 19 million dong to restructure crops from rice to corn and peanuts with support in the form of supplies and non-cash assistance.

6.1.2. Solution 2: Communication Programs

In four affected villages, the allowance of 20,000,000 dong will be allocated for the programs on the development of ethnic minorities, including communication strategy. The program will be conducted by the villages and Consultative Group on safety policy, discussions and proposals. The activities will focus on raising awareness of health and safety in the construction and operation of the dam system and dam

safety. Engage in income generation activities is also an effective way to raise awareness. It will be reviewed and approved by CPO.

6.1.3. Solution 3: Support of clean water program for households

All of the three villages: Dai Dong, Dai Thang and Thang Loi having the number of ethnic minorities higher than 90% and affected entirely with 223 households in 3 villages will be supported an amount in the EM development plan package for the construction of clean water for drinking and living activities of households.

In accordance with the aspiration of ethnic minority households in the consultation meeting, the current source of water for living everyday of households is from bored wells and dug wells. This water source is dependent on surface water supplied directly from Dai Thang reservoir, the reduction of surface water will give direct impact on the groundwater source being used by households through a system of bored wells and dug wells and the water source are contaminated with Asen.

Therefore, water cut for dam construction will reduce surface water, which will give impact directly on the groundwater source of households used in daily life through bored wells and dug well systems. Specially, the water cut period during the dry season gives even more severe impacts to water source for living of ethnic minority households.

The support of clean water program is implemented by specific activities including supporting supplies to households for building rainwater tanks used in daily life. Support with supplies including cement, bricks, iron and steel (the material is not available in locality) with a value equivalent of 5 million VND / household. The other materials are available at Locality that households can exploit or produce together with the missing materials and labor time done by households. Construction scale is decided by households and, depends on the level of use and number of people in households, but with only the general support of the program which is 5 million VND / household with supplies, non-cash support.

This helps ethnic minority communities feel safe after being affected by the activities of the project, particularly water sources in living will not be problem during the period of closing dam entrance and construction any more and also guarantee clean water sources for households in living later, ensure the community's health.

6.2. Proposal on impact mitigation measures

World Bank's resettlement policy compels to minimize the required resettlement in possible places. In required resettlement places, it is necessary to ensure that affected people by the project, especially ethnic minority people are supported to sustain their life at least equal to or better than their life before the project performance. The technical design of design and consulting company when designing the Project on "Rehabilitation and improvement of safety dam for Dai Thang

reservoir” must be discussed with the technical team, local authority and resettlement experts to minimize the land area appropriation and damage to houses, assets and crops of households.

The design and development of the project proposal has set out measures to mitigate impacts from the land appropriation and resettlement. The construction items which require land appropriation are dam upgrade and dam safety corridor have been carefully studied and many construction activities are also paid attention to avoid appropriating land and affecting other assets on land. Particularly, it is essential to select construction period to minimize impacts on the water source for production and living of households in the project area.

- Upgrade dam safety corridor: is a work item with permanent and temporary land appropriation.
- Overall construction: is a work item with permanent and temporary land appropriation.
- Moreover, when preparing the working design, constructors have made prudent calculations to minimize the land area appropriation and impacts on the water sources for production and living of the people. This land area belongs to 3 hamlets with over 90% ethnic minority people; therefore, the construction does not have much influence on the production and living in residential areas.

7. ESTIMATED EXPENDITURE AND BUDGET ALLOCATION PLAN FOR ETHNIC MINORITY DEVELOPMENT PLAN

7.1. Budget

All costs for the ethnic minority development plan of the project on “rehabilitating and improving the village’s reservoir” used is from the World Bank’s fund.

7.2. Estimated expenditure

Cost of EMDP is estimated to be rounded to 2.553 billion VND (approximately \$ 118,219). This figure includes specific measures and provision expenses. Monitoring and evaluating costs of EMDPs are included in these of RAP. Support for plant structure changing when water was cut for dam construction (support of seed and fertilizer) are based on the local reality.

