

**Asian Development Bank  
Electricity of Vietnam**

**TA 4625-VIE  
Song Bung 4 Hydropower Project  
Phase II**



**Social Management Plan**

January 2007

**ASIAN DEVELOPMENT BANK  
ELECTRICITY OF VIETNAM**

**TA 4625-VIE  
Song Bung 4 Hydropower Project, Phase II**

**FINAL REPORT**

**SOCIAL MANAGEMENT PLAN**

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**SWECO INTERNATIONAL**

# **TA No. 4625-VIE: Song Bung 4 Hydropower Project Phase II**

## **Final Report**

### **Report Structure**

#### **Main Report**

#### **Environmental Impact Assessment (EIA)**

#### **Resettlement and Ethnic Minority Development Plan (REMDP)**

#### **Volume 1: Cross Cutting Issues**

#### **Volume 2: Reservoir Resettlement and Development Plan**

#### **Volume 3: Project (Construction) Lands Resettlement Plan**

#### **Volume 4: Down/Upstream Mitigation and Resettlement Plan**

#### **Social Management Plan**

#### **Gender Action Plan**

#### **Consultation Report**

#### **Annex: Social Reports from the Local Consultants**

**Song Bung 4 Hydropower Project:**

**SOCIAL MANAGEMENT PLAN (SMP)**

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# SONG BUNG 4 HYDROPOWER PROJECT SOCIAL MANAGEMENT PLAN

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## **PART A: HEALTH ASSESSMENT**

### **1 THE HEALTH ASSESSMENT PROCESS**

In the Song Bung 4 Project area the majority of people belong to the ethnic minorities. Nearly all inhabitants are for example Co Tu in Zuoih Commune. In the surrounding communes there are also many Gie Trieng ethnic people.

In the Nam Giang district, where Song Bung 4 is situated, 6 communes are highland mountain remote communes and 3 are lowland communes. Of the 9 communes 8 are considered very poor and are included in the important Government 135 program for poverty eradication.

The Nam Giang District belongs to Quang Nam Province. The province is included in the “south central cost area”, one of the 8 specific geographical areas, according to the Vietnam Central Statistic Office. Still most of the communes in Nam Giang have more in common with the neighboring central highland provinces when it comes to geography and characteristics of the majority of the inhabitants. According to the guidelines used for the 1990 Population Census the ethnic groups are classified according to the region where the group predominates, not according to the current residence of each household. Co Tu and Gie Trieng are categorized as belonging to the Central region ethnic groups.

Several important sources of information have been used when doing the health assessment of the local people in the Song Bung 4 area. The first important source has been the Vietnam National Health Survey (VNHS) conducted during 2001 and 2002. Most of the information presented in the assessment has been made through separate statistical analyses from the huge VNHS health data material. The analysis has been made by the consultant and the findings can be seen in Annex 1.

The second important source of information has been by collecting available information from local authorities and health services through field visits to the Song Bung 4 area. The health information has been gathered from all levels as from Zuoih, Cha Val and Ta Binh communes, Nam Giang district and Quang Nam Province.

The information analyzed from the VNHS has shown a clear picture of the general health situation in the central highland areas for the ethnic minorities. These findings have then to a surprisingly high degree been confirmed by the data gathered during the field visits to the Song Bung area.

Based on the findings from the available information a health impact assessment for the different populations that are going to be most affected by the Song Bung 4 project has been made by the consultant. These major population groups include construction workers, the re-settlers and affected local communities in the local area.

### **2 SONG BUNG AREA HEALTH**

The presentation in the current chapter comes from available health data and information gathered during field visits. The findings start to be presented from the Zuoih commune villages ending up at the provincial health services in the province town Tam Ky.

## 2.1 Treatment and Examinations

According to the local health statistics from the last year the most common ill health conditions taken care of at the Zuoih Communal Health Station were related to respiratory infections, diarrhea and accidents (see Table 1).

**Table 1: Summary of health statistics from the Zuoih Communal Health Station, 2005.**

	Total Number of Cases	Cases for children under 5 years
Influenza	347	?
Acute respiratory infections	104	104
Bronchitis	251	37
Pneumonia	115	67
<b>Total Respiratory infections</b>	<b>817</b>	<b>208</b>
Diarrhea	205	49
Bacillary dysentery	142	13
<b>Total Diarrhea</b>	<b>347</b>	<b>62</b>
Accidents and injuries	42	?
Poisoning	78	?

The majority of patients treated at the health station were suffering from *respiratory infections*. Of them 25% were children under 5. Many of the cases have been classified as pneumonia, a very serious life threatening condition, especially among young malnourished children. To find the severe cases and give them correct treatment with antibiotics is often life saving.

Another major common disease was *diarrhea*. Nearly 20% of the cases of diarrhea were affecting children under 5. The use of sugar salt solution can in these situations be life saving. The proportion of diarrhea and respiratory infections among small children should be taken seriously.

No explanation to the high number of *poisoning* cases is available at the moment. Under this heading food poisoning is often reported. Another not uncommon reason for poisoning is the use of local alcohol.

Other common conditions treated at the health stations were *pain symptoms* as back pain, joint pain and stomach pain.

The disease panorama seen in Cha Val and Ta Binh communes were very similar to the diseases seen in Zuoih commune.

During March 2006, totally 196 patients were taken care of at the Zuoih Health Station. This figure included people coming for preventive services. This makes an average of 5 to 10 people per day. No in-patients treated at the health station had been noted in the health station statistics.

The district health authorities report that Zuoih commune has the highest prevalence of *skin diseases* in the district. Around 15% of the population is suffering from this condition.

At Tai Binh health station the problem with management of the 139 Program, the fund for free health care for the poor, was stressed. Drugs had previously been distributed free of charge for the poor from the Program. This had attracted 20 to 30 patients per day. The last months the drugs had not been delivered and the patients did not come as before.

At the district level in Nam Giang the following infectious and serious diseases were reported

during the last quarter of 2005 (see Table 2).

**Table 2: Summary of health statistics in Nam Giang District the last quarter 2005.**

	Total Number of Cases	Cases for children under 5 years
Dysentery	777	
Diarrhea	1,576	
<b>Total, Diarrhea</b>	<b>2,353</b>	
Influenza	2,869	
Bronchitis	7,384	703
Pneumonia	2,557	1,189
Acute respiratory infections	1,910	1,910
<b>Total, Respiratory infections</b>	<b>14,720</b>	<b>3,802</b>
Traffic accidents	232	
Occupational health	323	
Food poisoning	176	
<b>Total, accidents</b>	<b>731</b>	
Others	315	

The general disease panorama in the district is the same as reported in Zuoih commune. There are relatively more cases of respiratory infections in Zuoih commune compared to the whole district. Also here 25% of the patients suffering from respiratory infections are under 5 years.

## 2.2 Disease Prevention - The Health Programs

### 2.2.1 Infectious Disease Related Programs

#### 2.2.1.2 Malaria

The Song Bung 4 area is one of the remaining problem areas for malaria in Vietnam. Still good progress in decreasing the prevalence of malaria has been achieved the last years. In Zuoih commune the situation is well under control at present. There has only been one case of known malaria this year. There were 15 new detected cases last year. The health staff is still under alert for new cases. The risk populations are local people, staying in the forest for longer time, and immigrants, like illegal forestry traders and minders. These migrating groups of people could suddenly trigger a malaria outbreak. At the health station in Zuoih one staff has been trained three months in Tam Ky to be able to read malaria blood slides.

The district health authorities report that Tai Binh commune has the highest malaria prevalence in the district. Three new cases have been detected this year. In the district 245 slides were found with positive malaria parasites during 2004. The program is said to provide enough impregnated bed nets to the households in the Song Bung 4 area.

To get a broader picture of the malaria situation in the area some statistics will be presented for the whole region. The malaria control program is one of the priority areas in the Quang Nam health care plan for the years 2000 to 2010. There have been no malaria epidemics in Quang Nam the last years. Still more than 6,000 malaria infected patients were reported in the Quang Nam province 2005, an increase by 10% compared with the year before. More than 60% of the patients were suffering from the more malignant form of malaria, *plasmodium falciparum*. The rest of the patients had *plasmodium vivax*. These figures indicate that malaria still should be a concern in the area, as outbreaks could happen especially if new people are moving into the area.

Nationally, the malaria figures show the impressive progress of the program. Year 2000 293,016 patients were affected with malaria according to the Health Statistic Yearbook from the Ministry of Health. This figure had decreased to 128,622 year 2004. The number of known deaths due to

malaria was during the same period reduced to 24 from 148.

#### 2.2.1.3 Dengue Hemorrhagic Fever

In English this disease is also called “break bone fever”, as the patient usually get sick in high fever and is suffering from severe pain. Especially if the patients get the disease the second time, there is a high risk of bleedings that could be fatal. The disease is spread in the same way as malaria by mosquitoes.

As this is a major public health problem, especially in the south of Vietnam, a national health program has been set up and implemented. The local health staff in the Song Bung 4 area reported that Dengue Fever is not a problem in the area at present. The same preventive actions as for malaria control should be taken. At the provincial level Dengue was reported as a health problem still to be aware of.

During the year 2004 the total number of cases reported in Vietnam were 78 692 cases according to the Health Statistical Yearbook. The number had increased substantially during the later years.

#### 2.2.1.4 Tuberculoses

Three cases of tuberculoses were known on the Zuoih commune during the visit. The cases were treated by the higher levels. In the whole district there were 20 patients detected with tuberculoses during 2004.

The national tuberculosis program has tried to prevent people from getting the disease by immunization during the childhood and to treat people affected. Still there were 90,754 cases reported nationwide during the year 2000 increasing to 99,162 the year 2004 according the Health Statistical Yearbook. In Quang Nam Province 1,453 cases were reported during 2004.

#### 2.2.1.5 Leprosy

There are no known cases in the Song Bung area of leprosy. In the whole province 6 new cases were detected year 2005. For the whole country 2,102 cases were reported. It can be concluded that leprosy is well under control in the country.

#### 2.2.1.6 Expanded Program of Immunization-EPI

The program to immunize children with vaccinations against the six major killing diseases – tuberculosis, poliomyelitis, tetanus, measles, whooping cough and diphtheria – is said to be done successfully in the Song Bung area. This is done even if it takes a full day to reach the most distant village in Zuoih commune. Protection against hepatitis B is also included in the EPI immunization but not yet against Japanese B encephalitis. During 2004 the coverage of immunization against the six diseases in the EPI was 95% in the area. For the Quang Nam Province the coverage was reported to be nearly 98% and for the whole Vietnam 97%.

#### 2.2.1.7 HIV-Aids

No cases of HIV-Aids have been detected in the Nam Giang district. Still, there is a growing concern for the health of the illegal forestry traders and miners in the area. There are also growing health concerns related to the coming construction of the hydropower dams from the local as well as provincial health authorities.

The total number of known cases in the whole province was 311 in year 2005. Of these, 56 cases were detected during 2005 and 52 cases during 2004. The HIV-Aids problem is much more dominant in cities like Da Nang and Tam Ky compared to remote rural areas.

The number of new cases reported in Vietnam has been around 15,000 per year during 2002 to 2004. Until 2005 the total number of cases reported was 90,380.

#### 2.2.1.8 Acute Respiratory Infections - ARI

Previously, the Ministry of Health was supporting an ARI program. The aim of the program was to train mothers and local health staff to detect and treat serious cases of ARI in time, especially pneumonia among young children. ARI is still a leading cause of mortality in Vietnam. It is also one of the major killers among small children. See Annex 3. Support to this program has been scaled down by the government and donors during the last years. As pneumonia is still the major killer among young children, not least in this area, it could be worthwhile to re-consider a support to this program.

#### 2.2.1.9 Control of Diarrhea Diseases - CDD

Earlier the Ministry of Health, together with UNICEF and WHO, was giving a strong support to the CDD program. One main purpose was to promote sugar - salt solution as an efficient way to prevent the main cause for death related to diarrhea, dehydration. This program has been scaled down lately. Oresol, the salt sugar solution introduced in Vietnam 20 years ago, could still be found in stock at the communal health station in Zuoih.

Still this program should be promoted in an area like Zuoih, as the situation related to hygiene and sanitation is bad, malnutrition among children is high and diarrhea is common. The district health authorities claim that Zuoih commune has the highest prevalence of diarrhea in the whole district.

### 2.2.2 *Nutritional Related Programs*

#### 2.2.2.1 Growth Monitoring

The children in Zuoih commune are reported to be weighted by the VHW regularly. This should, according to the national program, be done monthly during the first two years of life. Then the weight control should be done twice a year until the age of 5. Whether this really is done in Zuoih commune is questionable as the staff at the health station claims that there is a lack of scales.

The malnutrition level among children in Zuoih commune is the highest in the Nam Giang district, nearly 50%. Still there is an ongoing free distribution of milk powder from the district to improve the situation. This figure can be compared with the latest figures from the Ministry of Health where a little more than every fourth child under 5 is malnourished.

The malnutrition rate in the whole district was 34% last year. About 80% of the children in the district were reported to be weighted regularly during 2004. In the whole Quang Nam Province the rate of malnutrition has been reduced significantly from 37% in year 2000 to 28% in year 2004.

There is no growth monitoring of pregnant women. This should be done at the prenatal examinations to assure that the coming mothers get enough food, especially during the last three months of the pregnancy. The extra food is also necessary during the breast-feeding period. The weight gain in Vietnam is usually around 6-8 kilogram during the pregnancy compared to 10-12 kilogram in the more economically developed countries. An extra meal a day would be sufficient to achieve some more weight gain.

#### 2.2.2.2 Goiter Prevention

In mountainous areas all over the world goiter might be a major health problem. Lack of iodine can lead to severe consequences, as mental retardation from birth, or the Basedows disease as grown up. The best protection from the diseases is to introduce the use of iodized salt.

Many people are suffering from goiter in the Zuoih area. According to the district authorities 7-8% of the population in the district is suffering from goiter. The staff at the health station states that there is no use of iodized salt in the area. If iodized salt is not used in the area this should urgently be introduced.

### 2.2.2.3 Vitamin A Supplement

Vitamin A supplement is given to young children twice a year in the Song Bung 4 area. This is done to prevent blindness. It is important to assure that this is actually done for all small children. Also the pregnant and breast-feeding women should be included.

### 2.2.2.4 Safe Food and Hygiene

The program should assure that public place, where food is handled or sold, is safe for people to use. In Zuoih commune there are at present no public places for food production or restaurants. No outbreak of “food poisoning” in the population has been reported even if individual cases have been registered at the commune health station.

## 2.2.3 *Water and Sanitation Related Programs*

### 2.2.3.1 Clean Water

This program is under the main responsibility of the Ministry of Agriculture and Rural Development. Still the health authorities should know and report the number of households that have access to clean water. The water supply to the Zuoih area was previously supported through the 135 Program. Water was provided through plastic pipes from the mountainous areas. The water system is now out of order due to bad maintenance. No wells are used in the Zuoih area. In Ta Binh water is most often taken directly from the river.

In Nam Giang district there are three main sources for people’s daily water utilization. These sources are from rainwater, surface water from streams and underground water. The Centre for Clean Water and Sanitation in Quang Nam Province reported that during 2003 there were only 70 dug wells, 90 bore wells and 107 water tanks available in the whole Nam Giang district. The bore wells have partly been supported by UNICEF.

