THANH HOA PROVINCIAL PEOPLE COMMITTEE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

SOCIAL ASSESSMENT

DAM REHABILITATION AND SAFETY IMPROVEMENT PROJECT (WB8)
SUB-PROJECT: DONG BE DAM REHABILITATION AND SAFETY
IMPROVEMENT, XUAN DU COMMUNE, NHU THANH DISTRICT,
THANH HOA PROVINCE

THANH HOA – June 17, 2015

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REPORT

ON

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CONSULTING FIRM

THANH HOA – June 17,2015

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ABBREVIATIONS

AP Affected person

CPO Central Project Office

CPC Communal People's Committee

DARD Department of Agriculture and Rural Development

DMS Detailed Measurement Survey

DPC District People's Committee

DRC District Resettlement Committee

DRASIP Dam Rehabilitation and Safety Project

EIA Environment Impact Assessment

EM Ethnic Minorities

EMPF Ethnic Minorities Policy Framework

EMDP Ethnic Minorities Development Plan

ESIA Environmental and Social Impact Assessment

ESMF Environmental and Social Management Framework

ESMP Environmental and Social Management Plan

GOV Government of Vietnam

HH Household

IOL Inventory of Losses

IMA Independent Monitoring Agency

WB World Bank

LAR Land Acquisition and Resettlement

LURC Land Use Right Certificate

MARD Ministry of Agriculture and Rural Development

MOF Ministry of Finance

MOLISA Ministry of Labors – Invalids and Social Affairs

NGO Non-government Organization

OP Operating Policy

PAD Project Appraisal Documents

PPC Provincial People's Committee

PPMU Provincial Project Management Unit

PRA Participatory Rapid Assessment

REA Rapid Environment Assessment

RAP Resettlement Action Plan

RPF Resettlement Policy Framework

TOR Terms of Reference

USD United States Dollar

VND Vietnamese Dong

WB World Bank

1. Background

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 sectored 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.

1.1. Project objective

The project 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.

1.2. Components

The proposed project is intended to improve the safety of the dams and related works, as well as the safety of people and socio-economic infrastructure of the downstream communities as defined in Decree 72 governing the management of dam safety in Vietnam. This adopts the international convention in defining dams based on height and volume. Specifically, the Decree defines the following: (i) large dams from 15m high or with reservoir capacity of three million cubic meters or more; (ii) medium dams from 10m to 15m high or dams with reservoir capacity from one to three million cubic meters; and (iii) small dams from 5m to 10m high or dams with reservoir capacity between 50,000 and one million cubic meters.

The project would be an optimized mix of both structural and non-structural measures. Structural measures include rehabilitation and upgrading safety work of existing dams, including instrumentation, such as safety monitoring equipment. Such physical works represent the large part of the project budget (>80%). Non-structural dam safety activities, which are a critical and key component of the Bank-supported activities under the project, would include support to strengthen the legal and institutional framework; safety monitoring; operational procedures, operations and maintenance (O&M); and emergency preparedness plans. These measures also include an assessment of the resources to ensure sustained O&M and monitoring.

- Name of project: Dam Rehabilitation and Safety Improvement Project
- Implementing agencies:
- Managing agency: Ministry of Agriculture and Rural Development (MARD)
- Project owner: Central Project Office (CPO)
- Sub-project owner: Thanh Hoa Department of Agriculture and Rural Development, Thanh Hoa Water Resources Project Management Unit
 - Project duration: 06 years from 2015 to 2021
 - Financial source: Total budget of 500 million USD

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

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

This component will improve dam safety through physical rehabilitation of existing infrastructure. This will include two different approaches required for the rehabilitation of large/medium and small, community-managed dams. The difference between the two relates not only to the types of works and the regulatory framework, but also the institutional and implementation arrangements required to undertake such works and ensure their sustainable operation and maintenance. This would include support to (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; and (iv) adoption of standardized checklist for community-managed dams.

Component 2: Dam Safety Management and Planning (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 between irrigation and hydropower reservoirs; (iii) regulatory and institutional support and strengthening on coordination mechanism including national dam policy on registration, regulation, inspection, safety compliance and penalties; (iv) technical specifications, safety standards and regulations to internationally-accepted levels; and (v) capacity enhancement, basin-wide integrated dam reservoir operation plans, emergency preparedness plan including dam break analysis, downstream flood mapping and benchmarking, awareness raising and evacuation drills for local communities living downstream.

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

This component will provide the necessary enabling environment to support project implementation. This will include support for the following: (i) Project Steering Committee composed of MARD, MoIT and MoNRE to coordinate all project interventions; (ii) Project Management Unit (PMU) within MARD to provide the necessary support services for timely and effective project implementation, including monitoring & evaluation, procurement, financial management, safeguard monitoring, etc.; (iii)Technical Assistance for beneficiary departments within MoIT and MoNRE to provide the necessary support services for timely and effective project

implementation; (iv) Establishment and operations of a National Dam Safety Review Panel; (v) Independent audits of prioritized dams before and after rehabilitation; and (vi) Incremental operating costs for project related activities.

Component 4: Disaster Contingency (US\$ 0 million - no fixed allocation, but not to exceed 20% of the total project cost)

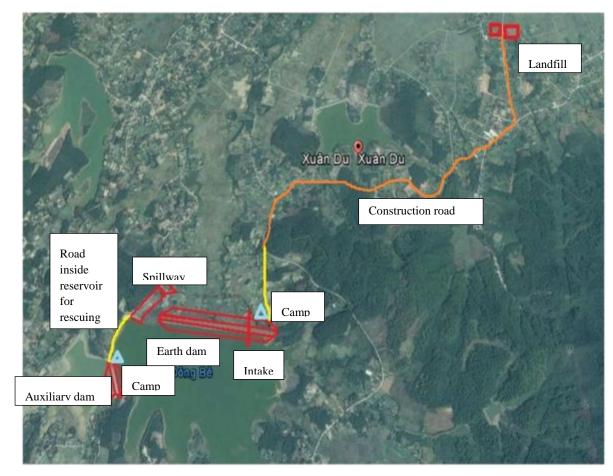
This component will improve the response capacity of the Government in case of an emergency relating to dam failure during project implementation. In the event of an emergency, this contingency component would facilitate rapid utilization of loan proceeds by minimizing the number of processing steps and modifying fiduciary and safeguard requirements so as to support rapid implementation. This component would allow expenditures to be made in accordance with the rapid response procedures of OP/BP 10.00 subject to the list of positive goods and services to be defined during project development. Such a component is not a substitution for insurance, and does not remove the need for construction covering dams included under the project. A generic positive list may be combined with a list of excluded goods that could trigger safeguard policies. This is intended to help ensure sufficient liquidity in the case of an emergency by financing the government's overall response to the emergency and providing some measure of protection to Government's fiscal accounts.

1.3. Sub-project description

The sub-project of "Dong Be dam rehabilitation and safety improvement, Xuan Du commune, Nhu Thanh district, Thanh Hoa province" is expected to be done in the first year of the project.

The main purposes of sub-project are rehabilitation of the headworks to ensure dam safety, ensure the designed irrigation capacity for 255 hectares of agricultural land of Trieu Thanh, Hop Thanh commune, Trieu Son district and Xuan Du commune, Nhu Thanh district and supply domestic water for people in those communes.

The rehabilitation components of sub-project are strengthening of main dam, building new spillway, two intake structures, embankment of flood dike, reinforcement of canals N1, N2, and building new management house.



Location of headworks of Dong Be reservoir

2. Methodology

The purpose of this social assessment (SA), conducted in an integral manner with environmental assessment for this subproject, is two-fold. First, it examined the potential impacts of the subproject – positive and adverse impact – on the basis of planned project activities. Second, its findings inform the design of measures addressing identified potential adverse impact and proposing community development activities that are relevant to the project development goal. For identified adverse impact that could not be avoided, consultation with local people, governmental agencies, project stakeholders, etc., were carried out to ensure affected peoples will be appropriately compensated for, and supported in a manner that their socio-economic activities will be promptly and fully restored to the pre-project level, at least, and that their livelihoods will not be worsen off, in the long run, as a result of the subproject.

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, 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). A gender analysis was also done as part of the SA to understand underlying gender dimensions (from project impact perspective) to enable gender mainstreaming to promote gender equality, and enhance further the development effectiveness of the subproject, and the project as a whole. Depending on the magnitude of the identified potential project impact, and the project development objective, a gender action plan and gender monitoring plan were prepared (please see these plans in the Annex 3 of this SA).

To ensure all potential impact could be identified during project preparation, the SA was conducted through series of consultations with various project stakeholders. A particular focus was maintained on households who are potentially affected (both positively and adversely). The research techniques employed for this SA include 1) review of secondary data, 2) field observations; 3) focus groups discussions/community meetings, 4) key informant interview, and 5) households survey (Please see Annex 7 for how the Sampling Frame). A total of 235 of respondents participated in the SA exercise for this subproject, of which 120 people participated in the households survey (quantitative), and 115 people participated in focus groups discussions, community meetings, key informant interview (qualitative).

In Section 4, we will present briefly the SA results. In Section 5, we will present the findings of the SA (positive and adverse impact) along with the recommendations on the basis of the SA findings, including the result of the gender analysis. Please note that a gender action plan and gender monitoring plan are presented at Annex 3 of this SA), and the public health intervention plan and public consultation and communication plan were presented at Annex 1 and 2, respectively).

3. General socio-economic situation of project area

3.1. Bio-physical information

Dong Be reservoir is located in the area of 4 communes: Phuong Nghi, Xuan Du commune of Nhu Thanh district and Trieu Thanh, Hop Thanh commune of Trieu Son district, 40 km away from Thanh Hoa city to the southwest, with geographical coordinate of 19°45'30" North Latitude, 105°30'00" East Longitude.

Reservoir area is a valley located in the mountainous area surrounded by low hills. Height of the lake varies from 31 m to 38 m. The hills surrounding the lake are strongly weathered rock hill, inside the reservoir is sedimentary rock. The vegetation in the basin of the reservoir in the form of forest regeneration.

The project area is generally characterized by a tropical monsoon climate, the year is divided into two distinct seasons. The dry season from mid-November until the end of March next year. The remaining time is the rainy season, with the heaviest rain usually occurs in July and August.

3.2. Socio-economic information

3.2.1. Area and population

The project area includes 4 communes: Phuong Nghi, Xuan Du commune of Nhu Thanh district and Trieu Thanh, Hop Thanh commune of Trieu Son district. Natural area is 7103.68 ha; agricultural production area is 1813.02 ha; forest area is 3051.94 ha; aquaculture area is 107.46; residential area is 682.86 ha. The total population is 24,716 people.

Consultant implemented sampling survey in Xuan Du and Trieu Thanh communes to collect basic data on the area, the population as shown in Table 1 below. Aggregate data showed that the population of the two communes in the project area is not much different. The average population density is 475 people/km2, 1.5 times higher than the average population density of Thanh Hoa province of 312 people/km2 (GSO, 2013). The person per household of two communes is about 4.1 persons/household, similar as statistics of Thanh Hoa province of 4 people/household. Average percentage of ethnic minority (EM) of the two communes is 32.5%. Thus, the average data of population in Table 1 can be used as baseline data representing the project area.