Table 18. Budget for ethnic minority development plan

| No. | Programs and activities | Units | Quantity | Unit price (dong) | Total (VND) |
|----------|--|-----------|------------|----------------------|----------------------|
| 1 | EDMP expenses | | | | 2,220,470,000 |
| | Support for plant structure changing when water was cut for dam construction (seed and fertilizers support for raising corn and peanut) | Ha | 57,13 | 19,000,000 | 1,085,470,000 |
| | Communication support | Time | 4 | 5,000,000 | 20,000,000 |
| | Support for clean water program (rainwater tank construction) | Household | 223 | 5,000,000 | 1,115,000,000 |
| 2 | Provision expense | % | 15% | | 333,070,500 |
| | Total | | | | 2,553,540,500 |

The expenditure for EMDP implementation is directly distributed to each household through the province, district, commune, hamlet, and is implemented immediately after the water cut-off for Dai Thang Reservoir upgrading.

8. GRIVANCE REDRESS MECHANISM

8.1. Main principles of grievance mechanism

During the project performance, EM people, other local communities and relevant people to the project can file a grievance to implementation agencies or the local authority. Therefore, the grievance redress mechanism for the whole project and items of sub-projects will be applied to EM people. To ensure that the above described grievance redress mechanism is practical and acceptable by affected EM people, the consultation with the local authority and affected community about this mechanism will be implemented to all sub-projects/activities and needs to include main principles to ensure:

- Affected EM people have basic rights and benefits
- EM people are entitled to file grievance and have their grievance redressed free of charge.
- Grievance redress measure will be an important part in the community-based conflict settlement mechanism and be suitable with the culture.

The grievance mechanism must be publicly disseminated to affected community and they must be informed about contact address of respective organizations at any relevant levels that people can file their grievances to. All grievances related to any aspects of the project will be solved through negotiation to reach the consent.

8.2. Grievance redress mechanism

All grievances related to any aspects of the project will be solved through negotiation to reach the consent. Grievances will be settled through 3 steps before being submitted to the legal court as the final option. CPO will be liable for all administrative and legal expenses arising from the grievance and grievance redress activities.

8.2.1. First step, CPC

A dissatisfied affected household will submit their grievance to any member in CPC through the head of hamlet or directly to CPC in written or oral form. Above-mentioned CPC member or head of hamlet will inform to CPC about the grievance. CPC will personally work with the affected household with the grievance and has about 30-45 days for settlement after receiving the grievance. The secretary board of CPC is responsible for making records and store all grievances that they are handling.

When CPC promulgates the decision, the household can appeal within 30 days. If the second decision has been issued while the household still has not satisfied with the decision, they can submit grievance to DPC.

8.2.2. Second step, DPC

After receiving grievance from a household, DPC will have about 30-45 days from receiving the grievance to solve the case. CARB is responsible for making

records and store documents about all grievances that they are processing.

After DPC promulgates the decision, the household can appeal within 30 days. If the second decision has been issued while the household still has not satisfied with the decision, they can submit grievance to PPC.

8.2.3. Third step, PPC

After receiving grievance from a household, PPC will have about 30-45 days from receiving the grievance to solve the case. PPC is responsible for making records and store documents about all grievances submitted.

After PPC promulgates the decision, the household can appeal within 30 days. If the second decision has been issued while the household still has not satisfied with the decision, they can submit grievance to court within 45 days. In that case, PPC shall pay the compensation into an escrow account.

8.2.4. Final step, civil court

If the grievancer submits the document about the case to the court and the court make a favourable decision to the grievancer, the provincial authority shall raise the compensation to the level decided by the court. In case the court makes a favorable decision to PPC, the grievancer will receive the amount submitted to the court.

To ensure that the above-described grievance mechanism is practical and acceptable to PAPs, a consultation meeting has been organized with the local authority and community with consultation on specific cultural identities as well as traditional cultural mechanisms in submission and settlement of grievances and conflicts. The objects and efforts of ethnic minority groups also determine and decide acceptable methods regarding culture to work out acceptable settlement methods.

The grievance redress procedure for affected people has been described in the document “Information about Project on Rehabilitation and improvement of safety dam for Dai Thang reservoir“ which has been delivered to affected people. To avoid the situation in which affected people do not know who to meet in commune, district or province to solve their grievances, the document has provided accurate name, address and telephone number of standing people to solve grievances so that affected people can make grievances effectively.