Local people have a habit of using water from simple self-flow systems from rivers and streams led along bamboo or plastic pipes. This can be a good way of getting water and the possibilities to improve and scale up this way of getting water to the people should be explored.

### 2.2.3.2 Toilets

There are few built toilets or latrines in the Zuoih area. People are usually going out in the forest when there is a need. In Tai Binh the situation is the same. The health station in Ta Binh reports that some households dig whole in the ground as a primitive form of toilet.

### 2.2.3.3 Bathrooms

There are no special “private” areas that could be called bathrooms in the Song Bung 4 area. Private areas are, as already mentioned, especially important for the private hygiene especially for women.

## 2.2.4 *Maternal Health and Population Control programs*

### 2.2.4.1 Maternal Health

Few women in Zuoih are coming for prenatal check ups. Nearly no women are coming for their delivery to the local health facilities. Some deliveries are assisted at home by the communal health staff. The pregnant women are reported to be given tetanus immunizations but not iron supplement. Only one delivery took place at the Zuoih communal health station last year. Most of the deliveries took place at home assisted by the mother-in-law or some other experienced local woman.

The situation is nearly the same in Ta Binh commune. The deliveries take place at home. There were only two deliveries at the health station last year. Two communes, Ta Binh and Ka Gi, have

got training for “traditional birth attendance” from a Japanese non-government organization. This should be further explored, as the training could be extended in the Song Bung 4 area.

A problem is that all village health workers in the district are men except one. This makes it impossible for them to be of any use during the pregnancy or during the delivery in the local village.

#### 2.2.4.2 Family Planning

Local health staff reported that most women are using some family planning method. The most common method is IUD, as everywhere else in Vietnam. IUD can be inserted at the Zuoih health station. Campaigns are common to promote the use of IUD and other family planning practices. If an abortion is needed it has to be done at the district level.

In Ta Bhing commune IUDs have to be handled at the district level. About 50% of the population in Nam Giang district was reported using some kind of modern contraceptive methods during 2004. The most common method was IUD used by 70%, followed by sterilization 16%, use of pills 7% and condoms 6%.

The high rate of IUD use and the reported high rate of reproductive tract infections should call for some health considerations. The infections tend to get worse if an IUD is inserted. If the IUD service provider is not skilled and considerate enough to make thorough examinations before inserting the IUD, or can not handle complications after inserting IUDs, this procedure will cause a lot of ill health for women. This is an even greater concern in an area like Zuoih, as this is an ethnic minority area, with lack of water and sanitation.

The family planning program in Vietnam is often run as campaigns to reach certain set targets. There were 3 campaigns during 2005 in the district to motivate women for family planning.

Abortions can nearly be considered as a family planning method in itself in Vietnam. The abortions can often be performed at the communal health stations or at least at the district level. It should be noted that analgesic procedures are seldom used during the abortions. In 2004 there was one abortionist and 17 menstrual regulation women reported to work in the district.

### 2.2.5 *Specific diseases programs*

#### 2.2.5.1 Mental Health

There is a national health program to deal with mental ill health. Epilepsy is considered as a mental disease. There are two known people suffering from schizophrenia in Zuoih commune at present. The need and the practical implementation of the program is not known by the consultant at present.

#### 2.2.5.2 “Women Diseases”

Many women are suffering form “women diseases”, i.e. reproductive tract infections. The prevalence mentioned in Zuoih commune was that up to 70% of the women are suffering from this problem. Local women are often expressing that “women diseases” is one of the major concerns for their health. The prevalence of “women diseases”, the causes and the need fore effective prevention and treatment should be urgently looked into by professional researchers. The district report that a UNFPA survey showed that 56% of the women has some kind of “women disease”.

#### 2.2.5.3 De-worming

Many of the children in Vietnam are suffering from intestinal parasites, mostly ascaris worms. This has lead to regular de-worming, often twice a year in the schools. When tested, 80% of the

children in Zuoih commune were suffering from this condition some years ago. The de-worming program is still implemented in the primary schools in the Song Bung 4 area.

### **2.2.6 Life Style and Arena programs**

#### **2.2.6.1 Tobacco Control**

The national tobacco control program has been supported by some donors as Sida and the Rockefeller Foundation. The assistance has been concentrated to some provinces, not including the Quang Nam province.

No direct evidence could be found that the health authorities in the area are involved in the tobacco control. Some “no smoke” signs in the district hospital could be seen. As most of the men in the area are smoking the program should also be activated in the Song Bung 4 area.

#### **2.2.6.2 Alcohol Abuse Prevention**

There is still no official alcohol abuse program in Vietnam. A national program is under way and will be presented by the Department of Planning and Finance at the Ministry of Health in the coming years.

Also related to this emerging program there were no signs of local activities. Nearly all the men in the area are said to drinking alcohol.

#### **2.2.6.3 Accident and Injury Prevention**

The national program for accident and injury prevention started at the end of 2001. The role of the Ministry of health is to secure the safe use of food and drugs, to assure first aid in case of accidents, to develop a reporting system for accidents and injuries and to develop local Safe Communities. This program has also been supported by foreign donors like UNICEF and Sida. The main activities have been concentrated to some of the 64 Vietnamese provinces, but not to Quang Nam Province.

No signs could be seen in the area of this potentially very important program for the Song Bung 4 area. It could be interesting to develop the Song Bung 4 area into a safe community! The first two safe communities are hopefully going to be certified by the WHO collaborating centre at Karolinska Institutet, at the end of this year. Why not suggest making the whole development project of the dam to a safe community project. This kind of safe community project has not yet been done in the world.

There are still few motorbikes in the area but that will most likely change rapidly when the dams are going to be constructed in the area. Also the roads will improve. Along with this development the risks in traffic will be increase. To prevent accident the use of helmets among motorbike users should therefore for example be made mandatory.

#### **2.2.6.4 Adolescent Health**

Today there are great worries associated with the spread of the HIV-Aids infection in Vietnam. In relation to this development, as well as other life style related diseases, the Ministry of Health is at present developing an adolescent health strategy under the direction of the Department of Mother and Child Care.

One of the important arenas for the program is the schools. Here the pupils could be helped to learn about themselves in this important period of life. The program is including many of the life style related health issues as use of tobacco and alcohol as well as emotions and sex. This program is not yet been implemented in this area yet but should be made a priority in the future.

#### 2.2.6.5 School Health

The Ministry of Education and Training is in charge of the school health program. The Ministry has developed specific curricula's and training material for school health in the different periods during the educational learning. The school program includes important health issues as safety in school, safety in traffic and adolescent health and could be promoted in the schools in the Song Bung 4 area.

#### 2.2.6.6 Occupational Health

The national occupational health program is dealing with safety at work places. A lot of detailed regulations and rules have been developed in Vietnam. Still there are few work places where the safety regulations are applied in practice. The most important occupational preventive measures in the Song Bung 4 project should be assured as a precondition for ADB support. Strong commitments should be made from the Vietnamese enterprises involved in the dam construction and ADB, towards occupational safety.

This also applies for the workers employment situation. Many workers are at present temporarily hired and have no rights and can be fired at any time. Others are contracted for minimal wages, at present at a level of 290 000 VND a month. The workers have often no social benefits, including health insurances. In these cases the workers will be without health protection when accidents or other health problems occur. This situation should also be avoided. Donors should assure that any assisted project in Vietnam is guaranteeing the workers normal employment rights according to international agreements.

#### 2.2.6.7 Social Evil

In Vietnam actions are taken against "social evils", like drug addiction, gambling, prostitution or crime. The notion "social evils" are today well known all around Vietnam. The local levels actors are playing important roles. Some actors are the local authorities, the mass organizations and the health services. They could be mobilized against "social evils" when a dam project like Song Bung 4 is starting up.

The district health department states that so far there are few cases of "social evils" in the Song Bung 4 area. There is for example no prostitution reported in the area.

### 3 HEALTH IMPACT ASSESSMENT

The health impact assessment for this project will use the excellent work done for the health assessment of the Nam Theun 2 Hydro-electrical Project in central Lao PDR. The health background information analyzed from the Vietnam National Health Survey and the available health data collection from the local field visits to the Song Bung 4 area will be other important inputs for the assessment.

#### 3.1 People Effectuated at different times

Some people will be more affected by the dam construction than others. Most social and health consequences could be expected to happen to the people that have to resettle from the water dam area. New people, the construction workers including transportation workers, are going to move into the area to build the dam. Some will bring their families. There will also be new people setting up different kind of business. These people are in the section called camp followers. There will also be a lot of transportation of material and workers to and from the area. The local people living in the local communities closest to the construction sites and to the constructions workers can be affected by the increased risk of exposure for diseases that the construction workers have got or are getting during their work in Song Bung. The main groups to consider in the health impact assessment are them;

- *Construction workers and camp followers* coming to Song Bung to build the dam
- Local families that have to *resettle* because of the increased water levels from the dam
- *Local people*, effected by the dam construction and taking into operation, in the local area

The dam project will effect the different populations at different times of the project. The time could be divided into two different periods:

- the **construction** period
- the **operation** period.

The construction phase form the Song Bung 4 project is planned to last 4 years from year 2008 to year 2011. The taking into operation phase is also planned to last for another 4 years from 2009 to year 2012.

### 3.2 The health areas that could affect people

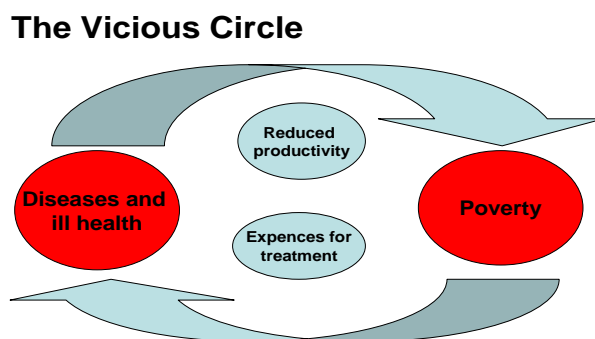
People in the area could be affected by different diseases as well as different causes of diseases. Both these aspects will be important to explore in the health assessment. The causes are important to look into with the ambitions to prevent diseases to happen. There has also to be increased capacity to take care of expected increase of diseases and injuries, or out brakes of illnesses.

#### 3.2.1 Poverty Related Diseases

People living in the Song Bung area are among the poorest in Vietnam. They are therefore among the most vulnerable for increased health risks as poverty is one of the most important determinants of ill health. The short life expectancy and the ill health of children are negative outcomes of the existing poverty. To improve the general living conditions and to eradicate poverty in the area is one of the most important factors to improve the health in the area. The following section is taken from the Vietnam Health Report 2002 from the Ministry of Health.

There is a vicious circle where poverty increases the risks for many diseases. Then when poor people get sick sending in health care and loss of income make them rapidly poorer. Ill health is one of the main reasons for people to get poor, especially in the countryside. In Vietnam it has been calculated that around 3 million people get poor due to ill health every year. This vicious circle is called the “medical poverty trap” (see Figure 1).

**Figure 1: The vicious circle between poverty and ill health**



Source: Vietnam Health Report 2002, Ministry of Health, Hanoi

The more access to different kind of recourses people living in the Song Bung area get, the better

the health will be. This includes better education and improved living standard. It is important to assure that the living conditions for the people affected by the dam construction are not becoming worse. Education for women is, as an example, one of the most efficient methods to improve health in a family, especially related to children.

It is also important to stress the access to good quality of free health services. As has been presented one of the most important causes of poverty in the rural areas of Vietnam are the high expenses for health services when people become sick and have to use the health services, especially inpatient care.

### ***3.2.2 Child Health***

Local area health statistics clearly shows that one of the most vulnerable groups in the communities in the Song Bung 4 area is the children. The rate of malnutrition and prevalence of diseases are about twice as high compared to other lowland areas. This indicates that many of the children are living on the margins related to access to nutrition, good hygiene and sanitation, and access to child health care. The children could more easily than others get into severe health conditions mainly relate to respiratory infections and diarrhea. It will be important to continuously survey the health of the children in the Song Bung 4 area related to poverty and diseases during the construction and taking into operation of the dam.

### ***3.2.3 Maternal Health***

Another vulnerable group in these Song Bung 4 area communities is women, especially during their pregnancies and deliveries. At present the health services are not reaching this group of people for prenatal and delivery services. Deliveries are usually taking place at home with the assistance of the mother in law. In other parts of Vietnam the maternal health services are nearly assisting all women. Also this risk group will be important to closely continuously supervise during the coming social changes related to the Song Bung 4 project.

### ***3.2.4 Nutrition***

Closely related to the health of, especially mothers and children, is nutrition. Nearly every second child in the area is malnourished. This is one of the highest rates in Vietnam. Also pregnant women are vulnerable to lack of nutrition during pregnancy and breast feeding. The nutritional status of children and pregnant women should be continuously monitored during the building and taking into operation of the dam.

### ***3.2.5 Sanitation and Water***

An important cause to infections is lack of clean water or access to good sanitation facilities. A clean environment related to domestic animals and other waists are also important. These issues are, as many other health risk factors, strongly influenced by the local cultures. When people have to change their living place, or when construction workers move in to an area, it is important to assure that the people accept, take responsibility for, and use the facilities provided. There are too many examples of projects where others “outsiders” have planed for local people. The result is nearly always that local people will not use the facilities.

### ***3.2.6 Accidents and Injuries***

The risk of accidents and injuries are drastically increasing in a construction area where a lot of people will be involved directly or indirectly in the work. This related to the construction work, the increased transportation and the increased activities around the camp sites. Safe transportation, safe homes and safe communities are only some of the important safety areas to assure for the local people. This means that the new houses have to be assured for safety. The increased water in the area will also increase the risk of drowning.

### ***3.2.7 Occupational health***

There are also other health hazards other than accidents and injuries that the construction workers can be exposed to during the work. Exposure from dam construction materials, machinery, as well as the drilling dusts is some.

### ***3.2.8 Infections including waterborne diseases***

Respiratory infections are common in the area, especially among small children. Tuberculosis cases are still detected in the area. Malaria is common in the area, even if no epidemic outbreaks have been reported the last years. Other diseases to be observant about are Dengue fever and Japanese B encephalitis. When people, having no resistance to malaria, move into the area the risk of malaria outbreaks increases. The increased areas with water can also be new breeding sites for vector born diseases.

### ***3.2.9 Sexually Transmitted Diseases***

The risk of getting more sexually transmitted diseases, especially HIV-Aids, into the area increases drastically with the arrival of construction workers and drivers. There are also many other sexually transmitted diseases like syphilis, gonorrhea, Chlamydia and hepatitis B that could be introduced into the Song Bung 4 area. There have still not been any cases of HIV-Aids detected in the area. This could hopefully continue to be the situation during and after the dam construction.

### ***3.2.10 Lifestyle Related Ill health***

Many of the most important determinants for ill health are related to life style. Use of tobacco, misuse of alcohol and the use of more modern means of transportation are some of the important life style risk factors that could be affected during the dam construction. When more money comes into an area there is a tendency that, at least among the men, smokes and drink more. More accidents and violence are other risks that could be expected to increase.

### ***3.2.11 Psychosocial Ill-health***

When people are forced to move, or big projects influencing the life and culture of a population, there is also an increased risk that people are not feeling well, when they have to adapt to the new situation. It is important that the local people are at any time respected, involved and informed about what is actually happening. This approach should be applied to all groups in the community, not the least the women and the poorest.