Table 1: Area and population of surveyed communes

Commune	Natural land area (ha)	Population (people)	Number of households	Population density (person/km²)	Person per household (person/HH)
Trieu Thanh	1092,06	5792	1544	530	3.8
Xuan Du	1708,74	7229	1602	420	4.5
Total	2800,8	13021	3146		
Average				475	4.1

According to the inventory of losses, there are 13 directly affected households (78 people) due to the acquisition of land and property on the ground to serve for dam rehabilitation. No HH is relocated, no HH lost more than 20% of productive land (10% of productive land for vulnerable households); no household has to move graves; no households in vulnerable groups and ethnic minorities.

According to statistics in the table below, the percentage of ethnic minorities (EM) of the total population of the Xuan Du, Trieu Thanh commune is 35% and 30%.

Table 5: Statistics of ethnic minorities

Commune	Ethnic minorities	Ratio of ethnic	Number of ethnic	Affected ethnic	Gender distribution	
		minorities (%)	minorities	minorities	Female	Male
Xuan Du	Muong, Thai, Tho	35	2.530	0	1164	1366
Trieu Thanh	Muong, Thai, Tay	30	1.738	0	799	939

3.2.2. Land use

The area of agricultural land of the average household in the two communes of approximately 0.3 ha / household. On the residential area, Du Xuan commune covers an area of residential land on average about 600 m2 / lower status than Trieu Thanh commune is 2700 m2 / household. Du Xuan commune commune is the main benefit

from Dong Swimming pool service area of 225 ha, while Trieu Thanh commune only 24 hectares of water supply from the lake.

Table 2: Land use in surveyed communes

Commune	Natural land (ha)	Agricultural land (ha)	Forestry land (ha)	Aquaculture land (ha)	Residential land (ha)
Trieu Thanh	1092,06	452,21	211,12	56,77	420,09
Xuan Du	1708,74	535,35	590,26	16,80	100,00

According to survey the damage on land acquisition, scope recovered mainly includes a small portion of land for agriculture or aquaculture and forestry land, does not affect the housing and structures of households. The affected households in the area of the dam should extend permanently acquired land and yard waste material should withdraw temporarily. Information about the recovery of land affected households as in the following table.

Table 3: Land acquisition

Commune	Agricultural land (ha)	Upland crop (ha)	Forestry land (ha)	Aquaculture land (ha)	Temporary land (ha)	Total (ha)
Xuan Du	0,154	0,057	0	0,031	1,0815	1,322
Trieu Thanh	0,150	0,130	0,05	0	0	0,330
Total	0,304	0,187	0,05	0,031	1,0815	1,652

4. Brief results of Social Assessment

4.1. Economic structure and main income

In terms of economic structure, there are two communal agriculture density higher than the craft industry and services (non-agricultural) as illustrated in figure 1 below. According to data reported by the socio-economic CPC, rate of agricultural population of the Xuan Du and Trieu Thanh commune was 96% and 91% is testament to the high density of agriculture. However, the per capita income of Xuan Du commune is 22.9 million / year higher than Trieu Thanh commune of 12.8 million / year.

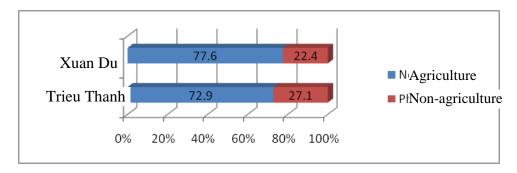


Figure 1: Economic structure

Interview results also showed that the proportion of households engaged in agriculture accounts for bulk. Occupations that members of the interviewed households were made including (1) Laborless, (2) Agriculture, forestry and fisheries, (3) Business and services, (4) State's personnel, (5) Students, (6) State, industry, (7) Workers (8) Retirement, (9) Hired work, (10) Jobless. Chart synthetic interviews below shows the percentage of people of agriculture, forestry and fisheries (2) was 46.7%. This rate is lower than the percentage of households agricultural commune in the statistics is due to agricultural households include those who do other jobs, such as students, accounting for 25.8% of students or employees or the retirement accounts for nearly 10%. Percentage of people without jobs is very low, only one case in the sample, accounting for 0.2% rate. Percentage of vocational trade, services, capital, industry is also very low, respectively, 1% and 0.2%.

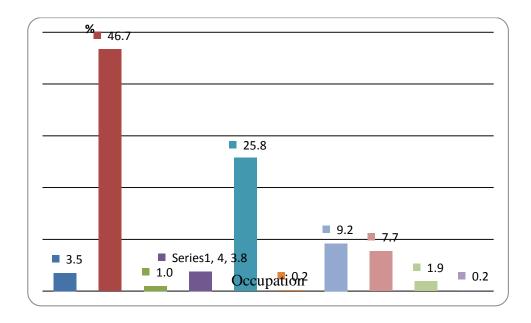


Figure 2: Ratio of career of household's members

The main income of almost people in project site is agriculture including crop cultivation and domestic husbandry. The main crops cultivated by the local people include paddy rice, maize, soybean, groundnut, sugarcane, vegetables and some fruit trees. Depending on locality and water resource, Farmers in the project area produce two (one rice + Up-land crop) to three (two rice + Up-land) crops per year. However, in the surveyed localities, a lot of people suppose that their current agricultural production is precarious because of depending too much on weather and operation of irrigation reservoir. It is special that Trieu Thanh commune has 19 small reservoir functioning irrigation for agricultural production.

Besides the income almost from rice farming, a lot of farmer HHS in the districts plant sugarcane providing raw material to Lam Son sugar factory. The sugarcane area of Xuan Du and Trieu Thanh communes are 32 ha and 50 ha. It seems that the income from sugarcane is reflected by the negative reviews because of unstable sugarcane price of the sugar factory. In the group discussions in Trieu Thanh commune, it was said that, due to high sugar inventory, the factory doesn't buy HHs' sugarcane or in case of purchase, they underestimate value of the sugarcane to reduce price, that makes serious impacts on sugarcane farming HHs. Especially, Xuan Du commune has advantage of peach tree cultivation with high economic efficiency and big income for many households.

The domestic animals raised in the project area are cows, buffaloes, pigs and poultries. The cattle are raised for draught and for selling. Poultries are rarely sold and mainly for family consumption (daily food). Some households developed model of

household's farm. Fluctuation of cattle prices also affect considerably farmers. The incomes from selling some cattle and pigs are used for purchasing household furniture, assets, etc.

Poverty is one issue in the group discussion with people in the communes. Xuan Du commune has poverty ratio of 3.2% while Trieu Thanh has higher ratio of 22.9%.

4.2. Education

Both are social survey system at three levels of education preschool, elementary and junior high school. Educational facilities, supplies of communal schools are equipped. Extension study was conducted in the commune is motivating students to achieve academic competition achievements, recommended for grade school, school, family, clan, village striving. Study Promotion Association organized gift giving encouragement of high-achieving students, students gain competitions at all levels and good teachers provincial and district levels. Each commune also has community learning centers are often organized extension activities, dissemination of scientific, technical farmers in the village.

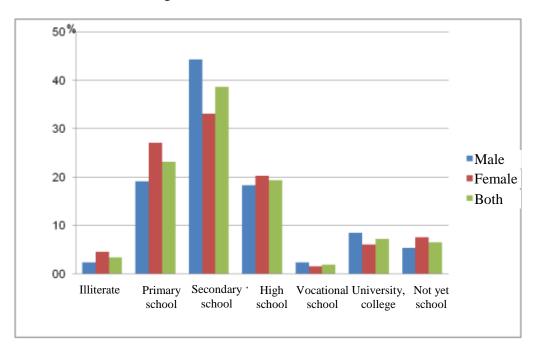


Figure 3: Education level of members

The chart shows the aggregate results of the educated people are members of the households surveyed by sex. The chart shows that nearly 40% of people with education junior high school level and the rate of men and women at higher levels. The illiteracy rate around 3% of that amount to more women. Percentage of people attending school or vocational secondary level is quite low, only 2%, but the rates

were much higher university degree with 8% divided equally among both men and women. So, basically the people here have been compulsory education to all primary, most of them are literate.

8% of households with children in school age (5-17 years old) but was absent from school, including 16 boys and 10 girls. The cause of all these cases is due to economic hardship to families of children out of school to help employees work producing family.

4.3. Health care

For farmers manual labor, health is a very important factor to maintain production and life. In the past year, with 86% of the households surveyed have a sick person. Among them, 76% of colds, flu, 26% of people with respiratory diseases, and the rest of malaria, cholera, hepatitis, high blood pressure, accidents and injuries. With common illnesses such as colds, flu, cough, rhinitis, up to 65% of the people to health care in CHCs. Choice of health care people are second in district hospitals with 62% of respondents. And about 22% of people in the provincial hospital treatment, no treatment cases in the central hospital.

As reported by Xuan Du commune, number of households using water hygienic 92.5% of households have sanitary latrines is 82.5%. However, 60% of people said that the factors that adversely affect people's health such as foods, vegetables and unsafe drinking water sources contaminated. Especially near the households in the cemetery reflects their well water contaminated clearly seen. Thus, 75% of people have health insurance to reduce the likelihood that health care costs in the year.

When asked about the disease through sexual transmission (HIV / AIDS), only about 50% of people are aware of this problem. Most people (88%) is still the notion that AIDS is an incurable disease. However, 90% of people were aware of the precautions such as not sharing needles and used condoms during sex. Mostly people absorb information through Figure broadcasts on television (92%) and others from the community meetings (25%).

In a commune in the project area have commune health stations with the basic information in the table below. Halls clinics are the 4 levels, built so long old. Each station can range from 11 to 14 beds, with rooms divided into as clinics, clinic, the room, pharmacy. Only station pages, minimal equipment to treat common diseases in the locality. Each station has 5 to 6 staff, including one doctor (head station), 2 doctors, 2 and 3 nurses.

Table 4: Infrastructure of clinic centres

Communo	Clinic centre			
Commune	Number of staff	Number of patient bed		
Xuan Du	6	14		
Trieu Thanh	5	11		
Total	11	25		



Figure 4: Clinic centre of Trieu Thanh commune

4.4. Migration

Some features and similar in the two communes rate long-term migrants and seasonal migration is relatively large. Included all two types of migration, the migration of the population in the range of 15% - 30% of the population of each village. Especially as Xuan Du commune with over 1300 employees who travel outside the communes and 32 migrants have a term abroad brings significant source of income for the family. Migrant workers abroad to export tends to rise as the local authority has determined this is one way to effectively reduce poverty. The female workers often work as Hanoi, cooking, masonry, selling clothing, agricultural products. Many women in the social workers had to Taiwan to help the family, or as garment workers, factory assembled in the electronic components.

Migration has brought a significant source of income for families in the commune and that funds for agricultural development for many households by income from migration can average a month with average income within 6 months from agriculture. The field work such as plowing gradually mechanized and households with migrants lack of manpower used remittances to pay for plowing hired by machinery. However, migration also creates negative consequences such as burden of farm work and family set off on the shoulders of the woman in the back; or are elderly home care to children and this can profoundly affect the psychology of the child to live away from their parents long as families migrated to the south of both spouses, and to children for grandparents, relatives caring relatives.