Affected people will be exempted from all expenses related to legal and administrative procedures. Grievances to court are also exempted from fee for submitting application. All the grievance records and settlement measures will be stored at CPCs, commune-level community consultation committees and investors of works under the Sub-project on “Rehabilitation and improvement of safety dam for Dai Thang reservoir”

9. MONITORING AND EVALUATION

9.1. Monitoring principles

To ensure that EMDP is implemented in a transparent manner and comply with EMPF as well as World Bank's Indigenous Peoples Policy (OP 4.10), a monitoring and evaluation mechanism needs to be established and deployed for all project items during the project performance process. Monitoring and evaluation is a continuous process. PPMU will be liable to the internal monitoring and an external agency selected by CPO will be responsible for independent monitoring and evaluation. Based on the monitoring mechanism, a monitoring and evaluation plan on mitigation measure will be prepared by PPMU. This plan will describe:

- Internal monitoring process.
- Main monitoring indicators to be employed in internal and independent monitoring.
- Constitutional organizations;
- Report frequency, internal & independent monitoring content, feedback integration process from internal & independent monitoring into the implementation process.
- Independent monitoring method;
- Financial arrangements for independent monitoring and evaluation activity.

9.2. Internal monitoring

Objectives of internal monitoring are:

- Ensure that all negative impacts of the sub-project to EM people are minimized, restricted or compensated in accordance with RPF, RAP, EMPF and EMDP.
- Ensure that measures on benefit enhancement and negative impact mitigation are implemented in a cultural compatible method for EM people.
- Determine whether the broad consultation, pre-consultation and information dissemination consultation for EM communities are implemented in a cultural compatible method for EM people or not.
- Determine whether grievance procedures comply with EMPF or not and propose measures if there is any unsettled problem.
- The suitability between the implementation of resettlement and site clearance with the construction inauguration to ensure that affected EM people receive satisfactory compensation and support before construction activities are deployed.

The provincial Project Management Unit will implement the internal monitoring on a monthly basis. All the results of internal monitoring shall be reported to CPO and WB. In fact, the implementation of EMDP internal monitoring needs to combine with RAP internal monitoring. The results of RAP and EMDP monitoring need to be presented in a report and submitted to CPO and WB for consideration.

EMDP internal monitoring indicators include (but are not limited to):

Table 12. Internal monitoring indicators

| Type of monitoring | Internal monitoring indicator |
|--|---|
| Expenditure and time | <ul style="list-style-type: none"> - Are sufficient personnel arranged for supporting ethnic minority people according to the plan? - Do support activities satisfy the set implementation plan? - Is expenditure for EMDP implementation allocated to implementation agencies timely and sufficiently? |
| Benefit payment to EM people | <ul style="list-style-type: none"> - Are benefits from support to EM people paid adequately? - Are support measures implemented in accordance with the plan for EM people communities? - Is access to schools, medical services, places and socio-cultural activities available for ethnic minority communities? |
| Consultation, grievance and special issues | <ul style="list-style-type: none"> - Are community consultation and information dissemination implemented for EM people according to the plan? - Are concentrated group discussions implemented with small affected people samples? Are private consultations conducted with affected EM women groups? - How many affected EM people know about their benefits? - Do affected people know and use grievance mechanism as set up in EMPF? What are the results? - Quantity and type of grievances received (classified by gender and vulnerable group) - Quantity and type of grievances settled (classified by gender and vulnerable group) - Levels of awareness and satisfaction on benefits of EM people. - Satisfaction level on grievance mechanism. |

9.3. Independent monitoring

The independent monitoring will be implemented by an independent agency with expertise in social science. The independent monitoring on EMDP implementation for all project items should be integrated in the independent monitoring for RAP implementation along with monitoring method and indicators but with concentration on EM people. The monitoring is periodically implemented twice a year and the monitoring report will be submitted to CPO and WB for consideration.

Table 13. Independent monitoring indicators

| Type of monitoring | Independent monitoring indicator |
|---|--|
| Some basic information about affected EM households | <ul style="list-style-type: none"> - Location - Number of affected EM households - Average number of household members, age, literacy - Gender of householder - Access level to medical & educational services, utilities and other social services - Types of land and legal land use status - Occupation and employment - Source and level of income |
| Living standard recovery | <ul style="list-style-type: none"> - Are compensation and support for EM people paid sufficiently and timely to affected EM people? - Are main environmental, cultural and social conditions of affected EM people recovered? - Have the list of EM people, especially vulnerable group been stabilized? |
| Livelihood recovery | <ul style="list-style-type: none"> - Are compensations enough to replace for lost assets? - Are vulnerable groups provided with opportunities to have income? Are these opportunities sustainable? - Can new jobs recover the income and living standard as before the project performance? |
| Satisfaction level of affected people | <ul style="list-style-type: none"> - Do affected EM people agree with the compensation price? - How is the awareness level of affected EM people about resettlement procedure as well as their rights and benefits? Have they known about whether these rights been met? - How do affected EM people assess about the recovery level of their living standard and livelihood? |