## **3.3 Risk at Different Times for Different Populations**

There will be different health risks for the different populations during the during the dam construction and the taking into operation phases. The following section will present these risks during the periods for the different populations. There tables includes five levels of risks. One plus is the small health risk effects while five plus is high health risk effects related to the specific population.

### ***3.3.1 Construction Workers, Followers and Drivers***

Most of the people belonging to workers, followers and drivers will migrate to the Song Bung 4 area and live there as long as the construction work is going on. Many of them are used to this kind of work and are used to move from place to place. During construction work and transportation there is always increased risks of accidents and injuries. These can happen at the construction sites, during transportation but also in the set up temporarily living and housing areas. The workers will more or less be exposed for different occupational hazards. This has to be prevented as far as possible.

There is also an increased risk that the workers and drivers feel lonely away from home in new

surroundings. When having money, this could be spent on gambling, drinking, smoking and women. Life style related ill-health and sexually transmitted diseases, as Hiv-Aids, are important health areas to have preventive actions against as well as being prepared to deal with when occurring. A close local monitoring system for “social evils” will be necessary (see Table 3).

**Table 3: Construction workers, camp followers and transportation workers and health effects to be especially concerned about**

	Construction	Operation
Poverty related diseases	+	+
Child health	+	+
Maternal health	+	+
Sanitation and sanitation	++	+
Accidents and injuries	+++++	+
Occupational health	+++	+
Nutritional disorders	++	+
Infections	++	+
Sexually transmitted diseases	+++++	+
Psychosocial ill-health	+++	+
Life style related ill health	++++	+

### 3.3.2 Households with people that have to resettle

The health area to be most concerned about for the households for resettles is the psychosocial area. Moving from relatives and friends where people are rooted and move from areas where people have put down their sweat and blood and tears for years are not easy, especially when the resettlement is enforced by others. Considerations of new living areas, new houses, new gardens and new possibilities for earning a living are only some difficult aspects to carefully handle during the psychosocial wellbeing of the people that have to resettle. If the local ethnic minority people that have resettled also are coming under the new influences from the outside construction workers and followers, the psychosocial health effects may be even stronger. Cultural conflicts will be evident. Depending on the new living conditions poverty related diseases could increase, especially related to maternal and child health. This also includes effects on nutrition.

There could also be influences coming from the “outside” world on life style habits. The risks for accidents will increase when more means of modern transportation are coming into the resettlement area. As the dam is coming into operation the risk of water born diseases and drowning is increasing (see Table 4).

**Table 4: Households that have to resettle from the dam area and the health effects to be especially concerned about.**

	Construction	Operation
Poverty related diseases	++	+
Child health	++	+
Maternal health	++	+
Sanitation and water	++	+++
Accidents and injuries	+++	+
Occupational health	-	-
Nutritional disorders	+++	+
Infections	+	+
Sexually transmitted diseases	++	+
Psychosocial ill-health	++++	++
Life style related ill health	+++	++

### 3.3.3 Health effects on local people living in the dam construction area

In an area quite isolated area from the world around as in the Song Bung area, traditions and customs have been settled and strongly rooted. When the outside world is coming closer with new roads, new information channels, new life styles, new resources etc people are indirectly affected as their roots are challenged. This will affect the well being of the local people that are not directly involved and affected by the dam construction or the taking into operation of the dam. Life style related ill health may increase in the area as well as the “social evils” like “karaoke om”, “massage om” and other kind of “oms”.

There is an increased risk that the arriving people for the construction phase will bring in diseases that has not been existing in the area or has been under control. One is HIV-Aids. Traffic accidents and water borne diseases may also affect the people outside the construction and the dam sites. The risks for malaria out brakes ill also increase.

When the dam has been construction and will be taken into operation the health problems will be more related to the changes of water flow and water levels in the downstream area. This can affect the nutrition, especially for vulnerable groups as children and pregnant women. Both the changes in water flow and the changes in nutritional status may increase the risk for infections.

More pressure will be put on the local authorities that have to manage the new project and integrate the project into the local planning and budgeting system. The pressure will also increase on the local health services. They have to take care of the construction workers and the followers in case of health emergencies. Then health care resources are taken from the ordinary health care work for the local people.

**Table 5: Indirect health effects on local people to be especially concerned about**

	Construction	Operation
Poverty related diseases	+	+
Child health	+	++
Maternal health	+	++
Sanitation and water	++	+
Accidents and injuries	++	+
Occupational health	-	-
Nutritional disorders	+	+++
Infections	++	+++
Sexually transmitted diseases	+++	+
Psychosocial ill-health	++	++
Life style related ill health	+++	+

## **PART B: SONG BUNG 4 – HEALTH ACTION PLAN**

The health action plan has been developed based on some important principles. One of the most important has been that the health action plan should be integrated as much as possible in the existing local health service and local administration procedures. Vietnam has an excellent health care network developed since many years starting at the village level ending up at the Ministry of Health in Hanoi. Therefore it is important to understand and build on the available local recourses as much as possible.

The second principle is that the health action plan should utilize local health development experiences. The experiences could have been made both from Vietnamese and donor supported projects. In the local area there is a present an important health care project going on. One is the Sida supported project named Community Based Health Development (CBHD). Another is the present ADB and Sida support to the neighboring Central Highlands provinces called “Hich”.

The third principle is that the health support suggested should be flexible in area coverage. The main focus for the suggested health action plan will be a support to the three main involved communes in the dam construction and taking into operation namely Zuoih, Cha Val and Ta Binh communes. The project could easily be scaled up to cover the whole district without increasing the costs dramatically. This could be done as the health care network already exists and there are useful health development donor projects already in the area.

This health action plan starts to identify existing health care recourses in the area. The local network and organization, health staff and capacity as well as health care financing, especially related to poor people, will be analyzed. The next section will describe the donor development health projects in the area and how the lessons learned could be used. The last part is the actual health action plan or health action plans. These plans are related to the three main population groups affected by the dam construction and taking into operation. One plane is related to the re-settlers, another to the affected local people and the last to the construction workers.

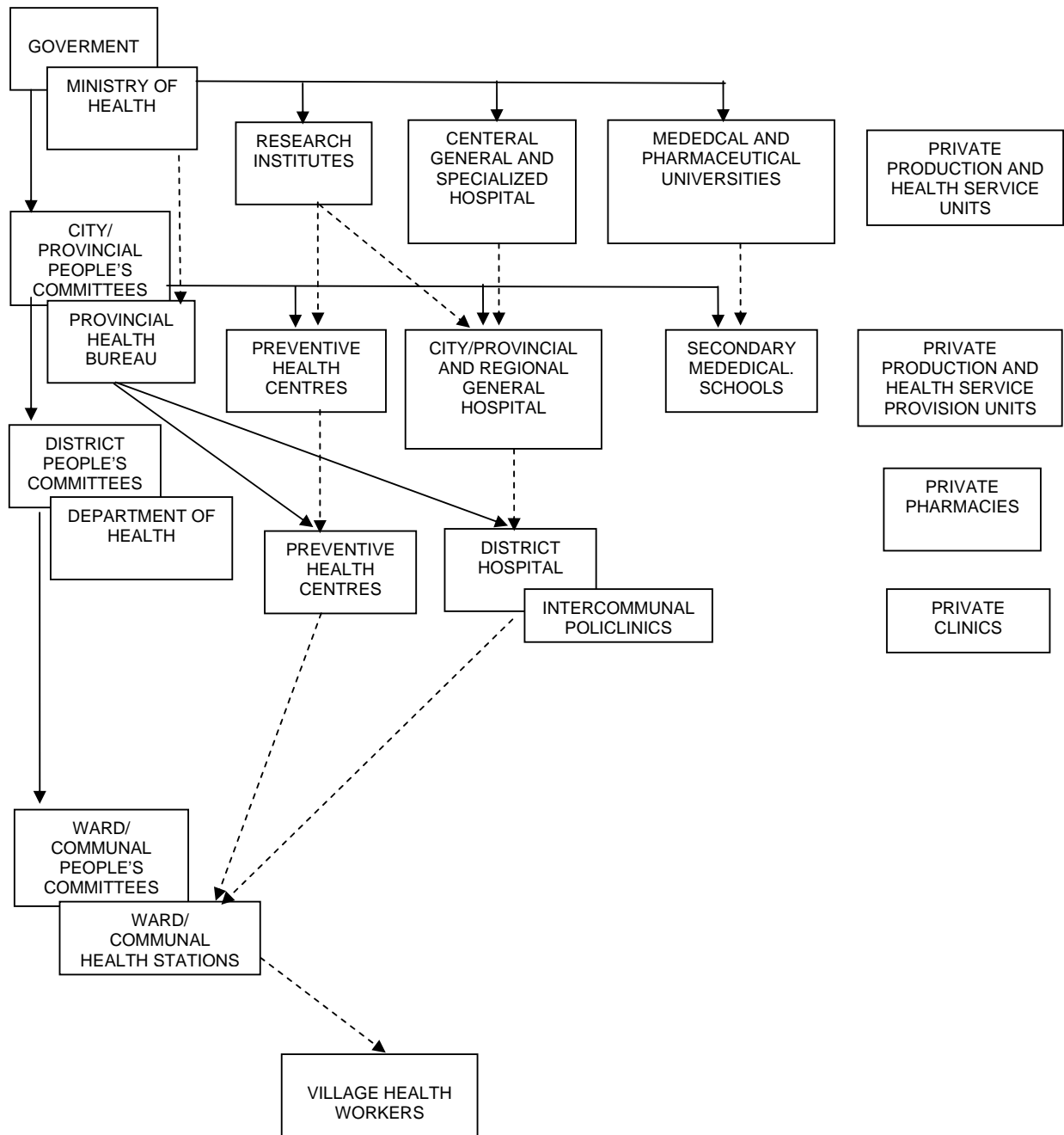
### **4 THE LOCAL HEALTH CARE ORGANIZATION**

There is an excellent network in existence today all over Vietnam. The present health care network starts in the villages with the village health workers. At the commune level there is a communal health station staffed with 3-5 health staff. The aim is that all health stations should have a medical doctor. The first referral level for curative care is the district level with a district hospital. In remote areas there are often inter communal polyclinics as a link between the commune health station and the district hospital. At provincial and central level there are higher levels of care. There is a parallel preventive structure with central level institutes, provincial preventive stations, and a district preventive station supporting the preventive health activities at the local level. This preventive structure is running the national health programs. Training of doctors and pharmacists for six years is done at the central level faculties. In each province there is a secondary medical school training assistant doctors, nurses and midwives usually for three years for the needs in the province. Figure 2 below shows the outline of the structure. In the following section the health care level will be presented and analyzed level by level.

Figure 2: Organization chart of the health sector of Vietnam.

STATE MANAGEMENT  
MANAGEMENT

PROFESSIONAL



NOTE

————> State management of staff, budgets, facilities etc

- - - - -> Supervision and management on technical issues related to preventive and curative care

#### 4.1 Village Health Workers

According to Decision No.3653/1999/QD-BYT dated Nov. 15, 1999, village health workers (VHWs) are health staff working within the community, under the technical direction of the commune health stations (CHSs) and the state management of the village leadership. Their main responsibility is to take care of the health of the people in their village. VHWs are the link between the public health care system and the people, carrying out the following tasks:

1. Health care health education
2. Guide people on hygiene and sanitation improvement
3. Provide first aid and care for common diseases
4. Support mother and child health care, including nutrition as well as family planning
5. Participate in the implementation of the national health care programs.

The VHWs should have a minimum medical training of 3 months according to the curriculum developed by the MoH. They are selected by the villagers. The VHW is mainly working on voluntary bases. For the work as a VHW a monthly allowance is given. The allowance varies between 40 000 and 60 000 VND per months between the provinces. The different national health programs can provide some extra small allowances when the VHWs are implementing the program at the local level.

The importance of the VHW increases with the distance to the communal health stations. They play a very important role in the remote and mountainous areas. In the Song Bing 4 area there are VHW available in every village. The Zuoih commune has 6 villages. All villages are covered with VHW trained for three months in Tam Ky at the Secondary Medical School. In Nam Giang district there are VHW in all 64 villages. All of them are belonging to the local ethnic population except three. All of them are men except one!! This is a major problem when they should deal with the important maternal and child health problems.

#### 4.2 Primary Health Care Facilities at the Commune Level

For the primary health care, the commune health stations (CHS) provide basic preventive and curative health care services. There should be at least three staff at a health station. One should be in charge of diagnose and treatment, one taking care of mother and child health care and one dealing with other health issues like drug management. The different national health programs are divided between the staff. This is a delicate matter as there are more than ten programs to implement at the local level.

There are national standards decided for how a health station should be built and run. These standards are to some part to ambitious, especially related to the many rooms and the size of a health centre. Less is focused on the quality of running the health facility.

The annual budget that should be provided to a health stations according to the central level norms is 10 million VND per year. This budget should cover all running costs, including allowances for the health workers, as well as small investments in equipment and repairs that needs to be made. Not even this modest amount of money is in reality seldom reaching the communal health stations.

The salaries are carefully regulated by state decisions and provided from the state. The normal salaries vary between 500 000 VND and 1 million VND a month related to position, geographical area and number of year at work. This is not considered to be enough. Many are mention a need of doubling the salary to be having a decent living. This can be compared to the often double

salary that the school teachers have from the primary school. Some of the national health programs are giving some small extra allowances when local health work is done.

Once per months there is a meeting with all VHW. Technically guidance is given and reports are delivered. The commune health station staff has a similar monthly meeting at the district level. The CHSs are managed by the commune and district people's committees. This is a new reorganization of the local health care system that has been set up in Vietnam the last year. This is an effort to decentralize the management of the health services and to separate the state management functions and the technical medical management functions. Before the health staff at the commune level was directly under the management of the provincial health bureau. In this new organization it will be important that the different management systems are well coordinated. Clear instructions how this should be done is urgently needed.

In Zuoih commune there are three staff employed at the health station. All have been trained in Tam Ky at the Secondary Medical School. Two are male assistant doctors and one is a female midwife. All are local ethnic people from the area.

The health station is of a relatively good construction build with a concrete floor with wooden walls and corrugated metal roof. The health station has three rooms. One is for delivery care, one for treatment and examination and one for inpatient care. The health station has no water or sanitary facilities. There are some drugs available. The drug delivery for the last month has not yet arrived.

The communes in Nam Giang are all belonging to the government supported 139 fund for the poor except the district town Tang My. Poor people should have access to free health care. For the commune level 10 000 VND has been set aside annually for buying free drugs. To have access to the drugs the commune health station has to make a list of requested drugs chosen from the Vietnamese essential drug list. The request is sent to the district and later to the province. From this year the purchase of drugs has to be made through bidding. When all these procedures have been done drugs should be delivered, at least quarterly, to the local levels. These procedures have not yet started to function well.

The health station in Zuoih commune got 7 million of the decided 10 million VND last year. No explanation has been given why the budget for the health station has been reduced.

Ta Binh is situated in the lowland area 20 km from Tang My town. Also in the Ta Binh commune health station there is three staff available. Two of them are of Co Tu ethnic origin and one is Kinh. Also in this commune all villages have VHW. The 9 VHW are all Co Tu and all are men. This health station is also in a relative good condition related to the construction. There is no running water available but there is a well and a toilet outside the health station.