4.5. Features of water use and management

Dong Be the reservoir is used to store the water in the lake for irrigation for agriculture, water supply, fisheries and flood control. Ho Company Ltd. is a member exploit Chu River irrigation management and operation of water supply for irrigation of 255 hectares of Du Xuan Commune, Trieu Thanh and The City. Also lake water also some aquaculture area of the commune. During operation, the lake is also the company combined Chu River flood control project.

At the station manager Dong Be the lake, there are three officers of the Company standing Chu river management and operation of the lake. The cost of operating and maintaining the Company's annual pool of about 350 million from the state's irrigation charge level. However, according to the records management staff, the only source of funding to meet the operational and maintenance, repair often, not enough to carry out major repairs while the lake was degraded after time long operation. Due to the structure of the current dam safety should not only keep the lake water level lower than ability, plus the amount of leaking water drains should not ensure the water supply for irrigation in late March and 4 dry season. The N1 and N2 irrigation brick building has long been due to serious degradation, erosion positions were dropped, very low hydraulic conductivity.

Every case, the scheduling communal agricultural production and water use requirements Song Chu sent to the Company to prepare operational plans. Each phase of the lake water level lasts about a week. During that time, the team of social irrigation in the irrigation layout operator opens the drain on the infield irrigation system to bring water to the fields. Irrigation force members are mostly elderly men and rural communities is proposed to undertake the infield irrigation.

4.6. Features of reservoir unsafe

The Dong Be reservoir is earth dam construction was started in 1989, in 1991 completed and put into operation and use management.

After months 5/1991, the water runned high exceeds 70 cm to erode spill down the slope, downstream flood overflow, seepage through the dam body, powerful probe doang open drain. Dong Bun of Xuan Du commune village was flooded then it was designed additional flood protection dike dam 300m from left shoulder and cut through the reservoir dam expansion, repair slopes spill itself, backyard with conventional concrete.

In 1996, major flood reservoir dam breaks, flooding and loss of 20 ha of rice and crops and property of the people in Trieu Thanh commune. In 1997, after this incident, the company invested Chu River irrigation repair flood overflow, additional wrap filled with concrete on concrete, lasting backyard filled, sealed manhole repair. In 2003, the company continues to make waves on the top of the dam wall, covering additional downstream of the dam body, which drains from the surface down to the foot of the dam and downstream drainage material combined filter bed feet downstream.

After 20 years of operation, the effects of weather over time affects the safety of the lake. Along the length of the dam location appears more permeable, roof tiles in the upper number is falling, peeling choppy. The upstream toe of the slope, the middle dam, sinking hammock, flat roof design than lead to unsafe work. Drain water is not guaranteed by construction should be open slots fade unsealed lead to water, valve problems. Concrete sewer pipe itself was badly damaged, the concrete was much mulch reduces the intensity, some sections of the reinforced openings. In flood overflow, overflow concrete face many seats were peeling, broken power consumption levels passages. Section from the managers to the foot of the dam are still dirt roads, often muddy, hard to go back in the rainy season and reduced ability to cope with the problem of operating personnel.

The investment in the repair of the unit's management should limit the work day a degraded. The residential area, irrigated area in downstream lakes are vulnerable to unsafe work when crash. When the flood risk unsafe reservoirs, Trieu Thanh commune displaced about 100 households out of dangerous places.

5. Main findings of Social Assessment

5.1. Gender issues

The group discussions in two communes involved a half of women consulted on gender and other issues related to the project. Some interviews with key informants such as President/ Vice president of Women Unions and CPC leaders were conducted.

a. Women and the division of labor by gender

Women account for more than a half of population (49.2% in Xuan Du and 53% in Trieu Thanh) and a significant percentage (near 60%) in labor force in two communes. The middle-aged women and men are the main labor force participating in agriculture activities in project area because almost young men go to work far from the localities. Information collected from group discussions shows that the phase of ploughing and harrowing which is before undertaken by men. The activities such as seedlings transplanting, fertilizing and weeding have been still done by women. Many women and men who migrate to the northern areas often return home when the seasons come to more actively participate in the production stage. Men still play a decisive role in making the production investment direction of the household.

In the project area, women undertake about 80% the hard household chores and work more than men 10 to 12 hours per week. Housework division still remains as traditional. In family, women take the main responsibility of housework and taking care of children. Although a lot of men think that they should share housework with their wives, but in fact, average time of working of women is much longer than of men. As the result, women are too busy and have no time for relax. By estimate, in two communes, average time that a woman works per day reaches about 10 to 11 hours. Almost women are farmers but beside the income-generating activities, women are also overloaded with almost household chores and taking care of family's members.

The traditional concepts about gender and obstacle on time have hindered women's participation in decision-making at community. The gender analysis result also confirms that women's understanding on the proposed projects and their participation into community's monitoring activities are more limited than men. This means that the future training on gender of the project should more highlight and emphasize on that women need more share from their family's members in household chores to have more time for relax and health-care.

b. Women and health-care:

Access to health clinics is important for women. It means that they and their children are able to recover more quickly. For women, this is especially important, not only because women and children tend to fall ill more often but also because they do not have to stay home so long to tend to their sick children. Each commune has public health-care centre and each district has hospital. Most ethnic minority women give birth at the health care centre of the commune. The villagers presently could access easily to the commune health care centre or village's nurses.

However, results of the consultations and group discussion show that women with gynecological problems make up the high rate in almost localities. In the group discussions, it was said by lots of people that the reason for gynecological disease is related to environmental condition and working environment of women (unsafe water, lack of sanitary bathing places or flood). Moreover, many other opinions mention the limited knowledge on disease prevention and treatment of both men and women. A lot of men expressed that they have never heard or discussed about prevention of diseases of the reproductive organs and are not aware of that husband needs to have coordination activities with his wife in gynecological treatment. Therefore, there should be the programmed improving knowledge of both men and women including the ethnicity on reproductive health and gynecological treatment.

c. Issues related HIV/ AIDs

Construction for long times could increase the risk of HIV/AIDS infection with a greater influx of outsiders as construction workers. The Women Unions, in collaboration with health centers, should pay more attention and have to conduct regular awareness campaigns on HIV/AIDS at the commune level.

d. Women and domestic violence prevention

Since the Law on Gender Equality and Domestic Violence Prevention was passed 2007, there are some progress recorded in the project area, especially in increasing awareness on gender issue and implementation of the capacity building program on gender and domestic violence prevention. Before, domestic violence was considered as the internal matter and then solved and kept secret in family without any interference of others.

The participants of group discussions expressed that the cases of domestic violence has much reduced compared with 5 years before thanks to various communication programs on gender equality promoted. In case of receiving any reports of domestic violence, the local authorities and neighbors will intervene to protect the victims or

women. This is considered as a significant progress to the situation of community's indifference and carelessness to violence against women happening popularly in rural area before. However, the participants of group discussions expressed that a lot of men still beat their wives as being drunk. Although essence of ethnic minority people is fairly benign but due to drug addiction and poverty, they may feel sorrow, falling deep into drinking and cause more domestic violence.

e. Women's participation in village's community

Women have more actively participated into the community's activities as village's meetings. According to group discussions, the women are generally active participating into training course on agricultural techniques at local dispel the current view of reality "men learn but women practice". The women union is considered as a dynamic mass organization at grass root level and plays an important role in economic development activities and environmental protection of localities. Commune Women Unions are the core member of various programs such as environment protection programs of village, new rural construction and propagation of HIV prevention, prevention of trafficking women and children, monitoring the resettlement programs and programs of new rural development.

Locals appreciate the role of women in the successful implementation of micro-credit program for families and they are in need of capital for economic development, construction and repair of sanitary facilities. All commune governments have recognized the WU as one of the most active organizations in the community. However, women are just as undertaking forces who are actively involved in community activities, but don't have the corresponding voice and position in the decision-making at all levels involved.

f. Gender equality and political participation

There are a lot of examples demonstrating the progress in gender equality issue in localities within project area since the Law on Gender equality issued in 2007. WU's members and leaders of communes and population generally state that, there are a lot of progresses in gender equality issue compared with 5 years ago. Currently, men, including EM men, have more shares with their wives in housework such as cooking, washing and taking care of children. The change of putting both name of husband and wife into LURCs is evaluated as an important legal foundation to protect women's rights in HHs. This becomes much more practically effective to protect their rights when the compensation on affected land or other assets will be implemented for these districts in future.

Women's position has been improved, although still slowly. There have been more women recruited in authority units. There have been more women participating into grass root level authority and party. Currently, women have better understanding on social, economic and cultural issues. Living quality (health, clothing, housing, transportation and cultural demand) has been being improved; birth ratio of commune has significantly reduced, from average of 3-4 children/ woman to 02 children/ woman.

However, there are a number of three children or more in a EM HH. Conditions for women to further study are not favorable due to the burden of production and family care. The commune conference commented psychological inferiority, limited communication skills and tight time budgets are these factors reduce the opportunities for advancement of women. In addition, they are faced with gender stereotypes. This is still the traditional concept "preference for boys over girls" and disregard for organizational capabilities of women because thinking that male leaders are always better than female leaders. Psychology of "preference of boys to girls" remains popular among populations of all communes.

5.2. Ethnic minorities

The ethnic minorities screening was carried out on the basis of the area of influence identified by the environmental and social impact assessment. Mostly Kinh people are living in areas affected directly/indirectly and benefited by the sub-project while ethnic minorities are living in the highland area. Within the project area, there are 145 ethnic minority households in Xuan Du commune, while no ethnic minority household lives in Trieu Thanh commune. Ratio of ethnic minority in the project area is 5% in total. There is no adverse impact of the sub-project to ethnic minorities in the project area. Moreover, all of them are beneficiaries in the irrigation command area of the sub-project.

The free, prior, and informed consultation (FPIC) was implemented with ethnic minorities in the Xuan Du commune. Almost EM communities living in the project area are Muong groups. They live there for long time. Although they have their own cultural identity presented through traditional festivals and languages, they still live together with Kinh people in the villages in the house style of Kinh people and communicate in Vietnamese. Therefore, it seems difficult to distinguish the Muong from Kinh people.

The Muong and Kinh people live in harmony, solidarity and help each other in production and daily life. Generally, a lot of EM people are not really good at doing

business like Kinh people. They also lack investment capital for production. The main source of income derives from paddy rice and sugarcane, however, paddy rice is enough for domestic food demand and sugarcane is purchased in unstable price, the income of the HHs, especially EM HHs, is not improved.

All of ethnic minority people in the consultation meeting agreed to the dam rehabilitation and safety improvement. They acknowledged the project objective to ensure safety of people living in the downstream of dam and maintain stable water supply for agriculture. Influence of construction on water supply was also mentioned. However, people agreed to the application of appropriate construction methods without influence on water supply and emergency water supply planning during construction. They expected that rehabilitation of the reservoir would improve irrigation service for their agricultural production. In addition, they proposed to project to support agricultural extension with demonstration of high-income agricultural models combined with training on advanced techniques for farmers.

Results of the EM screening confirmed a low proportion of EM (5%) in the area affected by sub-project and no adverse impacts on EM. Detail of EM issues are discussed in another individual document, the Ethnic Minorities Development Plan for the sub-project.