| Type of monitoring | Independent monitoring indicator |
|---------------------------|--|
| | <ul style="list-style-type: none"> - How is the awareness level of EM people about grievance process and grievance redress procedure? - Have grievances of EM people been received and solved timely and satisfactorily in accordance with the regime in EMPF? |
| Effectiveness of support | <ul style="list-style-type: none"> - Are affected EM people and their assets inventoried correctly? - Do the time and compensation meet EMDP objectives? - Are benefits for EM people satisfactory? - Is there any support for vulnerable group? |
| Other impacts | <ul style="list-style-type: none"> - Are there any unexpected impacts on employment or income of EM people? - How are those unexpected impacts solved (if any)? |

10. APPENDIX

SUMMARY ON CONSULTATION RESULTS WITH ETHNIC MINORITY PEOPLE

1. Objectives of consultation

Group discussions aim to: (i) Provide information about sub-project, compensation and resettlement for affected people; (ii) get to know disaster history (flood and drought), characteristics of annual disasters, disaster prevention and relief capability of the people & local authority, aftermaths of annual disasters; (iii) get to know about social networks in disaster risk prevention; (iv) select forms of compensation and resettlement of affected people with revoked land/house; and (v) get the people's broad agreement & support as well as recommendations or proposals to the project.

2. Contents of consultation

- 1) Information about the project
- 2) Some cultural identities of ethnic minority people
- 3) Current livelihoods of people
- 4) Disasters and disaster prevention in the locality
- 5) Issues related to land revocation, compensation, support and resettlement
- 6) Evaluation on people's support to the project

3. Methods of consultation

Group discussion is conducted with affected/non-affected EM people selected from various household groups by living standard, gender and age. Each group consists of 15-30 people. A social expert will instruct the discussion and record exchanged information. People discuss freely in accordance with the instructions of the social experts without any external intervention or coerce.

4. Summary of consultation results

Time of consultation: 28 March 2015

Place: Dai Thang, Thang Loi and Dai Dong hamlets of An Binh commune, Lac Thuy district, Hoa Binh province

Object of consultation: **Muong ethnic group**

Number of participants: 10-12 people/hamlet

Consultation results:

1. Some cultural identities:

- They have private language and traditional costumes. Daily costumes are similar to those of King People.

- Daily communication in family is conducted in the language of the ethnic minority group.

- Young people can read and write Vietnamese proficiently while old people have no restriction in communication in Vietnamese.

- They have integrated with the life of Kinh people in the locality for a long period and it is impossible to discriminate Muong people and Kinh people through their appearance.

- Funeral and marriage rites of Muong people are similar to those of Kinh people and are in harmony with hamlet's conventions.

2. Main livelihoods generating incomes for households:

- Local people mainly do agricultural work; and the agricultural production is always subject to natural impacts.

- The rice area with regular watering reaches 100% and water is taken from Dai Thang reservoir.

3. Disaster and prevention:

- Types of disasters which often occur in the commune are typhoons and flash floods which often happen in July and August annually. Disasters almost happen every year.

- Disaster prevention measures and developed for each hamlet. Coping forces are prepared and 4 on-spot motto are practiced. Equipment for disaster prevention mainly includes embankment, timbers, soil bags, etc.

- The people are well-aware of the danger of typhoons and floods. The authority always has instruction alternatives to mobilize coping force and militia to be ready for coping with disasters.

4. Land revocation, compensation and resettlement

- Most of the people have demand for receiving compensation in cash and self-arranging crops on the affected area during the water cut-off for reservoir construction. (Arrange crop structure reasonably and turn to plant secondary crops).

- The people require to be compensated according to the market price.

- The people are willing to support the construction and upgrade of Dai Thang reservoir.

5. Support on project

- The investment project aims to protect human and assets of the people from the disasters, so the people are very eager and willing to support the project. They are voluntary to contribute their labour to the project.

- 100% of consulted people support the project performance.