The last months there has been no provision of drugs for the poor from the higher levels. This has lead to a drastic decrease of patients. The only drug left is a drug for common cold. This has now been used for all arriving poor patients for all conditions during the last month!! The problem with the drug delivery was brought up with the provincial health authorities. Their explanation was that the new routines with the bidding process for purchasing drugs had taken time to follow. The delivery of essential drugs to the local level was promised to soon start again.

The goal is that there should be a medical doctor at each health station in Vietnam. At present more than two third of the health stations have a medical doctor In the Nam Giang district there are only two medical doctors working at the commune level.

### 4.3 Inter-communal Polyclinics

The Cha Val commune has an inter-communal polyclinic serving both as a local commune health station for the Cha Val commune and as an inter-communal polyclinic for the 5 highland communes in Nam Giang district. The most distant commune is 30 kilometer away from Cha Val commune and the most distant village is more than 60 km away. It would take at least one day to reach that village. With a carrier for a sick patient in will take more than two days to reach the polyclinic. From the polyclinic to Zuoih commune health station the distance is 25 kilometer. To cover the distance will take at least 2 hours by motorbike or one day by walking.

The clinic has five health staff headed by a medical doctor. He has been trained at the medical faculty in Hue to become a medical doctor after working as assistant doctor before. Three of the health staff is Kinh, one Co Tu and one Ta Rieng. There is also three staff working in the integrated communal health station. Every month the district hospital comes the 60 kilometers to the polyclinic for support and supervision. Communication is difficult as there is no telephone or car available at the polyclinic.

The polyclinic has 9 rooms. Three rooms are for inpatient care, two rooms for maternity and delivery care and one room for emergency. The operation room has been newly updated with white clinkers on the walls as well as modern water basins. Still there is no running water even if two wells are available. One has already a water pump installed. Equipment is still missing for making minor operations. Malaria and tuberculoses tests can be done.

Patients are given free treatment at the polyclinic according to 139 health care fund for the poor. Actual reimbursement related to the treatment costs is used as modality for payment to the polyclinic. The availability of essential drugs coming from higher levels is at present no problem. Minor surgery could only be performed at the polyclinic. Last year 40 deliveries took place at the clinic.

The district level like to support the polyclinic in the future especially with technical support related to emergencies and operations. Teams could come from the district hospital and perform the operations and at the same time train the local staff.

The budget for the polyclinic is allocated via the district hospital according to number of beds available. The allocation according to central level decisions should be 25 million VND per bed and year. In addition the polyclinic should have 60 million VND for the salaries. The total budget is then around 300 VND million per year.

At present the polyclinic is functioning more or less like a normal communal health station except that the budget is higher and that there are some more rooms. There are still few patients coming during a day. The question for the Song Bung 4 project is if the polyclinic should be supported or not. If support should be given the support should be used to upgrade the facilities in a way that emergency treatment related to accidents, maternal and child health could be performed. Or should all support efforts go into the newly built district hospital in Tang My. From the Zuoih commune the distance to Cha Val polyclinic and the Tan My district hospital is at present about the same from Zuoih commune.

### 4.4 District Health Care

In the whole Nam Giang district there are totally 102 health staff working at present at district and commune levels. Then the local VHW have not been included. Of the health staff there is totally 13 medical doctors, 44 assistant doctors, 17 midwives and 12 nurses.

The district centre is situated in Tang My town. The new organization of the health services can be seen in the organizational chart in Figure 3. The Department of health under the district peoples committee is in charge of the state management of the communal health services. The district health services are divided into the preventive centre dealing with all the national health programs and the district hospital, including the polyclinic, dealing with curative care. The district preventive and curative care is directly managed by the provincial health bureau.

#### *4.4.1 The District Preventive Centre*

As the health service has been reorganized from the beginning of this year many of the 15 staff in the preventive centre are new to their tasks and duties. The integration with the district hospital that was used previously could no longer be used. This has negative consequences for example support to the local level maternal health care. One specific health staff has now been appointed to be the main responsible for a specific national health program. The health staff has at the same time been assigned to be main responsible for a specific commune to support and supervise. In this function the individual health staff has to take on the supervision of several programs at the same time.

An important part of the activities implemented by the preventive centre is Information, Education and Communication, IEC. The intention with the IEC work is to make local people more aware of prioritized health issues. Use of radio messages, loudspeakers, and pamphlets are common. Other important channels information given through the local leaders at the commune and village levels. The mass organizations are usually playing an important role in this work as the Fatherland Front, the Youth Union, the Farmer Union and the Women Union. The year 200 a total of 600 million VND was allocated to the preventive centre.

#### *4.4.2 The District Hospital*

The district hospital has 40 beds divided into three main departments. Maternal health, obstetric and surgery is included in one department. Pediatric care, infections diseases and internal medicine is included in another department. Emergency and laboratories facilities make up the third department.

The hospital has 42 staff i.e. about one staff per bed. The health staff is including 11 medical doctors, 13 assistant doctors, 3 secondary nurses, 3 secondary midwives and 1 primary nurse. The Ministry of Health staff norm is that there should be 0,9 staff per hospital bed at the district level. The need for increasing the technical capacity of the staff was a concern that the vice director of the hospital expressed during the visit.

Minor operations could be performed at the hospital as caesareans, appendectomies and taking care of trauma patients. 60 operations were done last year. Blood can be given after being tested for HIV aids. There are 3 surgeons available together with 1-2 anesthetists. One ambulance has been provided by UNFPA 1998.

The hospital has electricity and telephone. There is one x-ray machine, ultrasound and ECG. The average cost for an inpatient stay is at present 170 000 VND.

The budget is at present 1,2 billion per year for 47 beds, including the beds in the polyclinic. The future Song Bung 4 support to the hospital is recommended to be given directly to the hospital and not pass through the upper levels bureaucracy.

A new district hospital has just been built in the hospital area. The new hospital consists of four new buildings. The hospital is well built with clinkers on the floors and on the walls. Water basins are available everywhere. Doors and windows are made in stainless steel. Still there is no functioning water supply system. Pipes have already been set out in the ground and pumps are

available. There has been no medical equipment supplied yet. This new hospital has a great potential to become an important referral centre for emergency care as well as for more complicated cases from the Song Bung 4 area. This could also be a good place for on the job training for lower level health staff.

#### **4.5 Health Insurances for the poor – Decision 139**

The Vietnamese Government has decided that by year 2010 there should be a comprehensive health insurance system covering all Vietnamese citizens. The system today is covering about one third of the population. All government employees and larger companies have to insure their staff. School children can also be insured. “The health care fund for the poor” according to decision 139 was introduced 2002. Poor are defined according to the Ministry of Labor and Social Affairs criteria’s. Also people living in the 135 supported areas and ethnic minorities in the northern and central highland provinces are automatically included. Recently all children under 6 years have been covered by the insurance system. The large group of uninsured is at present the non poor rice farmers in the country.

All eight communes in Nam Giang district except people in the district town of Thanh My are covered by the Fund. The provinces in Vietnam has had the choice between issuing health insurance cards to all poor families or give direct reimbursement when poor people are approaching the health care services. In Nam Giang direct reimbursement has been the choice. In the near future this has to be changed to health insurance cards handled by the Vietnam Social Insurance Agency. The fund is at present providing 50 000 VND per poor and year provided by the Government budget. There is at present a discussion going on at the Ministry of Health to increase the premium to 60 000 VND and to include the near poor people.

One other important decision made recently related to health care financing is that more management autonomy has been given to hospitals. The hospitals can take user fees from the patients when they use the facilities. Incomes from the fees could be used to boost staff income of to buy more equipment as well as to improve the hospital infrastructure.

At present the hospital fees could be used to contract local health staff for a minimum salaries of 290 000 VND per months. For setting the salaries for government staff there are strict carefully developed tables to follow. The levels depend on the educational background, the position, the geographical areas and the number of years the person has been working.

#### **4.6 The Provincial Health Services**

The provincial health bureau, PHB, is one of sections under the Provincial Peoples’ Committee. The PHB is in charge of the entire health network at the provincial level as well as the district preventive centers and district hospitals. At the province level there are several specific preventive centers for the different national health programs. There is also a general hospital available taking care severely sick patients and several specialist hospitals. At this level the Secondary Medical School train health staff according to the needs in the province. Outside the public system there is a rapidly growing private health sector, especially private pharmacies and private clinics for outpatient care. The private sector is in practice more or less unregulated.

At present the province is supporting the upgrading of assistant doctors to medical doctors in the ethnic minority area. More than 100 doctors are at present trained for the 8 highland districts in Quang Nam Province.

The provincial health service mentioned that there is another dam project under way in the same area as Song Bung 4. The inevitably question will then be – Are there some efforts to coordinate the support to the local people in need related to the different dam projects?

The Province Health Bureau had the following recommendations for the Song Bung 4 health area support;

- The support should deal with the VHW male situation. Could also separate female village health workers be trained? This recommendation was based on the importance of the VHW function for the preventive health in the villages.
- Another concern was how to control “social evils” in the future when the two dams will be constructed.
- A third recommendation from the provincial health authorities was to give a firm support to increase the district level training and supervision capacity. This would be the centre for increasing the capacity building for the local health staff in the area in relevant health fields.
- Regarding constructing and equipping local health facilities in the Song Bung 4 Area, a new communal health station will be necessary in Zuoih commune as the old one will be set under water.
- The emergency care should be upgrade and strengthening primarily at the new district hospital. A same kind of support could also be given to the Cha Val policlinic.
- Other concerns mentioned were the high rate of malnutrition among young children and the low attention form pregnant women at the local health services.
- When it comes to improve local water supply and sanitation facilities the district level has to play an important role.
- The provincial health authorities promised to urgently solve the initial problems with the drug supply related to the 139 program to the poor brought up during the visit to Tai Binh communal health centre..
- The retraining of health workers at the local level was recommended to be another priority for the Song Bung 4 area support. Both VHW and commune health workers needs to be trained. Also at the district level there are specific training need especially related to emergency care.

The provincial health authorities were so far satisfied with the good situation for malaria, safe food, and HIV-aids. Concerns were raised that improved efforts should be made to continue to keep the situation under strict control.

## 5 COMMUNITY BASED HEALTH DEVELOPMENT - CBHD

During more then thirty years Sweden has supported the Ministry of Health in Vietnam. One of the important areas has been to give support to the primary health care in poor and disadvantaged areas. During this agreement period support has been given to Yen Bai and Quang Nam provinces. The support is named “Community Based Health Development”, CBHD. Four districts have been selected in each province. In Quang Nam Province, Tien Phuc, Hiep Duc, Bac Tram My and Nam Tram My districts were selected. Of these districts Nam Tram My could be compared to Nam Giang as the distinct is mountainous with 10 000 poor ethnic minority people.

The program is managed by the Ministry of Health. In the Quang Nam province health services there is a project management unit, headed by the director of the health service and assisted by a vice director. The direct implementing level is the district level and the program money is directly transferred to the district level. The higher levels are mainly providing technical support as well as doing supervision and monitoring.

The basic strategies used are community participatory based. In most of the need based plans from the local villages the following priorities has been expressed; improved water and sanitation, better child nutrition, taking care for “women diseases” and better access to good quality local health services including drugs.

The following useful results and experiences have been achieved by the health services in Quang Nam Province that could be useful for the Song Bung 4 area.

### **5.1 Water and Sanitation**

The program provides a building material to every household that like to participate to improve their water and sanitation situation for a cost of between 1 and 1.5 million VND. Then the household has to provide the labor needed as well as local raw material and future maintenance. The household could choose between improved water supply, sanitation facilities and or simple bathrooms. The choice has often been water supply: The support has been given to the households that have been prepared to sign an agreement for their contribution. When the first households have been building their facilities successfully other have come to join the program. In this was the program has grown in its own pace and in a way the local community has been able to handle. One often-discussed topic has been how to give more support to the more poor households. So far the sanitation and water program has developed well.

### **5.2 Training**

Improving the capacity of the primary care health staff has been a priority in CBHD. New methods of teaching have been used as active learning. New curriculum has been developed for VHW. Need based regular training have been introduced for other primary health care staff.

#### ***5.2.1 Training of VHW***

For VHW acting in the local village it is important to be able to use the existing local knowledge and believes as a starting point. In CBHD a new curriculum for VHW has been developed adopted. In 2004 the curriculum was accepted by the Ministry of Health for training of VHW in remote areas.

The training will be described more in details at it could be useful for the Song Bung area. The training is divided into blocks. Each block consists of 10 days theory followed by one months practice in the local village. Each block has 1 to 2 topics related to the 5 duties of the VHW. The focus is on prevention of the main health problems that could be expected in the remote areas.

The blocks are divided as follows:

- Block A – Hygiene and Sanitation
- Block B – Mother and Childcare
- Block C – First Aid and care of Common Diseases

The theory is often done at district level. Trainers are often coming from the district themselves trained by the province to use active learning methods. The practice is supervised by the local communal health station.

For the VHW training there are curriculum and learning material available. The Quang Nam health services have supervised training of hundreds of VHW according to the curriculum for disadvantaged areas already.

#### ***5.2.2 Regular Retraining of Commune Health Workers***

The commune health workers are rarely retrained. If this is done it is often in relation with some national health program. Training in diagnose and treatment, including safe and rational use of drugs, is rare. Regular retraining could be done in connection with the monthly review meetings held at the commune for VHW and at the district for the commune level staff. In these occasions present health topics could be brought up for discussions by the health staff. Even on the job trained could be considered. .

### 5.2.3 Training of District Level Health Staff

For local people to gain confidence for the health services it is important to be able to treat well especially emergencies. The medical doctors may be a need to come to the provincial hospital to learn more. The district level should also be able to use some of the existing basic laboratory techniques.

In the CBHD supported districts a core group of local district trainers has to be set up and supported. This has been done under the supervision of the Secondary Medical School. This group has later been locally responsible for the VHW basic training and setting up the regular re training system for communal health staff.

### 5.3 Management and Supervision

The planning in CBHD has been made starting from local level. Then the plans have been discussed and approved by the higher levels. Higher levels then become more supportive than controlling.

### 5.4 ADB and Sida Support to the Central Highlands

There is at present an interesting donor support to the Central Highland provinces next to Quang Nam. The aim is to improve the access to good quality health care for the poor mainly ethnic minority population in the area. Additional financial support is given to the health care fund for the poor as for transportation, food and accommodation. This extra financial support could also be given for the local people in the Song Bung 4 area.

## 6 HEALTH ACTION PLAN FOR SONG BUNG 4 HYDROPOWER PROJECT

The health action plan will build on some important principles. These are:

- The responsibility of the Song Bung 4 *construction company* for the health of the *workers as well as of the local people that has to resettle*.
- *The involvement of the local people* and the local authorities, especially the health authorities for the support to improve the health of the local people.
- *The integration* of the health action plan into the local health plans for the Nam Giang district and locally affected communes. .
- The focus of the health action plan is increased *capacity building* of the local health staff and *the increased awareness* among the local people about the main health problems in the Song Bung area.
- The health information messages should be made language specific and adopted to the *ethnic culture by using local “health informers”*, and be *gender specific*.
- The importance to utilize gained local experiences in other *donor projects*
- The importance of the *determinants of health* for better health, i.e. how other sectors have consider health and safety when the socio-economic development plan has been developed for the Song Bung area
- The importance not to introduce a *material support* that is not appropriate in the area as vehicles, computers, new water and sanitation systems etc
- The importance to calculate the budget in *local currency* Vietnamese dong.