5.3. Positive impacts

Rehabilitation of Dong Be reservoir with the goal of ensuring safe and adequate water supply for the beneficiaries will enhance the autonomy of production, increase crop yields, cost-saving in irrigation and thus, can improve all aspects of the life of people in the communes. The project could have adverse impacts to private property and the community in some households, but in general, people are eager with the prospects and great benefits that reservoir can bring. The water supply will improve crop yields and, guarantee irrigation for farming.

According to many participants in group discussions, projects can bring benefits to both women and men in the community. From a gender perspective approach, a number of delegates said that benefits for women could be larger if compared to the benefits received by men because women's work engaged with production, land, and agricultural with needs of water. Thus, the investment in the project will have a positive impact on the community, particularly for women and men in many ways, directly or indirectly. The key benefits can be classified into the following groups:

a. Ensure dam safety

This is the positive impact of the project leading to the communities living downstream of the dam. Ho Dong pools built over 20 years ago with the technical conditions are limited so far there have been many phenomena unsafe as assessment of dam safety experts and locals. Therefore, the reinforcement and repair of items of the lake will increase the safety of the lake, reducing the threat to life and property of the people. Specifically, 100 households in the commune of two residential areas downstream dam (East Bun village, commune and village Xuan Du 9, 10, 11, Trieu Thanh commune) and the yield on 20 hectares in the commune Trieu Thanh will be secure, assured people live and produce locally.

b. Ability to increase employment opportunities and income for the community

The lake does not fix the reservoir safety but also ensure adequate water storage for irrigation water supply in the field, to improve the situation in the peak months due to lack of water and the resulting productivity and planting may yield increases. Agricultural productivity is improved (or at least stable) in some areas by reducing the risk of flooding or water shortages in the dry season.

Attractive employment opportunities will reduce the unemployment of women and men, increasing their level of participation in the labor force in all other occupations and incomes of families and increase revenue society. With rising incomes, household spending will be more comfortable and it promotes the production to supply meets demand more spending for households in the project area.

The economic development and increase local employment opportunities can reduce the number of migrants from rural to urban areas in the future. Theoretically, a decrease in the number of male migrants can freely positive impact on the goal of reducing the proportion of smokers in the village and therefore can substantially reduce the risk of HIV infection in the community.

c. Improved habitat

The repair of the reservoir will stop flooding downstream dam leaks and seepage. Therefore, the environmental conditions here will be improved, avoiding areas of standing water, stagnant ponds are often the development of the species causing infectious diseases such as malaria, cholera dysentery.

The process of developing the project as an opportunity to improve sanitary living environment of the community, raising awareness of people about the importance of social protection of irrigation works. Many educational opportunities, education and

training in gender action plan of the project will increase the awareness of environmental sanitation and health care for women.

d. Opportunities to improve community capacity

Due to the design goals and identify objects of community involvement projects, these activities or gender minorities will create opportunities for capacity building for residents of communal participation, household increase the understanding of social and community attachment, increased ability to organize, manage, monitor and increase the status of women as well as the level of community associations. They will have the opportunity to learn about the gender policy and social security of the international organizations as well as the Government of Vietnam. The ethnic minority women will have the opportunity to become familiar with the issues relating to community management, community monitoring the formation of user groups, to preserve water resources and irrigation systems infield. Women and men will have more knowledge regarding the production, or new skills to create products through rehabilitation programs in the community. The inclusion of men involved in community activities of the project will make men more aware of their rights and responsibilities to the community.

e. Solution to promote positive impacts

Repair, improve dam safety is a method to maximize the efficiency of construction investment pools. After the project is completed, its irrigation efficiency will be maximized, while creating a positive impact as mentioned above. To further promote the efficiency of the project, the unit provides case management, local government and the people should perform the following activities:

- Perform maintenance and repair lake periodically to ensure operation safety and reservoirs.
- Regularly monitor and test clock to detect the particular incident and timely processing.
- Establish information systems and reservoir safety warnings incident smoothly between the relevant agencies with government and local communities to respond quickly in emergency situations.
- Develop an emergency plan to prevent the incident to the lake, while rehearsing the prevention plans for people.

5.4. Adverse impacts

Potential adverse impacts have been addressed in the discussion groups, related to land recovery, secure environment, reducing the income of some households. The potential adverse impacts were identified including the risk occurring prior to, during construction and when the project goes into operation.

a. The impact of resettlement

The implementation of sub-project will affect the land, trees, crops of the communes in the project area. Because the subproject will only rehabilitate the existing works, it will not affect much local people; 13 households (78 persons without vulnerable one) will be affected and 1.65 ha of aquaculture land (public land) of Xuan Du commune will be acquired. No HH will be relocated and/or affected severely because their land taken constitutes less than 20% of the total productive area; no grave will be affected.

The sub-project will acquire permanently 5,721 m2 of public land where people using in the dam's protected area, including 3,039 m2 agriculture land, 1,872 m2 of upland crops land, 310 m2 of aquaculture land and 500 m2 of hilly land. The temporary land acquired for dumpsite is 10,815 m2 of aquaculture land that the Communal People's Committee (CPC) owns and contracts with HHs.

Regarding 4 HHs affected on their agricultural production on the dam's protected area to be acquired, they will be lost of rice, upland crops, and trees with following estimated quantity: 10 banana trees, 500 bamboos, 20 eucalyptus, 1,610 acacias. 9 HHs will be affected on rice and upland crops cultivated in the dam's protected area; 2 HHs will be affected on aquaculture in the public area that HHs contracted in short-term with CPC. No people's structure is affected by sub-project.

b. The risk of environmental contamination and the spread of disease during construction and operation of dam

The adverse impacts to the environment during construction and operation of the device may occur as noise, dust, if the contractor is not committed to the policy of environmental safety. After construction, the canals flow from upland to lowland areas, the possibility of pollution and health risks and threats to the environment of the residential area and the risk of disease outbreaks easily if the communes along the length of the channel does not have the sense to preserve the environment of your area.

c. Risks to safety and health of the community

The accident for adults and children can occur without the shielding safety measures and signs carefully during construction.

There is the risk of social risks associated with construction work as the risk of HIV/AIDS, so many construction workers and concentrated in construction time. The presence of a large amount of men who created a risk of transmission of HIV/AIDS through injecting and sex. Neighborhood security may be affected by the conflict between the community and construction workers can happen.

5.5. Mitigation measures

a. Consultation with stakeholders

In order to mitigate the risks associated with these possible adverse impacts and to establish communication channels, consultations with the local communities have been made during the project preparation process. Due to the project nature of foreign loans, a variety of different safeguard policies may lead to inconsistent levels of compensation in the same area. Therefore, the provinces should have the detail guidance for the implementation of the inventory, compensation with the replacement cost on the Resettlement Policy Framework of the project approved by the Prime Minister. PPMU cooperates with local authorities to disseminate project's objectives and policies for the communities to understand the implications of water use outside the communities and increase water productivity and water use efficiency.

Consultation with EM peoples:

For this subproject, a RAP has been prepared to ensure the loss of land/crop anticipated at the reservoir site will be appropriately and timely compensated for. There is no adverse impact anticipated for the EM peoples present in the project area. An EMDP has been prepared for this subproject - on the basis of social assessment and consultation with the EM peoples from this subproject. The EMDP aims to offer development opportunities for these EM present in the subproject area even though they are not adversely affected as a result of the subproject.

Free, prior and informed consultations with EM indicated that because there is no adverse impact anticipated for the EM peoples, and that the EMDP was prepared to provide additional development opportunities to EM peoples, there has been a broad community support from the EM peoples consulted for the subproject implementation.

b. Preparation of Resettlement Action Plan

Although efforts have been done to avoid land acquisition and relocation on local people, it would be unavoidable to recover land and other assets of farmers. According to the World Bank requirement, a Resettlement Action Plan (RAP) was prepared for

the 1st phase of subprojects and 2nd phase subprojects will be similar. This plan reflects on how the Project will minimize losses of the project affected people, restore their livelihoods by providing them compensation, assistance, and/or allowances. The overall objective of the RAP is to ensure that all APs will be compensated at replacement cost for their losses, and provided with rehabilitation assistance so that they could restore their livelihood – at least to the pre-project level.

c. Application of construction methods without influence on water supply and emergency water supply planning during construction

Water supply from Dong Be reservoir will not be stopped at the time of construction because the sub-project will apply appropriate construction methods and prepare emergency water supply plans. Firstly, the construction schedule which is based on the local production plan will be arranged in the winter season (from October to February) when irrigation demand is very low to avoid the influence on irrigation and agricultural production of farmers. Construction unit will embank the construction area of new intake structure while maintaining operation of former intake for water supply; after the new intake will be completed and operated, the former one will be removed. In the case of unexpected water cut at Dong Be reservoir, the Song Chu Irrigation Company and communes will prepare emergency water supply plans from other small reservoirs in the region. The irrigators of Xuan Du and Trieu Thanh communes proposed to take water from adjacent reservoirs into ponds, then pump water into irrigation canals of water cut areas. They will also discuss together with Song Chu Irrigatin Company to prepare appropriate water distribution plan to avoid water use conflicts between upstream and downstream. Therefore, water supply will be maintained well during construction of the sub-project to support production of famers.

d. Implementation of Contractor Environmental and Occupational Health and Safety Plan

The construction contractors are responsible for implementing mitigation measures and the mitigation costs will be part of the contract. Take actions to mitigate all potential negative impacts in line with the objective described in the ESMP. In order to be effective in the implementation process, PMU will establish an Environmental Unit with at least two environmental staffs to help with the environmental aspects of the project, including ESMP at the working site, actively communicate with local residents and take actions to prevent disturbance during construction.

The contractors need to prepare a Contractor Environmental and Occupational Health and Safety Plan (CEOHSP) based on the construction-related measures identified in the ESMP as well as the relevant national standards and standard practice in construction site management, including good housekeeping, construction waste management, etc.

6. The role of stakeholders

6.1. Central Project Office

CPO will be responsible for covering all the activities of the project activities as well as activities implemented the social security scheme through a consulting firm. Social consultants shall coordinate closely with the PMU in the deployment and implementation of activities at the district and community levels.

6.2. Provincial Project Management Units

PPMU will work with other agencies involved in the Vietnam provincial, district support activities and social security, coordination training, capacity building, and awareness-raising activities. Board PMU will be responsible for monitoring the implementation of social security plan. The implementation of social security plan will be monitored by the Consultative Group on Social MARD.

6.3. CPCs and community organizations

CPC is the largest administrative levels shall be responsible for project support in the implementation of program activities and social security at the commune level.

Farmers Union's organizations gathered masses of farmers in the village community. So many communal activities should be coordinated by organizing the farmers, especially in the extension activities under the organizational model "field day conference," hands-on, performing for her children farmers, especially the people of ethnic minorities.

WU commune is considered a dynamic mass organizations at the grassroots level and are playing a very important role in the development of economic activities and protection of the local environment. Women's Union is a member of several key programs such as the program of environmental hygiene village, new rural construction and propagation of HIV, prevention of trafficking in women and children, monitoring resettlement programs, program development and construction of new countryside.

Vietnam Youth Union is a mass organization with unified functionality and building youth programs entice youth to participate in social activities. At the local level, leaders and Youth Union members are very active in many development activities. Youth Union has the ability to connect with young people at all levels, including youth with high-risk behavior or related to HIV / AIDS. Youth Union activities need to increase awareness, education and communication for local youth, education,

advocacy healthy lifestyle among youth and support for young people in difficult circumstances.

7. Conclusions and recommendations

Project will bring enormous benefits, both immediate and long-term residents on the issue of dam safety and water supply. The project is also an important factor for the development of irrigation mountainous, remote areas, especially the particularly difficult area of water, associated with the social policy to gradually solve the drinking water for People and serve economic development and social, contribute to the success of poverty reduction programs, resettlement, development of ethnic minorities and agricultural development combined prevention and mitigation ear.

Effective project that focuses on the positive impact such security reservoirs, increase employment opportunities and income for the community, improve the environment, strengthening prevention incident, disaster for the community. However, the project should note the potential adverse impacts that may occur as resettlement, affecting the supply of irrigation water use conflicts in the country, the risk of environmental contamination and spread disease during construction and after construction in operation, the risk of affecting the safety and health of the community. Therefore, the proposed project implemented measures to minimize the negative effects as proposed in this report to ensure the life and production for people in the construction process. In addition, the beneficiaries, especially EM people, proposed to project to support agricultural extension with demonstration of high-income agricultural models combined with training on advanced techniques for farmers. This will be good activities to promote the efficiency of this project.

Annex

Annex 1. Public Health Intervention Plan

1. Main contents in the Public Health Intervention Plan

Identification of risk factors

<u>Step 1:</u> Identify health problems by answering screening questions as follows:

- What issues on health sector need to concern in the project?
- What reasons causes health risks?
- Why these health risks need to be concerned?
- What measures to identify risk factors for health?
- Is assessment of health risk appropriate to the context of the project?

Step 2: Evaluation of risk factors in both qualitative and quantitative methods.

Qualitative and quantitative information aims to assess relationship between different levels of exposure and its effects to community health, especially the adverse impacts. Methods to identify risk factors to health include: (1) physical, chemical, biological factors; (2) factors of social, cultural, custom aspects ... affect to community health.

Step 3: Description of risk

This is final step of identification and assessment process of risk factors. Objective of this step is to synthesize all information step 1 and step 2. Contents of the step aim to provide managers scientific basis for making decisions on selection of risk management solutions and provide basic information for risk communication activities.

Implementing above 3 steps aims to provide information for management of health risks which can occur when implementing project. Also, according to concept of integrated risk assessment, the three steps are implemented in a uniform and link to help determine the closest and truest risk factors.

Promoting positive factors of community health

This is an important content because besides risk of adverse impacts on health when implementing the project, positive impacts also need to interest and have solutions to promote positive factors. Such as solutions for protection of air environment, beautiful scenery, clean water in the structures during operation process or to encourage people to participate in healthy entertainment activities in the works where can be exploited to sever community activities (in accordance with regulations).

Developing community health management program of the sub-project

Based on strategic directions of community health management, the sub-projects will develop plans and programs of community health management in accordance with the characteristics of the sub-projects.

2. Management of health risks of the WB8 project

Assessment of risk factors for health

The surveys on disease in community of project area show that common diseases in this area include flu, respiratory diseases, malaria, cholera / dysentery, hepatitis, etc. The number of people suffering from colds has relatively high proportion ranged from 49% to 65%. The percentage of people who get sick in the survey of the sub-project is 86%. There are 5 main reasons have a adverse impact on the health situation from high level to low level are water contaminated, residential areas polluted, food insecurity, disease and lack of clean water for living.

Implementation process of the sub-projects can cause impacts on health and community unsafety as follows.

- Upgrading some structures will create beautiful landscape, increasing number of tourism as well as tourist services can cause some social ills such as drug smoking, prostitution, etc. Also, attracting visitors can increase environmental pollution (litter), or drowning risk for children and women.
- Affecting safety of workers during the construction project. Construction process
 can cause loss of safety for workers if not properly implement procedures for
 occupational safety, fire prevention.
- Most of results of social impact assessment showed that social risks associated with construction can be occurred such as HIV/AIDS, issues on community unsafety because a large number of workers concentrate in construction time. The presence of a large amount of male can create risk of transmission of HIV/AIDS through injecting and sex. Neighborhood security may be affected by conflicts between community and construction workers.
- Increasing agricultural production in the project area as well as the expansion of crop and aquaculture will have risk of water pollution due to increasing demand for fertilizers, pesticides and food industry.
- In consultation process, people expressed concerns on impacts on environmental pollution due to transportation of land, construction materials, oil waste, and domestic waste of workers. Travelling activities may be hindered or unsafe due to dirt roads and transportation of vehicle.

Besides, construction process can cause noise of machineries, security issues such as theft or public unsafety due to conflicts between workers and indigenous people or noise of group activities.

The process of living of workers and project management as well as operation of machinery on construction projects can lead to contamination of waste, especially hazardous waste may affect health people.

Management of health risks

To minimize the risk factors which have adverse impacts on community health, it is necessary to implement the following measures:

- It requires control and assessment measures of cumulative impacts, developing public health management plan, dissemination plan and community consultation in order to minimize impacts on surrounding communities in the project areas such as transportation, traffic, noise, etc.
- Good management of production activities; encouraging and guiding people to apply new production and environmental friendly methods; reducing use industrial feed in aquaculture and fertilizer, affecting health and environment and polluted water quality of the reservoir.
- Implementing successfully provisions on ensuring safety corridors of irrigation structures, managing dangerous areas for people, adding some items such as bridge over spillway, bridge over flood discharge route, management road combined migration, rescue, water-level gauge of flood warning ... to reduce the risk of drowning occurred, especially children and women.
- During the construction process, workers in construction site must be equipped with knowledge of occupational health, food safety, propaganda, information on health protection in order to minimum transmission of sexual diseases, etc.
- The truck transporting sand and gravel for construction services should be screened carefully to avoid spillage of materials affected roads and atmosphere (dust, dirt). Should use cars before expire date and transport with designed volume to avoid road subsidence due to over volume allowed.
- Project Management Board should have garbage containers classified for related waste oil and waste generated by activities of workers. Types of hazardous wastes should be collected and transported carefully to handle places to avoid adverse impacts on community health of the project.
- Vehicles and construction equipments must be maintained periodically. Avoid implement construction activities near residential areas in the break time. Regularly announce construction plan to communities and local authorities by telephone, speaker, text or message boards of CPC, message boards at construction site. The Management Board should install signs of dangerous warning around the construction

site to prevent movement of the local people, and control movement of people in the project area.

- When the project is put into operation, it needs to test periodically the safety of reservoirs, arranging people to monitor activities in the rainy season. Coordinating with local people in activities; constructing safety corridors of flood discharge; developing dam break scenarios; announcing time of flood discharge for people. Residents and local authorities need to have community based disaster risk response plans.
- As for sub-projects related to mine clearance activities, these activities were carried out according to regulations and mitigation measures from survey step, project design, and site clearance, ensuring compliance with safety procedures, regulations, and rules.
- Propagating disseminating to the local people around construction area on information of environmental protection, water resources, natural landscape, developing advantages of clean water for life and production.

3. Responsibilities of stakeholders

- CPO is responsible for developing community health management of the project, ensuring activities of plan to comply with objectives, coordinating the participation of stakeholders.
- Provincial Project Management Office will be responsible for general supervision of all project activities, including communication plan, public health consultation. The issues relating to public health is also one of the content is reflected in complaints mechanism of the project.
- Construction contractor:
- Commander of construction on the behalf of the contractor will coordinate with local governments to implement the communication, and consultation activities related to community health and workers.
- Contractor will be assigned to commander of or a worker in charge of occupational safety and health for workers to monitor and support related issues.
- Contractor shall coordinate with commune clinic, officers of clinic in the village to timely update on disease situation in the province or health problems of workers can spread
- Contractor shall coordinate with local authorities, clinic to inform on issues related to people's safety at construction sites or in the road for transport of construction materials / waste
- Contractor shall coordinate with CPC / clinics to coordination mechanism when accident or disease occurs.

- Workers / employees: implement fully provisions in the process of construction.
- Clinic: clinic at communes has function of management, monitoring, first aid, reporting problems to community health in the commune. Therefore, the issues relating to community health are supported by the units.

4. Monitoring and evaluation

Indicators for health monitoring and management:

- The number of accidents caused by construction of sub-projects
- The number of traffic accidents by construction vehicles of sub-projects
- Number of times / number of workers are ill, especially infectious diseases
- The availability of medicine cabinet for workers in camps
- Number of employees are guided / trained on issues related to community health: diseases transmitted via sex
- Knowledge and understanding of construction workers on prevention of social evils and social diseases
- The documentations to guide for coping with disease, accidents which contractors provide for workers

Annex 2. Public Consultation, Participation And Communication Plan

1. Information disclosure and participation

Information disclosure is an on-going process beginning early in the project cycle and continuing throughout project preparation and implementation. The process provides timely information to communities in order that they may meaningfully contribute to project design, decisions and also mitigation. Provision of timely and accurate information will avoid misinformation and inaccurate rumours from circulating in communities. During consultations particular attention is given to vulnerable groups in the community to ensure their understanding and collective input. In accordance with both WB and GoV policy (contained in Decree 69 Articles 29, 30 and 31 and 2) the PPC and DPC ensure that public notice is given and disseminate details of the approved draft resettlement plan, or framework, before project Fact Finding by the WB. This draft will also be disclosed on the WB website. Following the census of affected persons, the final resettlement plan, as endorsed by the GoV and WB, is further disseminated to the affected communities and posted on the WB website. Any updates or revisions to the final resettlement plan must be further disseminated to affected communities and again, posted on the WB website.

The Resettlement Provincial Project Management Unit, with assistance from consultant, relevant provincial and districts, communes agencies, conducted a series of public meetings to provide information regarding project activities and the proposed resettlement and compensation arrangements. These public meetings have been carried out to: (i) disseminate information on inventory and pricing results, (ii) inform the APs on amounts of compensation and supports of each affected household, (iii) to listen to their feed back and suggestions, and (iv) for revising or adjusting the inaccurate data, if any. It is important that APs are informed well in advance of the date, time and location of each meeting, and that reminders are also provided. It is essential that these meetings enjoy maximum participation as this will reduce misunderstandings and potential for conflict. For removal or relocation of tombs/graveyards or other religious or cultural significant items, special consultation took place and a record of consultation should be made available which includes: (i) nature and type of tombs; (ii) how old are the tomb and status of land where the tombs are located; (iii) new location and status of land; (iv) if the tombs are owned by ethnic minorities or not and the implications of impact on the religious and cultural sentiments of the community; (v) agreed ritual process, cost and time of removal of tombs, and other arrangements as deemed necessary.

In accordance with Decree 69/ND-CP Article 30(2b) the posting must be recorded in official minutes and confirmed by the CPC, the Commune Fatherland Front and APs. As per Decree 69/ND-CP Article 30 Clause 3(a), following expiration of this period the agency in charge of compensation will summarise all opinions and comments received, including numbers of APs and stakeholders who agree and disagree, with the compensation and land acquisition and assistance offered in the resettlement plan. Interviews with APs will be conducted in order to check the adequacy of compensation prices issued by the provinces. Further public consultations will be carried out during the implementation stage with a focus on specific activities including assessment of compensation, acquisition of land, and design of rehabilitation assistance planning. These measures are undertaken to ensure that APs are satisfied with the compensation arrangements and will not object to the disruption and that they will not suffer enduring adverse impacts due to the project and be able to fully restore and further improve their livelihoods.