### 6.1 The Three Health Programs

The public health action plan is based on the health impact assessment in Part A. The plan covers three health programs which have the common overall objectives to prevent ill health to occur and

to avoid the negative health effects of the Song Bung Hydropower Project for the people that will be in the project area. There are three health programs suggested for support;

- Construction workers health program
- Resettlement health program
- Health program for the project area local people

The three programs have their own specific objectives, time frames, people affected and activities. There will also be different main provider of recourses to the different programs. The main providers will be:

- The construction company;
- The local health authorities at provincial and district levels;
- Additional resources from donors.

The resources from the different providers will be made transparent related to the different programs. This can best be found in the summary of the budget at the end of the health action plan. Still many of the health activities are the same and the three programs have to be closely coordinated. The main coordinator and supervisor of the first program will be the construction company. The main coordinator and supervisor of the third program will be the provincial health authorities in cooperation with the RMIU staff and the main implementing level will be the district level in Nam Giang. The second program has to be jointly coordinated and supervised by the construction company and the provincial and district health authorities.

The Ministry of Health has developed financial regulations and guidelines for Sida health support to Vietnam. Allowances for training and supervisor have been adopted for remote and mountainous areas. These regulations are proposed to be used also in the Song Bung 4 support. The allowances used can be found in Annex 4. The budget proposals and calculated unit costs for this health action plan are based on these allowances level.

## **6.2 Construction workers health program**

### **6.2.1 Objective**

The objective for the construction workers health program is as follows;

- To ensure preventive and curative health measures to safe guard health and safety of the workers and their families
- To prevent and minimize the negative health effects due to construction work and the migration of project staff and camp followers on the local population

### **6.2.2 Location, time and people effected**

The program will focus on the construction and transportation workers as well as camp followers. If nothing else is stated all are included when mentioning construction workers in the construction workers health program.

The number of workers and construction camp followers are expected to be between 2,500 and 3,000 people. Camp followers include family members and service people, as food sellers and merchants. Many of the health issues for the construction workers are mentioned in Construction Phase Social Management Plan (CPSMP) given in Part II of this Report. The CPSMP addresses the following health issues; traffic accidents, drug addiction, sexual exploitation and human trafficking. The plan is mentioning that the camp workers should be provided with basic health facilities, ensured safe drinking water and sanitation and be made aware and protect themselves and the local population from sexually transmitted diseases. The plan also stress that local organizations should be involved in the community planning and monitoring of health hazards.

The greatest concerns for the surrounding population in the construction area are the people in the villages in Thon Vinh and Pa Toi (total 117 households with 650 people, nearly all of Co Tu ethnicity) in Ta Binh commune closest to the construction site. Also other villages along the National Road 14 D in Ta Binh and Ca Dy communes should be considered. The district town of Thanh My is mentioned in the plan as a place that will be affected by the influx of traders and service providers. One of the most important topics covered in the CPSMP is health and gender.

The Construction workers health program *time frame is 5 years*. There will be some time needed to prepare for the program before the workers will arrive to the camp sites. There is a time schedule for the construction schedule presented in the CPSMP. The construction period for the dam will be 4 years and the construction workers health program will be implemented during this time.

### 6.2.3 Implementing framework

The implementing agency for the construction worker health program will be the Song Bung 4 construction company. The construction contractor is required to provide adequate living, health, water and sanitary conditions, including solid waste management in the worker camps, to avoid increased health risks for the workers on local people. The contractor will work closely with the local health authorities especially in the Nam Giang district. The company will be advised to “contract” IEC support as well as the training needed for increased awareness among the workers and the contractor’s health staff. The company must also have a good cooperation with the local health authorities in Thanh My in case emergency care is needed. Good communication by telecommunication and emergency transportation will be important to set up.

### 6.2.4 Activities

Most of the activities in the construction workers health plan will be related to prevention of the increased risks of accidents and injuries, occupational health hazards and transmittable diseases as Hiv-Aids and malaria. It will also be important to give good medical care when accidents and injuries as well as other health problems occur. To be able to do this there must be health facilities available for the camp workers.

There will be three main areas for support in the construction worker health program;

- Ensure that the construction company fulfil the legal obligations related to employment and occupational health
- Improve the awareness how to and the possibilities to preventive health and safety problems to occur.
- Establish good health care facilities with qualified health staff for the construction workers

#### 6.2.4.1 Ensuring employment

There are clear regulations related to employments of workers in Vietnam. This states that workers have to be contracted as for the construction of the hydropower dam. These regulations are usually followed by bigger companies but more seldom by smaller companies. There are also detailed regulations regarding work safety as well as occupational health, see Annex 5. These regulations are more seldom followed in practice by Vietnamese companies.

Related to the construction workers health program it should be a pre-condition for the contracted construction company that their workers are contracted. Then they are automatically insured. Health and social insurances are guaranteed. For the health insurance the employee pay 1% of their salary and the employer pay 2%. Then the employee is entitled to free health care when needed.

#### 6.2.4.2 Increase the awareness and preventive activities for construction workers

Regular health information will be given to the construction workers (including the camp followers) by the health staff working from the project health station. Health information could also be “contracted” from and coordinated with the district IEC work in the two other health programs. The information will cover the important health risks that the workers could be exposed to. They will also be informed about the health risks that they could bring to the local population. Priority areas will be accident and injury prevention, occupational health, sexually transmitted diseases, especially Hiv-Aids, malaria, and health and safety risks of misusing alcohol.

Specific preventive efforts are also proposed for the main health risks. The following areas should be especially considered;

- Accident and injury prevention
- Occupational health
- Sexually transmitted diseases, including Hiv-Aids
- Malarial prevention
- Alcohol misuse prevention

All of the areas are including IEC activities as an important component. Allowances are proposed for the staff performing the information campaigns at a level of 50 000 VND. This is the level used in the Vietnam Sweden Health Cooperation at the local levels. The staff could only get one allowance in the same time. This means that if the staff are informing about several topics at the same time the allowances are still 50 000 VND. The cost for the IEC activities could then be sharply reduced if the IEC activities are coordinated and done at the same time.

#### Accidents and Injury Prevention

The workers should be assured to have access to a safe working environment. The project company should use safety protection for machines and workers involved in the construction work. The project company and the project health staff should make *safety rounds* at the work sites at least monthly to assure that the safety regulations for construction workers are followed. Strict protocols should be written after each round and signed by the project director. In this protocol it should be noted if the regulated safety measures are in place. If this is not the case, the safety people should urgently suggest improvements. Agreed measures for improvements should be signed by the project director. The following activities are suggested;

- IEC activities quarterly to all the workers
- Monthly safety rounds
- Actions to improve safety according to the safety protocols

#### Budget

IEC regularly every quarter by three “health informers” from the district or the province together with the health staff at the construction health centre for five years – 50 000 VND per staff and time

Cost – 5 million VND

Safety rounds monthly including five people per time – 50 000 VND per staff and time

Cost – 15 million VND

***Total cost – 20 million VND + costs for improving safety according to Protocols***

#### Occupational health

Construction workers will be exposed not only to increases risks of accidents and injuries but also

to other occupational health hazards. This can come from the construction materials or environmental dusts from the working sites. An *occupational health plan* should be set up with the assistance of the district preventive centre. The occupational health plan should be supported and approved by the provincial health bureau. The occupational health plan has to be followed up at least two times per year by inspections on site, including occupational health specialist from the province, local health staff and company managers. The following activities are proposed;

- IEC activities regularly at least twice a year to all workers
- Measures according to the Vietnamese official regulations as protective devices for the workers, on machines etc to prevent occupational diseases to occur
- Occupational health inspections twice a year

#### Budget

IEC regularly twice a year by three “health informers” from the district of province together with the health staff at the construction health centre for five years – 50 000 VND per staff and time  
Cost – 2.5 million VND

Occupational health protection according to the occupational safety plan made by the construction company

Occupational health inspections twice per year during 5 years involving ten people – 50 000 VND per staff and time  
Cost – 5 million VND

***Total cost - 7.5 million VND + occupational safety arrangements***

#### Sexually transmitted diseases, including Hiv-Aids

As suggested in the social management plan in the CPSMP, the project contractor should set up an *Hiv-Aids specific program* for the construction workers. The program will include the health information champagnes for the construction workers, counseling services at the project health clinic and free condoms at “private places”. A major problem is that condoms are still seldom used in Vietnam. The following activities are proposed in this health action plan;

- IEC activities every quarter to the constructions workers
- Free condoms at “private” places
- Testing facilities for Hiv at the health clinic
- Counseling facilities at the health clinic

#### Budget

IEC activities to all workers quarterly by three “health informers” from the district or province together with the health staff at the health clinic for five years – 50 000 VND per staff and time  
Cost – 5 million VND

Free condoms  
Cost – 2 million VND

Testing facilities  
Cost – 50 million VND

***Total cost – 57 million VND***

#### Malaria prevention

The risk will increase for different infectious disease outbreak when new people come into an area. The increased risks for a *malaria outbreak* when the new construction workers arrive is a major concern. There should be different measures taken to prevent and in time detect and treat new cases;

- IEC information at least every six months - how to prevent malaria to occur
- Provide bed nets to all the construction workers
- Provide chemicals for spraying suspected malaria larvae breeding areas
- Proved equipment for diagnostic tests and treatment of suspected malaria cases

#### Budget

IEC activities twice a year for all workers by three “health informers” from the district preventive centre and the health staff at the construction site health staff for 5 years - 50 000 VND per staff and time

Cost – 2.5 million VND

Bed bets to all workers – 80 000 VND per net

Cost – 200 million VND

Chemicals for spraying regularly at least once a year – per year 15 million VND

Cost – 75 million VND

Tests and treatment depend on outbreaks and the number of cases. Should be available if needed

Cost – 25 million VND

**Total cost - 302.5 million VND**

#### Alcohol misuse prevention program

One main health and safety risk will be high consumption of alcohol among the construction workers. In Vietnam it is not unusual that alcohol is used even for breakfast and more often during lunch houses. **Rules and regulations**, when and how alcohol could be consumed related to the work, should be set up by the project company. These rules should be inspected by the securities at the sites. If misuse of alcohol that endanger the work or traffic situations, incidences should be reported immediately to the management. Proper actions should be taken. The following activities are suggested;

- IEC activities related to the effects of alcohol misuse, including risk for accidents and Hiv-Aids
- Rules and regulations set up related to use of alcohol
- Equipment for alcohol measurement among workers and drivers

#### Budget

IEC activities among the workers quarterly for five years by three “health informers” from the district or provincial preventive centre together with the health staff at the construction health centre.- 50 000 VND per staff and time

Cost – 5 million VND

Regular meetings once per quarter for five years with the workers, the management and the health staff where the alcohol situation among the workers are discussed and proper actions taken if needed – 10 people a 50 000 VND per time

Cost – 10 million VND

Equipment for alcohol measurement

Cost - 50 million VND

**Total cost – 65 million VND**

#### 6.2.4.3 Health care facilities and qualified health staff

The construction workers camps have to have health care facilities for the workers. For a work force of up to 3,000 people a **health clinic** is needed. A 20 bed health clinic is proposed. The health clinic also has to be equipped with basic equipment and emergency equipment.

The quality of the services depends heavily on *qualified health staff*. The clinic needs to be headed by a medical doctor and staffed by at least one secondary nurse and one secondary pharmacist. This health staff should have specialist skills in emergency medicine/trauma and infectious diseases. This would ensure that the clinic has the capacity to handle some first line preventive care and to stabilize accident victims and improving the outcomes for the patients as well as minimize the impact of the construction work population on the district hospital.

The clinic should have good telecommunication with the district and provincial hospitals in case of emergencies. The health clinic should also have one *ambulance* stand by for emergency evacuations. It has to be assured that the ambulance is only used for this purpose. Ambulances in Vietnam are usually more often used to transport leaders and health staff to different meetings and work shops. The ambulance and other equipment at the clinic should be donated to the district hospital at the end of the construction work.

The construction contractor will have a full cost-recovery agreement with the local health services through the obligatory health insurance for the construction workers.

The following support is proposed for the construction workers health facilities;

- Health clinic of 20 beds
- Basic equipment
- Emergency equipment
- Medical doctor
- Secondary nurse
- Secondary pharmacist
- Ambulance

#### Budget

Health clinic for 20 beds based on 2 million VND per square meter, totally 150 square meter

Cost - 300 million VND

Furniture as beds etc

Cost - 50 million VND

Basic equipment

Cost - 100 million VND

Emergency equipment

Cost - 100 million VND

Salary for a medical doctor per month 1.5 million VND (calculated as 13 months in a year as one month extra bonus is paid at tet)

Cost - 97.5 million VND for five years

Salary for a secondary nurse per month 1.2 million VND

Cost – 78 million VND

Salary for a secondary pharmacist per month 1.2 million VND

Cost - 78 million VND

Ambulance

Cost - 500 million VND

**Total cost – 1,303.5 million VND**

### 6.3 Resettlement health program

#### 6.3.1 Objectives

The objectives for the resettlement health program are;

- To prevent and minimize negative health effects due to the resettlement
- To prevent and avoid the negative health effects resulting from the construction work
- To improve the health situation of the local people

#### 6.3.2 Location, time and people

The resettlement health program will focus on the possible impact area/target groups for the increased water levels when the dam is taken into operation. There are nearly 1,000 people coming from four villages that will be flooded. They will be resettled in two new villages and one existing village.

The program *time frame is 8 years*. It will at least start 6 month before the start of the dam construction activities. This will allow for the local health staff to be ready before the first resettlement takes place. It will also assure health service for the population while they are still living in their old villages.

This population will be especially vulnerable during the period from when they are moving from their old village areas until they have settled down in the new living area after the reservoir has been filled.

#### 6.3.3 Implementing framework

The direct implementing agency for the resettlement health plan will be the Song Bung contracted company. Supervision will be done by both the Nam Giang district people's committee as well as by the Province health bureau. A good cooperation has to be established between these involved agencies. The contractor has to support the construction of the communal health station needed for the new villagers as well as give support the construction of healthy housing and good water and sanitation facilities for the new settlers.

The health staff at the communal health staff, as well as the village health workers, is already employed by the Nam Giang people's committee. These employments will continue also after the re-settlement.

To be sure to avoid negative consequences for the re-settlers a more general support to increase the awareness among the local people and the increase the capacity among the local health workers has to be implemented. This support could not be expected to be given by the construction company. External funds will be looked for to ensure the quality of this part of the program. Still the main responsible for this part of the program will be the local health authorities in Nam Giang district.

#### 6.3.4 Activities

The local ethnic minority population that has to resettle will become the most vulnerable population in the Song Bung 4 area. They have to prepare for moving long before the project starts. Then they will live in a transition period from when they are moving from the old villages until the water dam has been filled. Only then the new housing areas will be ready for people to settle down in an environment that has become stable.

There are new facilities that the Song Bung 4 contractor has to provide for the re-settlers. This is mainly related to the construction of new health care facilities, as well as housing areas with good

healthy housing and functioning water and sanitation.

For the more general health support many of the health activities in the resettlement health plan are the same as for the local area health plan. These activities should be integrated into the local area health plan.

The resettlement health plan will only cover the health issues that are specific concerns for this population. There will be two main areas for the more specific support;

- To reestablish the health care *facilities*, build healthy houses and improved the water and sanitation situation for the resettling households.
- To give extra support to avoid *negative health effects* of the increase health risks related to nutrition, water and sanitation.

#### 6.3.4.1 Health housing and healthy environment

It is important to recognize that other sectors involved in the Song Bung 4 area development will be important for the health development in the area. The health services are not directly involved in these activities. Still they should be important advisor when plans are made.

##### Housing

When considering the construction of the new houses in the resettlement area at least the following health considerations should be made.

- *The kitchens* should be constructed in a way that smoke is not affecting the health of the people living in the household.
- *Animals* should be kept away from the housing area. The domestic water recourses should be protected from garbage and domestic animals.
- Safety should always be considered when constructing new houses. This related to areas like electricity, falls, drowning etc. The movement *Safe Homes*, included in the cultural and safe village movement should be used.

##### Education

*The education of the mothers* is very important for the health of the families. This is especially important for the health of the children. As there is a high rate of illiteracy, especially among women in the Song Bung 4 area, special efforts should be made to educate, at least the girls and the younger, illiterate women.

##### Access to Food and Income

In Zuoih commune the malnutrition rate among children is among the highest in Vietnam and is reaching nearly 50% of the children, twice as much as in Vietnam in average. The availability of food is important for all people, especially for children and mothers. Health is strongly related to the living standard. The more rich the better health.

##### Clean Water and Sanitation

There are no wells in Zuoih commune. Most of the water used comes from the streams and the water quality cannot be guaranteed. A low rate of the people is boiling the water before drinking. Supply of clean water is one of the health priorities for Zuoih commune, but also for the whole area where the dam is being constructed. A water supply system with plastic pipes transporting water from the streams has earlier been provided to the Zuoih area. This system has not been maintained well and is at present not functioning.

In the Sida supported CBHD clean water supply has been one of the priorities local people has asked for when doing rapid appraisals in poor villages in Quang Nam Province. In the Quang Nam Province, water supply support has been given to poor districts like Nam Tram My. Direct responsible for the implementation has been the district level with the support and guidance from the province health services.

Water and sanitation awareness and capacity training will be provided for the project area people both in Zuoih and in Ta Bhing commune.

Cost provided by donor 16.44 MVND

#### 6.3.4.2 Direct Material Support to the Resettlement Health Services

There is a need for some material support to the Song Bung area health services, especially for the health station that will be moved. The following support is proposed for the program;

- New communal health station in Zuoih commune
- A new health post

#### Support to a new Health Station in Zuoih Commune

The present *communal health station* in Zuoih commune will be under water when the dam is taken into operation. A new health station has to be built in the new commune centre. The standard is proposed to be in concrete material for the basement and the walls with tiles on the roof. Not more than five rooms are suggested. The health station should have running water inside as well as good sanitary facilities. Running water could be made available with a pump from a reliable water resource, plastic pipes to a water container, and pipes to at least the delivery and treatment rooms. The delivery room should have clinkers on the walls easy to clean. Some additional medical equipment is also proposed. The budget for the commune health station is included in the resettlement budget given in Chapter 8 of Volume 2 of the REMDP

Additional equipment will be provided at a cost of 15 million VND from the additional Livelihoods Development Program budget.

#### Support to the Pa Pang resettlement area

This area will be isolated when the reservoir is filled with water. The number of households is expected to be less than 60. This is not enough to support the area with specific health facilities. It is suggested that a *health post* will be set up headed by an assistant doctor or a secondary trained nurse from the area of the local ethnic people. This health staff will be contracted, placed in the village and given some extra medical equipment and allowances. The budget for the health post in Pa Pang is included in the resettlement budget given in Chapter 8 of Volume 2 of the REMDP

#### Extra support related to important health issues

In the health impact assessment several health areas were mentioned that could become worse during the resettlement. These were psychosocial ill-health, poverty related diseases, accidents and injuries, nutritional problems mainly related to small children and the health of pregnant women, Hiv-Aids and water related diseases.

There is also an increased risk of a malaria outbreak when a lot of new people will arrive into a malaria endemic area. It will be important that the people closest to the constriction sites are provided with impregnated malaria bed nets. At least the families that are resettled should be included in this group.

Extra support should be given to make the resettles aware of

- Accidents and injury risks and how to prevent them
- The importance of growth monitoring of small children
- How to give good and healthy weaning food to children between 6 and 12 months
- The importance for pregnant women to go for prenatal check ups
- The importance to deliver assisted by professional health staff
- The importance to use impregnated bed nets at all time when going to sleep
- The risks of unsafe sex
- The need of clean water and good sanitation

This IEC and training activities should be made by the district health authorities with the support and supervisions from the provincial health authorities. This part of the program should be coordinated with the activities in the project area local people health program. There is a need for some extra external funding for these activities.

Budget provided by donor 61.44 MVND

## 6.4 Health program for the project area local people

### 6.4.1 Objectives

The objectives for the local area health program is

- To prevent and avoid negative health effects resulting from the immigration of construction workers
- To prevent and avoid negative health effects resulting from the construction works and increased traffic
- To prevent and avoid negative health effects resulting from the changes in water levels and water flow
- Improve the health situation for the local people in the project area

### 6.4.2 Location, people and time

Geographically support will be concentrated to the communes around the construction sites and to the downstream area of the new dam. Here the risks of adverse health effects are highest. Most construction activities and camps for workers and followers will be located here. These areas will be affected by changes in water levels and quality. The communes that will be mostly affected are Thai Binh and Cha Val, where the construction workers will be, and the Zuoih commune areas, directly affected by the increased water levels and need to be resettled due to the dam.

The program time frame is *4 years intensive support* followed by five years of monitoring and supervision. It will be good if the program starts at least six months prior to the start of the dam construction. This will allow for some important program preparations as capacity building for local health staff and awareness raising for the local people before the construction people arrives to set up the dam. Continuous monitoring for long term effects might be needed after the ten year period.

### 6.4.3 Implementation framework

The district level peoples committee in Nam Giang is today directly responsible for the implementation of the health services action for the local area people at commune and village levels. The province health bureau is responsible for the curative, i.e. district hospital, and district preventive health services. i.e. preventive health centre, at the district level.

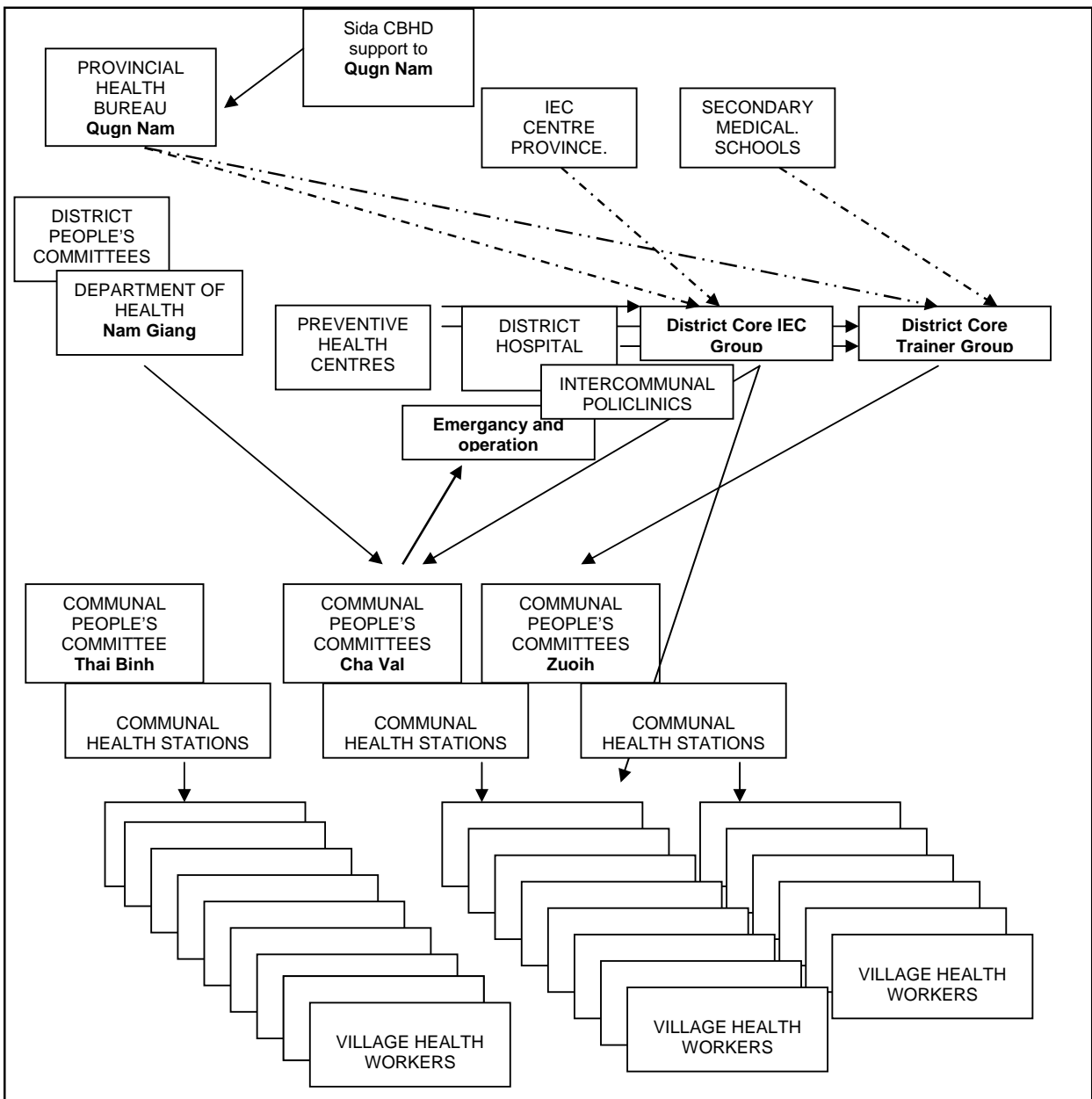
A district core trainer groups is proposed to be established in Nam Giang district with the support from the provincial health service. The aim will be to increase the capacity for the Nam Giang district health services to support better health service capacity of the commune and village level health staff. A district core group is also proposed for Information, Education and Communication (IEC) activities. Again the province will give technical support and supervision to set up district core groups. The core group will then support and implement local area IEC activities. These core groups will be directly responsible to improve the capacity among the local health staff as well as increasing the awareness among the local village people in the local dam area.

To improve the technical capacity to take care of emergency cases as well as improve the surgical skills material as well as a capacity support is suggested to the district hospital and polyclinic.

The direct implementing agency will be the Nam Giang district peoples committee. The supervision will be done by the province health bureau. The Sida supported CBHD in Quang Nam province is prepared to take on the central level supervision as one part of the ongoing Sida support. The costs for the development of the Nam Gang health program for the project area local people could be shared between the Song Bung 4 project and CBHD. CBHD is prepared to take on the supervision and monitoring costs. The Song Bung 4 project could then take on the technical implementation support.

The framework for the implantation could be as described in Figure 3 below. The three important focal points for the health program for local area people are the two district level core groups and the strengthening of the emergency and operation services.

Figure 3: Possible Framework for Implementation



The activities in the local area health program will be described more in detail below.

**6.4.4 Activities**

During the first four years the program will emphasize on possible effects resulting from the construction, construction related activities and from the concentration of people at the construction sites. When the dam will be taken into operation the focus will be shifted to prevent

and monitor possible negative effects resulting from the changes in water levels and quality.

Most of the planned activities will be directly implemented by the existing public health institutions in the target area in the district, affected communes, villages and households. There will be three main areas for additional project support in this program:

- Improved technical *capacity* among local health staff, i.e. village health workers and commune health station staff, to prevent and deal with emerging health problems related to the dam construction
- Improved *health awareness* among the local population in the local area related to the main health problems mentioned in the health impact assessment
- Material support for more emergency and operation equipment for the district level and *medical equipment* and upgrading of the local area commune health stations

If *priorities* have to be made the following activities should be put first to secure the increases awareness among local people and to increase the capacity of the local health workers;

- Set up the district trainer group
- Train Village Health Workers
- Set up the district IEC group
- Implement suggested IEC activities

#### 6.4.4.1 Training of Local Health Staff

One of the most important content in the health action plan will be support to improve the technical capacity of the local health staff at village, commune and district levels. There are three important capacity building efforts for the local health staff proposed:

- Give basic training of *female VHW*
- To set up a *regular re-training system* for village and commune health workers
- Give *“on the job” training to key staff* in different important health areas at commune and district levels

To support the local training needs a local core training group will be set at the district level by the support of the provincial level. This group will be the focal point generating better technical capacity for the village and commune levels health workers.

#### 6.4.4.2 Increase the health awareness among the local people

It is important to increase the knowledge and awareness among the local people in the local area about the emerging health issues. As can be seen in the VNHS there has been a lot of Information, Communication and Education (IEC) activities going on in the Song Bung area. Still people are lacking basic knowledge related to important health issues as child nutrition, maternal health and water and sanitation. When Song Bung 4 starts to be built new health risks will be emerging. Some of the most important are accidents and injuries, especially related to the traffic, and sexually transmitted diseases as Hiv-Aids. The risk for different infectious disease outbreaks are increasing, as for malaria. Improved IEC activities, built on people’s cultural understanding, will be an important part of the health action plan. For the IEC activities, not only the health services have to be involved. The village leaders and the village sections of the mass organizations together with the VHW will play important part in the future IEC support.

#### Upgrading of the Local Area Communal Health Stations

The Ta Binh communal health station will have more patients in the future coming from the construction workers sites. It is therefore suggested that the Ta Binh health stations should be upgraded. Support to improve the *water and sanitation* facilities and support to secure that the

station has basic medical equipment should be done. The Cha Val commune will be supported with some improvement of the polyclinic. Zuoih commune will be supported in the re-settler health program.

An equipment list should urgently be proposed for the Ta Binh health station from the local health authorities. An inventory of existing equipment has already been made.

The budget is included above under Section 6.3.4.1.

## 6.5 Monitoring and Evaluation

### 6.5.1 Baseline and end-line surveys

A *health baseline* should be done among the local area people before the dam starts to be constructed. The baseline could use the questionnaire developed for the 2001-2002 Vietnam National Health Survey. This survey has been one of the main sources for the health assessment for the Song Bung area. A similar survey will be used as baselines in a BTC supported Hoa Binh health project this summer. The data should be gender and ethnic specific. The unit cost for the baseline is calculated to be 100 million VND, totally 200 MVND, included in the monitoring activities.

### 6.5.2 Improved monitoring by local health management

The overall main responsible for the supervision and management of the three health programs will be the Quang Nam provincial health bureau. The province has good learning experiences from supportive supervision from the Sida CBHD project in the province. For the construction worker health plan the supervision has to be done together with the project contractor. The supervision costs for the province may be covered by the Sida supported CBHD for the first years.

Some *indicators* will be chosen for regular monitoring the health effects in the Song Bung 4 area. Also these data should be made gender and ethnic specific. The monitoring will be done by the district health authorities and the province health bureau.

The following are the first preliminary suggestion indicators to be used;

- *Child and maternal malnutrition*

Children and pregnant women are among the most vulnerable groups in this area. As many as 50% of the children are malnourished. At present children under three are monthly weighed by the local health workers.

Pregnant women are not gaining weight, especially during the third trimester. In western countries pregnant women are gaining 10-12 kilogram during a pregnancy compared with 6-8 kilogram for Vietnamese women. Women are not weighed regularly in this area and no figures are available. This should be done during the prenatal check ups.