Participation provides for the occasion and the process by which stakeholders influence and become co-responsible for development initiatives and decisions that affect them. Through participation, the needs and priorities of the local population are expressed and can be addressed in project and resettlement planning. The affected households and other stakeholders will continue to be consulted during RAP updating and implementation, following a two-way process – information dissemination and gathering of feedback and suggestions.

2. Public Consultation

A Social Impact Assessment (SIA) was pursued to inform stakeholders on the project and possible social impact resulting from it, and solicit their comments and suggestions on possible mitigation of the perceived impacts. The activity utilized focus group discussions that were participated in by section of stakeholders (i.e. Ethnic Minority, women, etc.) in project district.

There was an active participation of the stakeholders in the Provincial consultation meetings. Briefly, the predominant feedback related to resettlement are as follows:

- (i) All are in favour of implementing the project;;
- (ii) Un-harmonized compensation policies adopted by different projects financed by different multi-lateral funding institutions as well as the Vietnam government, are causing social problems due to disparity between unit rates used to compute for compensation and other benefits provided to affected persons;

- (iii) Since there are no available replacement land for affected households dependent on agriculture, it is essential that the crafting and implementation of viable livelihood restoration program for severely affected and vulnerable groups be given serious consideration; and
- (iv) Close coordination between the Executing agency, project consultants and concerned provincial/district/commune implementers is essential to the success of the Project;

The first public consultations at project affected communes were held prior to the commencement of the IOL and SES with participation of communal officials and affected households. In addition, focus group discussions were held with the affected people and local officials during the conduct of the census and the IOL survey.

During the meetings, the consultant teams relayed to participants the following topics:

- i. General information of the project and its features;
- ii. Objectives and Principles of RAP according to the requirements of GOV and WB's policy on involuntary resettlement;
- iii. Livelihood restoration program;
- iv. Compensation and relocation modes (options for cash and/or in-kind compensation);
- v. Ethnic, Gender and vulnerable group issues;

The reactions of the community consultation meetings were various. There are those where active participation were observed, while there were also some meetings where the public rather listen and offer minimal inter-action with the members of the consultant team. Among the issues discussed above, the following were the most significant:

- i. Basis for compensation and allowance package for affected persons; and
- ii. Crafting and implementation of a viable and acceptable income restoration program for SAHs is essential as suitable replacement land for recovered agricultural lands is not available.

The consultant carried out detailed consultations individually and/or in small groups with all type of affected households, in order to determine their specific requirements and preferences for rehabilitation assistance and, as required, resettlement.

The second of Public Consultation was held along with the Environmental Impact Assessment (EIA) for public hearing, where the contents of the resettlement plan is briefly disclosed, including its social impact assessment of the project, compensation plan and other proposed involuntary resettlement mitigation measures. Participants came from relevant affected Province departments, concerned communes and representatives from affected persons. Feedbacks and suggestions to be secured from stakeholders on the resettlement plan, foremost of which is the harmonized resettlement policy, compensation plan and income restoration approach and institutional arrangements among others.

Further public consultations will continue during updating and implementation of resettlement plans. RAP updating is necessary during the detailed engineering design phase, where the full extent of the land acquisition will be known and the DRCs would have conducted the cadastral survey to delineate the recovered and residual lands of affected persons, and prepared the updated Compensation Plan. Similar to the approach during RAP preparation, separate meetings will again be undertaken with the vulnerable and severely affected households. All consultation and disclosure activities will be properly documented. These meetings will take place: (i) following completion of the DMS and review and updating of replacement costs for affected assets, where the District Resettlement Council consults with the affected households individually and/or in group in connection with the updating of compensation and entitlements and, as warranted, income restoration programs and relocation plans; and (ii) following approval of the updated RAPs, to present to the affected households in the communes (i.e., also referred to as "final disclosure meeting") the validated/updated list of affected people, compensation and entitlements due to them, and schedule of delivery of compensation and entitlements.

3. Disclosure of RAP

A public information booklet (PIB) will be prepared and distributed to the affected households through the concerned local governments (PPC/DPC/CPC) after the approval of the RAP by WB and GOV. The following information are provided in the PIB: (i) a brief background of the Project, specifically the civil works to be undertaken andthe adverse social impacts; (ii) IOL results, with a statement that detailed information is available at the commune office; (iii) basis used for asset valuations,

stating also that detailed information is available at the commune office; (iv) the entitlements due to the affected households; (v) timing of payments and the schedule of displacement; (vi) grievance redress mechanism; and (vii) contact persons at RAP-PMU, DRCs and concerned local authorities.

With regard to disclosure of the draft RAP, key information of the plan will be disclosed to the PPC, DPCs, and relevant Provincial Departments during the third Public Consultation meetings in which Resettlement Impacts, Mitigation Measures, Compensation and Rehabilitation will be present. The results of the consultation meetings, which focused on alternative livelihoods are discussed in detail in subsequent chapter. A copy of the RAP, also translated in Vietnamese, will be placed in the provincial, district and communal offices. Similarly, the draft RAP will be uploaded on the WB website following approval of the draft RAP by CPO and WB.

Disclosure of the updated RAP to PPC, DPCs, will be carried out prior to its submission to WB for review and approval. Key information in the updated RAP to be disclosed to the displaced persons, will include: (i) compensation, relocation and rehabilitation options, (ii) DMS results, (iii) detailed asset valuations, (iv) entitlements and other benefits, (v) grievance redress procedures, (vi) timing of payments, and (vii) displacement schedule. The final updated RAP will again be disclosed to the affected households and uploaded on the WB website. The information will be made publicly available in commune offices and provided to the displaced persons in the form of a summary RAP. Social monitoring reports as well as resettlement External Monitoring Report will also be uploaded on WB website.

Annex 3. Gender Action Plan

Gender Action Plan (GAP) is designed to directly improve women's approach extent to social services, and/or opportunities and economic and financial resources, and/or base urban and rural infrastructure works, and/or enhancing voice and right of women, contributing into gender equality and empowerment to women

1. Legal policy framework

The Law on Gender Equality is considered as the key legal basis of the GoV to enhance gender mainstreaming in the socio-economic development programs.

Law on Gender Equality was issued by GoV on 29th November 2006 aiming at elimination of gender discrimination, creating equal opportunities for both men and women in socio-economic development, man power development and establishing the mutual cooperation and support mechanism for men and women in all aspects as well. Regarding content, the Law on Gender Equality launches the principle of gender equality in all fields of economics, politics, in family and society. Coming together with these principles, the Law also refers to the implementation of measures to ensure gender equality as well as the responsibilities of agencies, organizations, families and individuals in the implementation of gender equality. The strengthening of gender mainstreaming in socio-economic development programs is the measures strategy that creates opportunities for women to have voice and participation in process of decisionmaking to the critical issue of communities. It is also the measure to give women the opportunity to reach equally and sustainably the benefits of the project and the opportunity to develop capabilities, innovation in management and monitoring; and to limit the adverse impacts and promote the positive impact of the socio-economic development and construction of rural and urban infrastructure programs.

2. Main activities of GAP

The GAP of project is proposed based on the general strategy of enhancement of the extensive involvement of stakeholders in construction and management of irrigation system to ensure all concerns and interests of stakeholders (women, men, the poor, EM and farmers) are satisfied. The plan is also aimed at increasing ability and capacity of women and community in planning, implementation, management and monitoring.

The common feature of those gender actions includes (i) the common design to redress the shortcomings that women face in 5 districts and promote the advantages of women and (ii) specific design to individual issues of each group and circumstances of every district. Those activities are prepared through consultations with stakeholders,

especially to local women, and will be implemented during project's implementation. The issues that the project focuses on the most include information disclosure to people and design of actions to attract participation of whole community, men and women from the beginning. This will be implemented by the WUS in coordination with Central Woman Union during project's implementation (construction phase).

The communication/gender training programs combined with building of happy family, domestic violence prevention, development of HH's economics and protection of environment and irrigation canal system will be carried out selectively in each commune, depending on budget and actual condition as well as demand of women and community at consultations. Some training and communication activities will be highlighted in some locations based on analysis of actual situation.

Another key issue is building activities creating employment and increasing income during and after the construction phase of the project, contributing in ensuring stability and recovery of livelihood of AHs. Although the main responsibility for livelihood recovery program for Ahs belong to Provincial and district compensation committee, WUs are responsible for adding the training programs supporting women business knowledge. The specific practice measurements should pay special attention to HHs affected on land, housing and assets or relocated HHs who are the poor or womenheaded HHs and EM HHs.

Furthermore, another indispensable emphasis is communications program warning of the spread of the disease through sexual transmission/HIV. A campaign to raise awareness about HIV/AIDS prevention will be conducted at the construction site and in the affected communes before and during the construction phase of the canal system.

Employment in the construction phase is the issue attracted many people's arguments. The canal construction work will need unskilled labor to prepare the ground, making the earthworks and other activities. The preferential employment of unskilled labor in the locality, where canal is upgraded and constructed, would bring significant social benefits for women, communities and participating households, and it is also a way of compensation for households affected by construction of canals.

It should be noted that a campaign to raise awareness on prevention of HIV infection will be carried out individually by the contractors for their workers. The contractor shall prepare plan for the awareness raising campaign, organize and implement training programs for the workers. Funding for this program will come from the contractor's budget. Women's Union and village officials, along with gender specialist

will coordinate, monitor and report on the campaign against HIV/AIDS by contractors and assist them by providing documentation and implementation of activities propagation to their workers.

Employment in the construction phase is the issue attracted many people's arguments. The canal construction work will need unskilled labor to prepare the ground, making the earthworks and other activities. The preferential employment of unskilled labor in the locality, where canal is upgraded and constructed, would bring significant social benefits for women, communities and participating households, and it is also a way of compensation for households affected by construction of canals.

As per the Labor Code, all employment for civil work will have to respect GOV commitments to gender equity and promotion of ethnic minorities, including:

- Employment targets for women and ethnic minorities
- No discrimination against the employment of qualified women and ethnic minorities, and;
- No differential wages paid to men and women for work of equal value.

It will need discussion and agreement to include specifications in biding documents and civil works contracts that require, to the extent feasible, civil works and other contractors for the project to hire a local labor force, especially: i) 30% of the labor force (unskilled laborers) will come from the local project communes; ii) Among 30%, 50% will be women; and iii) Equal work for equal pay and no use of child labor.

Discussion with commune authorities will also need to identify the process to hire local people. Contractors will have to submit to the commune authorities the number of people and the types of tasks needed. The local authorities, in collaboration with the Woman Union (WU), will inform the community and will ask interested people to give their names at the commune level. The list, 50% men and 50% women, will be given to the contractors. The PPMU, district and commune authorities and WU will monitor whether the contractor meet the targets i.e. agreed percentage of local labors and women; wages to be paid by the contractor.