*Indicators proposed*

- Malnutrition rate among children under three divided by age one, two and three years of age and sex
- Malnutrition rate among pregnant women during the third trimester

- *Pregnant check ups and attended deliveries*

Women are especially vulnerable to ill health during a pregnancy. In Vietnam

there should be at least three check ups before the delivery and on after. This is to detect problems during pregnancies, give preventive measures as tetanus vaccinations and iron tablets, as well as detecting risk deliveries in time for referral.

The women in the Song Bung 4 area are rarely attended by professional health staff during the deliveries. There are cultural as well as health care reasons as only male village health workers could be found in their villages. It must be a priority for the local health services to improve the delivery services

*Indicators proposed*

- Number of pregnancy check ups
- Tetanus vaccination and iron tablet given
- Deliveries attended by trained health staff

- ***Water and sanitation***

The water and sanitation situation in the Song Bung 4 area is quite bad even if the water flow by bamboo pipes is acceptable. To follow the improvement of the water and sanitation situation in this area will be another priority for the local health services

*Indicators proposed*

- Percentage of household with access to clean water
- Percentage of households with access to good latrines

- ***Accidents and injuries***

One of the most rapidly increasing health problems in Vietnam is caused by accidents and injuries. This is also a major concern for the Song Bung 4 project. To measure, at least the number of death related accidents and injuries, is a minimum monitoring requirement. These figures are best collected by the local police.

*Indicator proposed*

- Number of death related to accidents, especially in the traffic

- ***“Social evils”***

Still this concept is frequently used at the local level. This is also a major concern from the local authorities related to the Song Bung 4 project. A committee is proposed to be set up at the district level including the local district authorities, local securities, local health services and the contracted company. This committee could then monitor the number of massage places, karaoke places as well as the drug misuse, including alcohol. The committee is proposed to include at most ten people and should have regular meetings every quarter. At these meetings the involved people assess the local situation related to the problems, protocols are made including suggestions for actions when needed. These protocols should be signed by the local authorities. For this committee a special budget support is suggested as follows;

*Indicators proposed*

- Number of karaoke and massage places in the local area
- Hiv cases detected

- ***Malaria***

The malaria situation will be important to closely monitor to detect signs of suspected outbreaks.

*Proposed indicators*

- Number of new malaria cases per month

- ***Number of people treated at the health stations***

At present the health stations are seldom utilized for curative care. People mostly go to higher levels when they get severely sick. It will be important to closely monitor the number of patients attending the different health facilities in the local area during the dam construction. Changes in the utilization and changes in patterns of the disease panorama should be closely monitored by the distinct health authorities.

*Suggested indicators*

- Number of patients coming to the health stations for curative care reported monthly

The ***different supervision rounds*** at the construction site as for safety, occupational health as well as for alcohol misuse are also important part of the monitoring activities for the Song Bung 4 project.

## 6.6 Summary of the budget

The budgets have been made for the different health programs covering the people affected by the Song Bung 4 area. There are three communes in the Song Bung area, Zuoih, Ta Bing and Cha Val that are the most affected by the dam project. The budget is made for the total period of 8 years. The budget could be drastically cut for some of the activities if they are only supported in the initial phase of the project.

The summary is dividing the costs on three parties;

- The construction company - CC
- The local health authorities - HA
- External donor funding – DF

### 6.6.1 Construction workers health program – five years

#### Increasing the awareness and prevention

* Accidents and Injuries	20 million VND	
	+ Improvements as safety protocols	CC
* Occupational Health	7.5 million VND	
	+ Improvement as occupational health prot.	CC

* Sexually transmitted	57 million VND	CC
* Malaria prevention	302.5 million VND	CC
* Alcohol misuse	65 million VND	CC
<b>Total cost</b>	<b>452 million VND</b>	

**Health facilities and health staff**

* Health clinic	300 million VND	CC
* Basic and emergency equipment	250 million VND	CC
* Salaries for health workers	253.5 million VND	CC
* Ambulance	500 million VND	CC
<b>Total cost</b>	<b>1303.5 million VND</b>	

**6.6.2 Resettlement health program – 8 years****Material support**

*Extra support to health stations	15 million VND	DF
<b>Total cost</b>	<b>15 million VND</b>	

**Extra support to important health issues**

* Increased awareness & technical capacity	61.44 million VND	HA / DF
* Water and sanitation	16.44 million VND	HA / DF
<b>Total cost</b>	<b>77.88 million VND</b>	

**GRAND TOTAL 1,850 million VND**

This includes salaries at 253.5 million VND and one ambulance at 500 million VND.

If divided for the different agencies involved the budget is as follows;

- Construction company 1,756 million VND
- Local health authorities and external donors 94 million VND

**Annex 1: Health among Ethnic People in the Central Region**

**1. INTRODUCTION TO VIETNAM NATIONAL HEALTH SURVEY-VNHS**

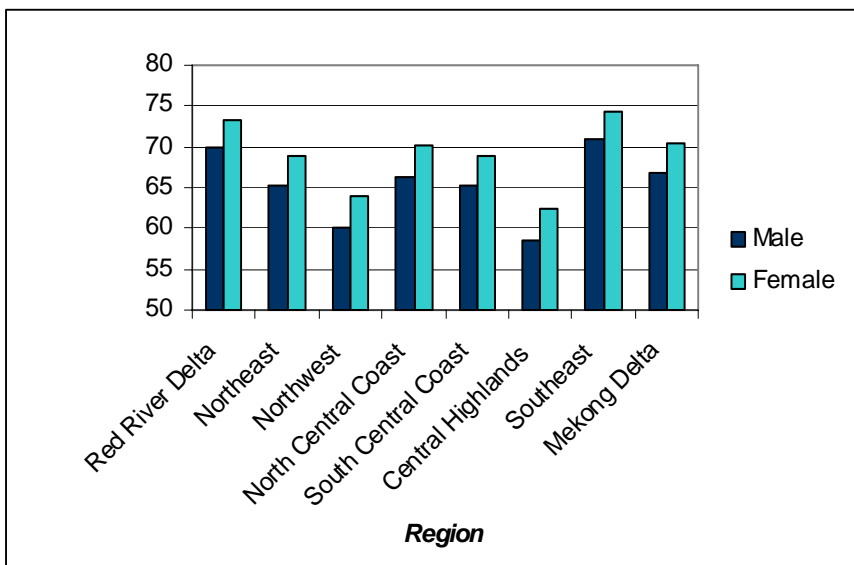
The Vietnam National Health Survey covered all 61 provinces in Vietnam at that time 2001-2002. Totally 1,200 communes were sampled to be included and in each commune villages and households were furthered sampled. Totally 36,000 households were reached and nearly 160,000 people were interviewed. One of the background variables included in the survey was ethnicity. The ethnic groups in Vietnam have been divided into four groups according to the set criteria's from the national Population Census. These are Kinh-Hoa (the majority of Vietnamese and Chinese), northern mountain ethnic groups, central region ethnic groups and southern ethnic groups (see Annex 2). The national Population Census is also dividing Vietnam into 8 different geographical regions when doing data analyzes (see Annex 2). The health of the central region ethnics have been analyzed as the best available general health knowledge for the people in the Song Bung area. The division into ethnic groups or the division into the different geographical areas have been used for the analyzes. In the following section the health will be presented as a summary.

**2. HEALTH STATUS**

**2.1 Life Expectancy**

The life expectancy in the Central Highlands is alarmingly low compared to the Vietnamese living in the delta areas. The life expectancy among men was 58.6 years and for women 62.3 years compared to 71 years for men and 74.4 years for women in southern Vietnam 1999 (see Figure 4).

**Figure 4: Life Expectancy by Region**



Source: Population and Housing Census 1999.

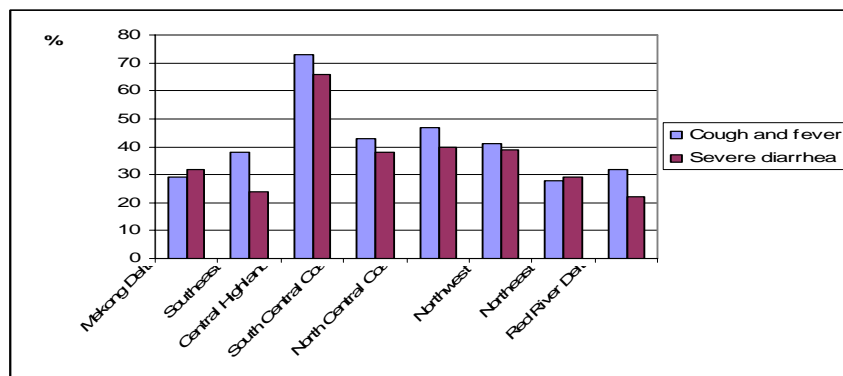
A difference of about 12 years both for men and women in life expectancy is a dramatic big

difference. When comparing societies in the world this different in life expectancy could be seen between Sweden and Vietnam, countries on a very different economic level of development. The same differences could be seen between ethnic groups in other countries like in Australia. The aboriginals have the same difference in life expectancy compared to the rest of the Australian population.

### 2.2 Child Health

The most important factor influencing life expectancies is infant mortality. Looking at the eight different regions in Vietnam it is striking that children in the Central Highlands have a much higher rate of illness then other regions. See Figure 5. About twice as many children were sick there compared with other regions for the two most common childhood diseases, respiratory infections and diarrhea.

**Figure 5: Ratio of children with severe diarrhea and cough/fever within 4 weeks per regions**



Note : "severe" refers to illness affecting participation in normal activity.  
Source : Vietnam National Health Survey 2001-02

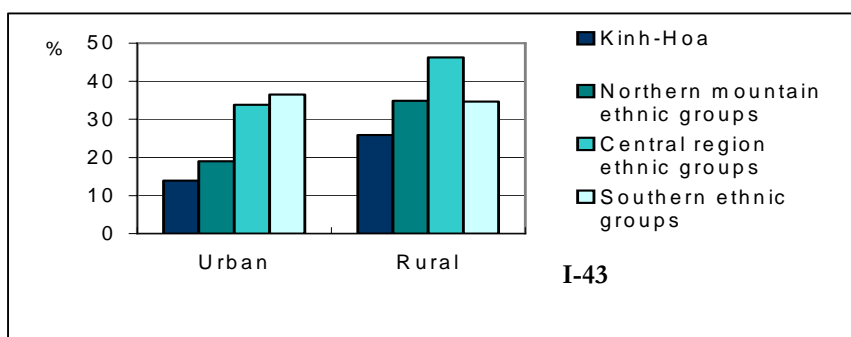
The living conditions usually have a strong influence on these figures. Nutrition and mothers education are some of the most important factors.

### 2.3 Nutrition

Vietnam still has a high proportion of malnourished children compared to other countries. One third of the children under five were malnourished in Vietnam year 2000. The main reason is lack of knowledge about child feeding practices among mothers. The weaning food in the important age period from 6 to 12 months does not include high calorie density food, as oil and fat. The children do not get enough to grow well. Still there is a strong belief in Vietnam that protein is the important lacking ingredient in weaning food. The end result is a rapidly developing malnutrition in during the second half of the first year in life.

The children in the central highlands are worse off than the rest of the population in Vietnam. For the rural children in the central highland region ethnics the malnutrition rate for children under 5 years was close to 50% in the VNHS. See Figure 6.

**Figure 6: Proportion underweight in children under age 5 by ethnic group and residence**



Source: Vietnam National Health Survey 2001-02.

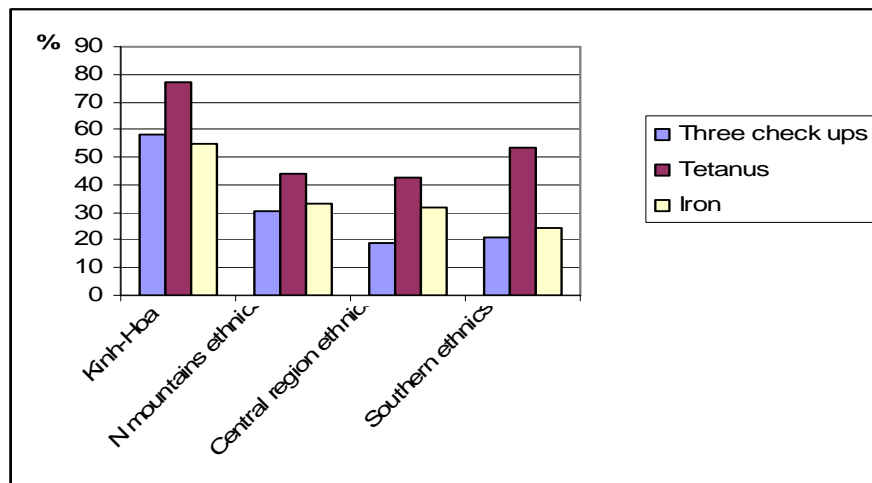
Malnourished children have a much higher risk of getting childhood disease as well as die from them compared to well nourished children.

The effect of malnutrition among the young children could also be seen when looking at the height of the adolescent. The height targets set in Vietnam are 165 cm for male and 155 cm among female. The shortest are by far the ethnic people in the central highlands. Only 20% of men and 14% of women had reached the height target of the ethnic groups in the central region.

## 2.4 Maternal Health

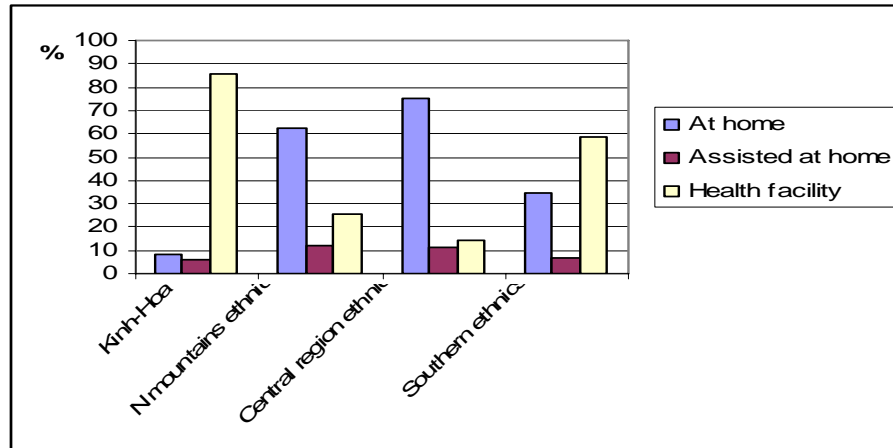
A “safe motherhood” require three prenatal examinations, full tetanus immunization and use of iron pills. Less than 25% of the pregnant women had got this safe motherhood protection, according to VNHS. The care for pregnant women was least developed for the women belonging to the central highlands. They only got half of the reproductive services compared to Kinh-Hoa (see Figure 7).