Serving for project management and effective mainstreaming of gender issues, the project will also ensure a minimum of 25% of total staff of CPMU / PPMU to be women. The gender training and introduction to gender action plan will be introduced to all the staff of the PMU, CPMU and the partners involved. The activities of monitor,

examine and evaluate the implementation of the GAP and gender mainstreaming in the activities will be carried out according to the cycle beginning, middle and the end.

3. The Matrix of Gender Action Plan (GAP)

Project Component	Actions
Dam Safety Rehabilitation	1. At least, 50% female will participate the consultation meetings on information regarding projects and build up the action plans for communes. In a such meeting, at least that 25% of participants will be minority women in ethnic minority communities
	+ Carrying out trainings for core groups including volunteers on communication skills. These will disseminates information on project and communicate the obligations to protect irrigation system. It is possible to integrate media content in activities hold by the happy family clubs. At least, 30% of trained volunteers are women.
	+ Carrying out communication campaigns on project implementation (be played on the district's and commune's radio, or in writing such as flyers, brochures distributed to hands of households and / or representatives).
	+ Conduct regular consultations with women and men during whole project implementation process. Formation of a feedback mechanism for the concerns of women to all levels of project leadership timely capture and adjust as needed.
	 Building community monitoring groups and these will be responsible for supervision of construction works through their locations. A minimum of 20% of the supervision leadership groups will be female. At least, 20-30% participants of training on reservoir operation will be women.
	+ The training/consultation should be held according to the time frame proposed that creates favorable conditions for women's participation.
	+ The consultation meetings, and training information can be used by the Kinh language since minority households in the commune are

	fluent in Kinh.
Dam Safety Management and Planning	 Organize some training program on gender, gender equality and environmental protection, the role of women in water resources and environmental protection. 50% participants should be women. At minimum, 50% participants of meetings, discussion on the topic "keep clean the living environment, keep irrigation system" are women. Carry out activities/ campaigns to keep hygienic environment in villages like sweeping, picking up trash, guiding people not to throw garbage into the canal, protecting of canal section not to be contaminated. At least, 30% of participants of each campaigns are male. The contractor should prioritize recruiting the local employees for unskilled labor + Unskilled labors should be paid equally by gender at the same job; + It is not allow to use child labor in building of civil work; + Contractors will inform CPCs on their needs of unskilled labors; Considers will register at CPCs and CPCs will submit the name list to the contractors. It should be given a priority to the poor and the poor whose female are householders.
Project Management Support	 At least 25% of CPMU and PPMU staff will be women, and gender sensitive training provided for all project staff. GAP will be introduced for all stakeholders and make sure the compliance GAP during whole implementation section. Implementation for monitoring and supervisor. Develop a simple monitoring form based on the initial HH survey and socio-economic data Collect and analyze the initial data separated by gender on project's impacts; and conduct regular assessment and make adjustment if needed. Make final assessment upon the project complete, compare with the initial indicators, especially gender indicators to identify how the gender situation would have changed.

- Lessons to be learned.
- 4. Organize final review workshops as well as festival/ art contests among communes in the project areas.

5. Cost estimate

No.	Activities			Cost (VND)					
1	The public disclosure of information relating to the project	All of	4	20,000,000					
		components							
2	Organize training on community supervision in the	Component 1		20,000,000					
	implementation of irrigation projects for the community								
	monitoring committee								
3	Communication and raising awareness to the people about	Component 1		20,000,000					
	the risks that may occur during project construction,								
4	Communication and raising awareness through organizing	Component 2		20,000,000					
	training for local communities downstream of the risks								
5	Organize gender training activities	Component 3		20,000,000					
	Total: 100,000,000								

Annex 4. Grievance redress mechanism

In order to ensure that all APs' grievances and complaints on any aspect of land acquisition, compensation and resettlement are addressed in a timely and satisfactory manner, and that all possible avenues are available to APs to air their grievances, a well defined grievance redress mechanism needs to be established. All APs can send any questions to implementation agencies about their rights in relation with entitlement of compensation, compensation policy, rates, land acquisition, resettlement, allowance and income restoration. Otherwise, all APs are not ordered to pay any fee during the grievance and complaints at any level of trial and court. Complaints will pass through 4 stages before they could be elevated to a court of law as a last resort. The Executing Agency (EA) will manage all administrative and legal fees that might be incurred in the resolution of grievances and complaints.

First Stage, Commune People's Committee: An aggrieved affected household may bring his/her complaint before any member of the Commune People's Committee, either through the Village Chief or directly to the CPC, in writing or verbally. It is incumbent upon said member of CPC or the village chief to notify the CPC about the complaint. The CPC will meet personally with the aggrieved affected household and will have 15 days following the lodging of the complaint to resolve it. The CPC secretariat is responsible for documenting and keeping file of all complaints that it handles.

Second Stage, District People's Committee: If after 15 days the aggrieved affected household does not hear from the CPC, or if the affected household is not satisfied with the decision taken on his/her complaint, the affected household may bring the case, either in writing or verbally, to any member of the DPC or the DRC. The DPC in turn will have 15 days following the lodging of the complaint to resolve the case. The DPC is responsible for documenting and keeping file of all complaints that it handles and will inform the DRC of any determination made. The DRC must ensure this decision is notified to the AP.

Third Stage, Provincial People's Committee: If after 15 days the aggrieved affected household does not hear from the DPC, or if the affected household is not satisfied with the decision taken on his/her complaint, the affected household may bring the case, either in writing or verbally, to any member of the PPC. The PPC has 15 days within which to resolve the complaint to the satisfaction of all concerned. The PPC is responsible for documenting and keeping file of all complaints that reaches the same.

Final Stage, the Court of Law Arbitrates: If after 15 days following the lodging of the complaint with the PPC, the aggrieved affected household does not hear from the PPC, or if he/she is not satisfied with the decision taken on his/her complaint, the case may be brought to a court of law for adjudication.

The above grievance redress mechanism is subject to be disclosed and discussed with the APs to ensure that the APs understand the process. RP-PMU and DRCs are responsible to follow up the grievance process from the APs.

The procedure described in these four steps complies with the legal process for resolution of disputes in Viet Nam which include: a) Article 138 of Land Law 2003, Article 63, Article 64 of Government Decree 84/2007/NĐ-CP, b) Clause 2, Article 40 Decree 69/2009, and c) regulation on grievance at Government Decree 136/2006/ND-CP dated 14/11/2006.

The External monitoring Agency (EMA) contracted for external monitoring and evaluation will be responsible for checking the procedures for and resolutions of grievances and complaints. The EMA may recommend further measures to be taken to redress unresolved grievances.

As part of the Project internal monitoring and evaluation, PPC and RP-PMU will keep a written record of all grievances and complaints brought forward by APs, as well as their final resolution. PPC and the RP-PMU will be responsible to ensure that the grievance redress procedures and timeframes are explained clearly to each level of People's Committees. CPO being the Executing Agency will retain the overall responsibility for the resolution of all grievances, and can follow-up resolution of outstanding cases in the Project level especially those that are policy related.

In addition to the grievance mechanism described above, APs may also (or permit representatives on their behalf) raise their concern or complaint with the WB, through the WB office in Hanoi, if APs are still not satisfied with the grievance resolutions at the Project level.

Annex 5. Implementation Arrangements

1. Central level

MARD will delegate responsibility of the Executing Agency to a Central Project Management Unit (CPMU) within MARD's Central Project Office (CPO), which will be led by a Project Director with fully-delegated responsibility for decision making. The CPMU comprises full-time qualified and experienced staff of CPO. Project implementation consultants will assist the CPMU with these tasks.

The CPMU will:

- i Provide overall management and coordination of the project;
- ii Liaise with IAs to carry out all project components;
- iii Coordinate with ADB in providing resettlement consultant services for the project;
- iv Support the RP-PMU for updating RPs of the project's components;
- v Consolidate project progress reports on land acquisition and resettlement submitted by the RP-PMU for relevant ministries and ADB; and
- vi Recruit and supervise the external independent organisation (or consultants) for external resettlement monitoring.

2. Provincial Level

The Implementing Agency (IA) will be Thanh Hoa Provincial People's Committee (PPC). The PPC will be responsible for issuing all decisions and approvals relating to the implementation of RP including those relating to its formal adoption, unit compensation costs, notices and approvals for information disclosure, land acquisition and compensation payments, allocations of replacement land (if applicable) and grievance redress. The PPC will also be responsible for establishing the Land Valuation Council and allocation of responsibilities to district-based organizations.

Thanh Hoa PPC authorizes Thanh Hoa DARD to be the Owner of the land acquisition, resettlement and compensation component in this Project. Within its authorization, Thanh Hoa DARD established the Resettlement Provincial Project Management Unit (RP-PMU) for Land Acquisition, Resettlement and Compensation of the Project and to undertake the implementation of RPs for the Project.

The RP-PMU will oversee all activities of District Resettlement Committees (DRCs) in regard to the implementation of the RP. The RP-PMU will also be responsible for:

- (i) Updating RPs for the project components, including updating numbers of APs, compensation rates (based on an independent assessment of current market values) and budget, submitting this to the PPC for approval and, once approved, making it publicly available in commune offices;
- (ii) Working with relevant agencies at different levels to ensure timely and effective implementation of RP; this applies particularly to DONRE who will review the overall RPs and recommending PPC approving the land acquisition plans and the unit compensation costs (with assistance from the Land Valuation Council in regard to current market prices, if necessary) and verify compensation plans;
- (iii) Resolving any issues of inter-agency coordination that cannot be resolved by the relevant agencies;
- (iv) Monitor grievances related to the project and calls the attention of concerned government offices where complaints have remained outstanding beyond prescribed action periods. Resolving any grievances that have been appealed to the PPC;
- (v) Ensuring the timely release of funds;
- (vi) Design and implement an internal monitoring system that shall capture the overall progress of the RP updating and implementation; and prepare quarterly progress reports for submission to CPMU and ADB.

The membership of the RP-PMU will include the Vice-Director of Thanh Hoa DARD who will be the Head of the RP-PMU; Vice-Director of the Provincial Sub-Department of Rural Development will be the Deputy Director of RP-PMU, and other RP-PMU staff.

3. District and Commune Levels

District People's Committee (DPC)

The District of Peoples' Committees will be responsible for the following:

(i) Establish the District Resettlement Committee (DRCs) or empower an existing body (Land Fund Development Centre) of similar function, to assist the RP-PMU in the updating of the RP and implementation of resettlement related activities;

- (ii) Assist the RP-PMU in coordinating with the Commune People's Committees and relevant organizations on various resettlement activities;
- (iii) Review and endorse the Updated RP prepared by DRC for endorsement to the PPC; and
- (iv) Oversee the updating and implementation of the RP within the District.

District Resettlement Committee (DRC)

The composition of the DRCS but will be coming from the District offices and Government bodies, in addition to the representatives of the affected households (including women affected households), District Farmers' Association, Women's Union, and Committee for Ethnic Minorities, if ethnic minority households are among the affected households in the district. The main responsibilities of DRCs are the following

- (v) The dissemination of the Public Information Brochure and other publicity material; ensuring that APs are aware of the LAR process.
- (vi) Planning and carrying out the DMS and the disbursement of compensation payments.
- (vii) The identification of severely affected and vulnerable APs and the planning and implementation of rehabilitation measures for these APs.
- (viii) Help identify any resettlement sites and new farming land for APs who cannot remain in their present location.
- (ix) Assist in the resolution of AP grievances.
- (x) Facilitate the work of the agency appointed to undertake the external monitoring

Commune People's Committee (CPC)

The responsibilities of the CPC relative to resettlement include the following:

- (i) Assign commune officials to assist the DRCs in the updating of the RP and its implementation;
- (ii) Identify replacement land for the AHs;
- (iii) Sign the Agreement Compensation Forms along with the AHs;
- (iv) Assist in the resolution of grievances; and
- (v) Actively participate in all resettlement activities and concerns

4. Consultant

The Project consultants (i.e., TA Loan consultants and the Project supervision consultants) will assist the CPMU in its tasks, specifically during RP updating and implementation. Said consultants likewise will provide training and capacity-building interventions to the DRCs as needed. TA consultants during RP updating and implementation including:

- a) Resettlement/Social Development Team.
- b) Income Restoration Program.
- c) Replacement Cost Study.

5. Implementation

The implementation process is as follows:

- (i) Establishment of the DRCs. The PPC will establish DRCs for the projects, and entrust tasks to relevant agencies and entities.
- (ii) Land clearance/boundary setting for the Project. After receiving the PPC and DPCs in revoking land and handing over land to the RP-PMU for implementing the projects, RP-PMU will cooperate with the provincial Department of Natural Resources, Environment and the specialised cadastral agency having a contract with RP-PMU to determine the project land clearance red line and setting out boundary at the field, handing over land to implement resettlement tasks for the displaced persons, in order to clear land for the project. Relevant Offices of Natural Resources, Environment of districts and Commune People's Committees of the project will assign their staff working as members of DRCs to implement this task.
- (iii) Engagement of External Monitoring Agency. CPMU will engage the services of an external monitoring agency to carry out independent monitoring and evaluation of RP preparation and implementation activities. Semi-annual progress reports will be submitted by the EMA to CPMU and ADB.
- (iv) Information campaign before DMS. According to Decree No.181/2004/ND-CP, before land acquisition, within 90 days in case of agricultural land and 180 days in case of non-agricultural land, the DRCS must send written notices to affected land owners in respect of reasons for land acquisition, time and plan of displacement, resettlement options, land clearance and resettlement.

- (v) Before census and detailed measurement survey, RP-PMU in cooperation with local authorities of districts and communes will provide project information to residents in the project area. Information will be broadcasted via the public address system of the locality in combination with other multi-media such as radios, press, television, brochures or letters delivered to households to be open posted in public areas.
- (vi) Orientation meetings will be held in the project affected commune to notify the affected community about the scope and scale of the project, impacts, policies and rights for all kinds of damages, implementation schedule, responsibilities for organisation, and complaint mechanism. Brochures including (images, photos or books) related to project implementation will be prepared and delivered to all affected communes in the meetings.
- (vii) Conduct of Replacement Cost Survey by a Qualified Agency. A qualified agency will be engaged by CPMU to assist PPC in determining the current market price under normal condition of land and non-land assets. If there is a significant difference between compensation price and market price as per replacement cost survey carried out by a qualified agency, PPC will update the compensation unit price according to regulations and implementation guidance of Decree No.197/2004/CP and 17/2006/ND-CP.
- (viii) Detailed Measurement Survey. DMS will be undertaken once detailed design is finalised. These surveys will be the basis for the preparation of compensation plan and for preparation of the RPs.
- (ix) Preparation of Compensation Plan. DRCs are responsible for applying prices and preparing compensation tables for each affected commune. RP-PMU and People's Committees of districts will appraise these tables in respect of prices, quantities of affected assets, rights that the displaced persons are entitled to, etc. before notifying each commune for review and comments. All tables of compensation price application must be checked and signed by the displaced persons to prove their consensus. RP-PMU and DRCs will submit the proposed unit rates as per result of the replacement cost survey to PPC for review and approval. The unit rates to be applied will be based on the approved unit rates of PPC.
- (x) Submission of RP and ADB concurrence. RP-PMU will prepare Updated Resettlement Plan, disclose key information of the Updated RP to the displaced persons and submit the same to ADB for review and concurrence.
- (xi) RP Uploading on ADB website. Once the RP is acceptable to ADB, the RP will be uploaded on the ADB website.

- (xii) Implementation of RP. Compensation and assistance will be paid directly to the APs under the supervision of representatives of DCARBs, commune authorities and representatives of the displaced persons. Income restoration and relocation plan will be implemented in close consultation with the APs and concerned agencies.
- (xiii) Monitoring. Internal monitoring and independent monitoring will be implemented from RP preparation to implementation. Grievances received will be addressed through the grievance redress mechanism set up for the project. One post-project assessment survey will be undertaken by the EMA within 6 to 12 months after completion of compensation and resettlement activities.

Annex 6: Photos of community consultations













Annex 7: Summary of survey results

Sampling Frame

Household survey was done with 120 households in two communes by sampling with the sample amount depending on the number of affected person (according to the guidance of national consultants). 100% of the 13 affected households were interviewed, together with 107 other farmers benefited from Dong Be reservoir.

Four focus groups discussions with 40 people in total were held in each of two communes, of which, one discussion with the 10 staffs of CPC including leaders, land, agriculture, irrigation manager, women union, farmer association, etc. and one discussion with the 10 people affected and benefited from sub-project.

15 key informant interviews were done with the directly/indirectly affected persons in different spaces from upstream to downstream of the dam in two communes of Xuan Du (upstream) and Trieu Thanh (downstream), and dam managers, CPC leaders, political organizations, village heads, irrigation staff, clinic staff, DARD staff.

Community meetings with 60 people in total were held in two communes with 30 people of each.

The education level of the householder (unit:%)

			Education Level						
No.	Commune	Illiterate	Primary school	Secondary school	High School	Total			
1	Trieu Thanh	5.4	32.1	50.0	12.5	100			
2	Xuan Du	0.0	50.0	40.0	10.0	100			
3	Total	4.5	34.8	48.5	12.1	100			

The education level of household members by sex (unit:%)

Gender	Illiterate	Primary school	Secondary school	High School	Vocational school	College/ university	Not yet school	Total
Male	2.3	19.1	44.3	18.3	2.3	8.4	5.3	100
N u	4.5	27.1	33.1	20.3	1.5	6.0	7.5	100
Total	3.4	23.1	38.6	19.3	1.9	7.2	6.4	100

The main occupation of the householder (unit:%)

			Occupati	ion								
Commune	Laborless	Agriculture, forestry and fishery	Business, service	Worker	Retired	Hired work	Total					
Total	6.8	70.3	0.8	1.7	18.6	1.7	100					
Trieu Thanh	12.7	45.5	1.8	3.6	32.7	3.6	100					
Xuan Du	1.6	92.1	0.0	0.0	6.3	0.0	100					
By ethnic mino	By ethnic minorities											
Kinh	7.1	68.8	0.9	1.8	19.6	1.8	100					
EM	0.0	100.0	0.0	0.0	0.0	0.0	100					

The main occupation of the household members (unit:%)

THE III	the main occupation of the household members (unit. 70)												
Commune	Laborless	Agriculture, forestry & fishery	Business, service	Employee of state	Student	Handicraft	Worker	Retired	Hired work	Jobless			
Total	3.5	46.7	1.0	3.8	25.8	0.2	9.2	7.7	1.9	0.2			
Trieu Thanh	6.2	36.2	1.4	1.9	27.1	0.0	10.5	12.4	4.3	0.0			
Xuan Du	1.5	54.8	0.7	5.2	24.8	0.4	8.1	4.1	0.0	0.4			
By ethnic n	By ethnic minorities												
Kinh	3.8	46.8	0.9	3.5	25.8	0.2	8.6	8.2	2.0	0.2			
EM	0.0	44.4	3.7	7.4	25.9	0.0	18.5	0.0	0.0	0.0			

The main water supply for households affected (unit: %)

No	Commune	Dri	nking water		В	ter	
No.	Commune	Wells	Rain	Total	Wells	Rain	Total
11 1	Trieu Thanh	100.0	0.0	100	98.2	1.8	100
2	Xuan Du	96.9	3.1	100	98.4	1.6	100
3	Total	98.3	1.7	100	98.3	1.7	100
No	C		Total				
No.	Commune	River	Reservoir	Wells	Irrigation	Rain	Total
11 1	Trieu Thanh	10.7	7.1	1.8	80.4	0.0	100
2	Xuan Du	6.3	12.5	6.3	71.9	3.1	100
3	Total	8.3	10.0	4.2	75.8	1.7	100

Current status of the toilet used in affected households (unit:%)

				Type of toilet			
TT	Commune	No toilet	Septic	Two compartments	Simple	Ponds, rivers,	Total
1	Trieu Thanh	1.8	26.8	28.6	42.9	0.0	100
2	Xuan Du	1.6	29.7	29.7	35.9	3.1	100
3	Total	1.7	28.3	29.2	39.2	1.7	100

The disease mainly in the project area during the past 12 months (unit:%)

No.	Commune	Flu	Respiratory	Cold	Malaria	Liver	Poisoning	Injury	Total
11	Trieu Thanh	75.5	26.5	4.1	12.2	8.2	0.0	8.2	100
2	Xuan Du	77.8	22.2	0.0	0.0	0.0	0.0	0.0	100
3	Total	75.9	25.9	3.4	10.3	6.9	0.0	6.9	100

The health services reach the common people (unit:%)

No.	Commune	Commune clinic	Inter- communal clinic	District hospital	Provincial hospital	Central hospital	Private clinic	Pharmacy	Traditional medicine	Total
1	Trieu Thanh	34.0	2.1	33.0	10.6	0.0	0.0	18.1	2.1	100
2	Xuan Du	32.1	1.9	32.1	9.4	0.0	2.8	20.8	0.9	100
3	Both	33.0	2.0	32.5	10.0	0.0	1.5	19.5	1.5	100

Energy source for lighting (unit:%)

No	Commune	Power	r source	Total	
No.	Commune	Petrol	Grid	1 Otal	
1	Trieu Thanh	1, 8	98, 2	100	
2	Xuan Du	3, 1	96, 9	100	
3	Both	2, 5	97, 5	100	
	By ethnic minorities				
	Kinh	1.8	98.2	100	
	EM	16.7	83.3	100	

Energy sources used for cooking (unit:%)

No.	Commune		T-4-1					
		Wood	Petrol	Gas	Biogas	Total		
1	Trieu Thanh	80.4	0.0	17.9	1.8	100		
2	Xuan Du	73.4	3.1	23.4	0.0	100		
3	Both	76.7	1.7	20.8	0.8	100		
	By ethnic minorities							
	Kinh	77.2	1.8	20.2	0.9	100		
	EM	66.7	0.0	33.3	0.0	100		

Average size of household land

Commune	Residential land (m ²)	Garden soil (m²)	Agricultural land (m ²)	Aquatic Land (m ²)	Forest land (m ²)					
Average	434	1886	589	186	1042					
Trieu Thanh	378	2043	540	149	893					
Xuan Du	483	1748	632	218	1172					
By ethnic group										
Kinh	442	1864	495	140	921					
EM	290	2303	383	1050	3333					