**Figure 7: Proportion of women giving birth who had have prenatal check ups, tetanus and iron pills by ethnic groups.**



Source: Vietnam National Health Survey 2001-02

Health workers with obstetric qualifications are important to intervene in case of obstetric complications. The VNHS showed that 77% were giving birth at a health facility. There are great variations in these figures not the least relating to ethnicity. 75% of the central highland ethnics mothers were delivering at home unassisted compared to less than 10% among Kinh-Hoa. The reverse figures could be seen when looking at deliveries at health facilities (see Figure 8)

**Figure 8: Distribution of place of delivery for women by ethnic groups.**

Source: Vietnam National Health Survey 2001-02

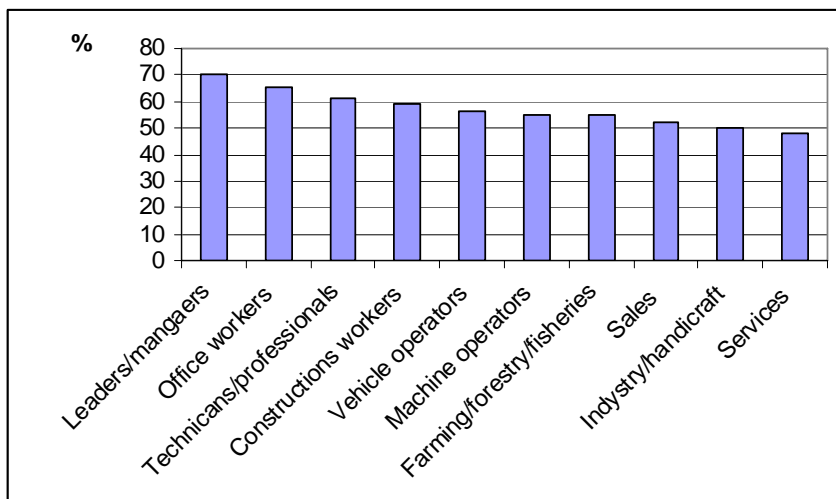
## 2.5 Determinants of Health

### 2.5.1 Life style

**Smoking** among men in Vietnam was most prevalent in the age group 26 to 45 years according to the VNHS. In this group 70% of men were smoking. Smoking among women was rare as only 2% were smoking. Among the central highland ethnic women smoking was not uncommon. More than 16% were smoking. Another characteristic for the central highlands was the early age when men started smoking. More than one third had started to smoke at the age of 15. This was two times more compared to Kinh.

The proportion of people using *alcohol* is relatively low in Southeast Asia. This is due to the low proportion of women drinking alcohol. The proportion of men aged 15 or older, drinking alcohol one or more times per week was 46% for in the VNHS. Looking at different occupational groups the highest consumption of alcohol could remarkably be found among leaders and managers both among men and women. Also vehicle drivers and machine operators were drinking quite often. See the drinking habits for men in Figure 9.

**Figure 9: Proportion of men who drink alcohol or beer by occupational groups**



Source: Vietnam National Health Survey 2001-02

The age of starting drinking is younger among ethnic groups in northern mountains and central highland ethnics groups both for men and women compared to Kinh-Hoa and southern ethnics. The young are mainly influenced by other family members to start drinking.

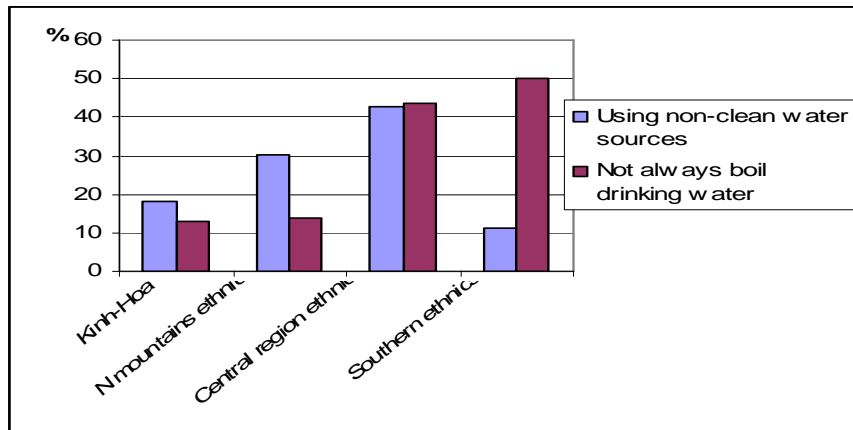
In 2001 more than 10,000 people died in traffic accidents in Vietnam and the figures were rapidly increasing. Accidents are the 5<sup>th</sup> most frequent cause of illness and the first cause of death as stated in the statistical yearbook for health 2004. Among the frequent motorcycle riders less than 8% among men and 4% among women were *wearing helmet* each time they were riding according to the VNHS. Among the central highland ethnics even fewer were wearing helmets regularly or occasionally when going on a motorbike.

**2.5.2 Water and Sanitation**

Since more than twenty years there has been a movement in Vietnam to provide the “three sanitations” – clean water, appropriate toilet facilities and bathroom, as a private place to be able to take a bath. Later also consideration has been taken to keeping domestic animals in a hygienic way. Animals should have their own facilities, as for pigs and cows. They should be kept way from domestic water sources and housing areas. The environmental hygiene in public places has also become a major concern. Taking care of garbage and waste in a hygienic way from markets and other places is included in the present program. In many local places special hygiene teams has been organized to take care of the local garbage and sanitation.

The access to and use of clean water varies between the different ethnic groups in Vietnam. There is an alarming high proportion of people not using *safe water* or not boiling drinking water, especially among the central highland ethnic people. This have negative consequences for water related diseases (see Figure 10).

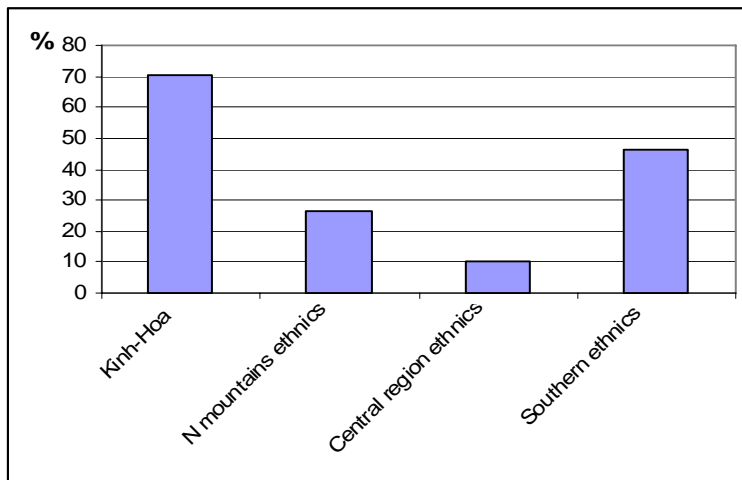
**Figure 10: Proportion of people using non clean water and not always boiling drinking water.**



Source: Vietnam National Health Survey 2001-02

It is important, especially for women, to have an enclosed place for *bathing*. One of the major diseases among women are reproductive tract infections. Up to 70% of women reported to be infected in some areas of Vietnam. As can be seen in Figure 11 only 10% of the central region ethnics had access to a “private” bathe compared to more than 70% among Kinh-Hoa.

Figure 11: Proportion of people who have an enclosed place for bathing, by ethnic group.



Source: Vietnam National Health Survey 2001-02

Ethnic minorities are groups that are particularly disadvantaged with regard to sanitary *toilets*. Among the central highland ethnics more than 50% have no toilet and less than 5% have access to a good toilet (see Table 6).

Table 6: Distribution of toilets used by ethnic group

	Kinh-Hoa	Northern Mountain	Central Highland	Southern
No toilet	9	31,1	53,5	30,8
Join toilet	15,6	4,7	2,5	26

Simple toilet	29,9	54,2	40,6	14,4
Double compost toilet	10,7	5,8	1,8	5,4
Flush toilet with septic tank	25,1	2,5	1,6	5,4

Source: Vietnam National Health Survey 2001-02

The households benefiting from *garbage* collection services have increased steadily over time. The proportion of households who burn or bury garbage has increased. These three methods are seen as appropriate for a clean environment. When looking at the different ethnic groups the central highland ethnics were throwing away garbage in no fixed place in 60% of the household.

*Smoking fuel* is considered correlated with a higher risk of respiratory infections, especially for those doing the cooking and people who are often at home such as women, children and the elderly. When 25% of the kinh-hoa uses smoky fuel with smoke blowing into the living space the figures for the central region ethnics were close to 75% of the households.

## 2.6 Coverage of the National Public Health Programs

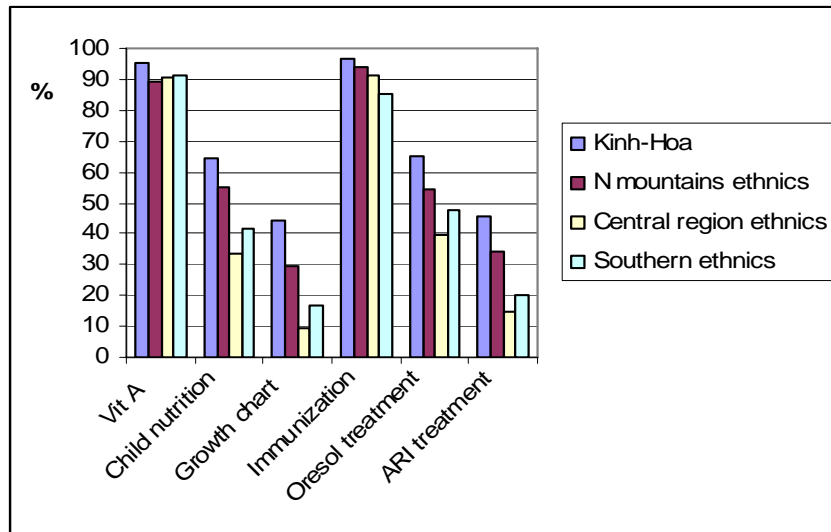
Vietnam has an impressive health care network developed since many years in the spirit of the WHO primary health care declaration of Alma Ata from 1978. Prevention has always been a priority and Vietnam has established more than ten national health programs. The programs are related to important infectious diseases as well as to mother and child health and family planning. Remarkable good results have been achieved in the past years. In the recent years emerging public health problems as accidents and injuries, tobacco use and HIV/Aids have been addressed as new public health programs. The following section will analyze some of these national health care programs related to the ethnic people in the central highland area.

## 2.7 Programs Related to Child Diseases and Nutrition

One important part of the national health programs is to increase the awareness among people how to take care of their health. This is done through Information, Education and Communication (IEC) activities through the local loudspeakers, radio, public meetings etc.

The ethnic people in the central highlands had been least exposed to the child health national programs according the VNHS. Few people had heard about the nutrition and growth monitoring programs (see Figure 12).

**Figure 12: Proportion of households with children under 5 who has heard about selected child health programs in the last six months, by ethnic group.**



Source: Vietnam National Health Survey 2001-02

When looking at what mothers actually know the results in general was even more depressing. Less than 30% of mothers knew about the actual content of the programs in all ethnic groups except Kinh-Hoa. In the Kinh-Hoa group around 50% knew about the content. The ethnic people in the central highland had an alarmingly little knowledge related to nutrition. Only 5% of mothers with children under 5 understood a growth chart and 15% were actually weighing the children on a monthly basis.

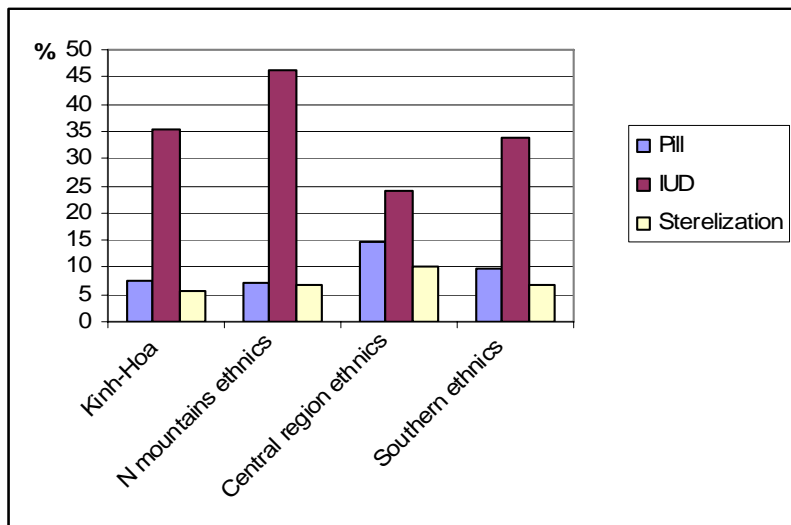
This indicates that many mothers had heard about the programs without understanding the messages. Serious questions have to be made. What has been the effect of all the resources put into all so called IEC – Information Education Communication – activities from donors and the Government? The methods used should urgently be evaluated and improved. The messages and methods must be more adapted to the target population. This is not least important when the activities are related to ethnic minorities.

## 2.8 Programs Related to Reproductive Health

When looking at the proportion of married women not using any contraceptive methods married, women in the ethnic groups in the central highlands had the highest proportion of non users. More than one third was not using any contraceptives compared to 20% among Kinh-Hoa.

The women in the central region area were using more pills and sterilization and less IUD compared with the other ethnic groups in other regions. 15% of the central region women twice as many compared to the Kinh-Hoa group (see Figure 13). More than 10% had been sterilized compared to 5% in the Kinh-Hoa ethnic group. Less than 25% used IUD compare with the more than 45% in the northern ethnic minority groups. Condoms were seldom used in any ethnic groups. Among Kinh-Hoa condoms were used in 10% related to only 3% in the three other groups.

**Figure 13: Distribution of married women aged 15-49 using contraceptive, by type and ethnic group.**



Source: Vietnam National Health Survey 2001-02

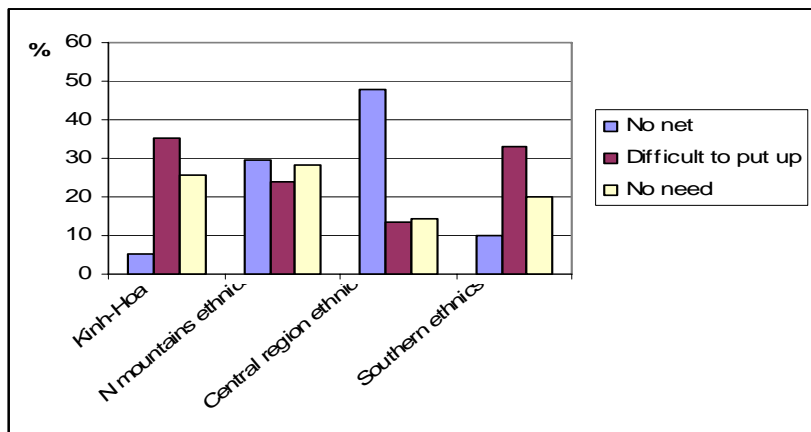
Gynecological examinations can detect and treat reproductive tract infections. These conditions are surprisingly common in Vietnam. It is not uncommon that local communities report that up to 70% of women are suffering from these conditions.

### 2.9 Malaria Prevention

In Vietnam the malaria incidence has steadily declined over the past decade. Malaria is today mainly a problem in the central highlands. Spontaneous migration and organized migration to new economic zones in this area have brought many people without natural resistance against malaria to a region where malaria is endemic.

In areas with high risk of malaria the contact with the national malaria prevention program is high. Still as much as 45% of the ethnic minorities in the central highlands were not using nets, at least during part of the year according to VNHS. As many as 50% of the households in the central highland area reported lack of nets (see Figure 14). There is therefore a great need to supply mosquito nets in the central highland area, combined with health education, to ensure that nets are used effectively.

Figure 14: Reason for not using mosquito nets by ethnic groups.



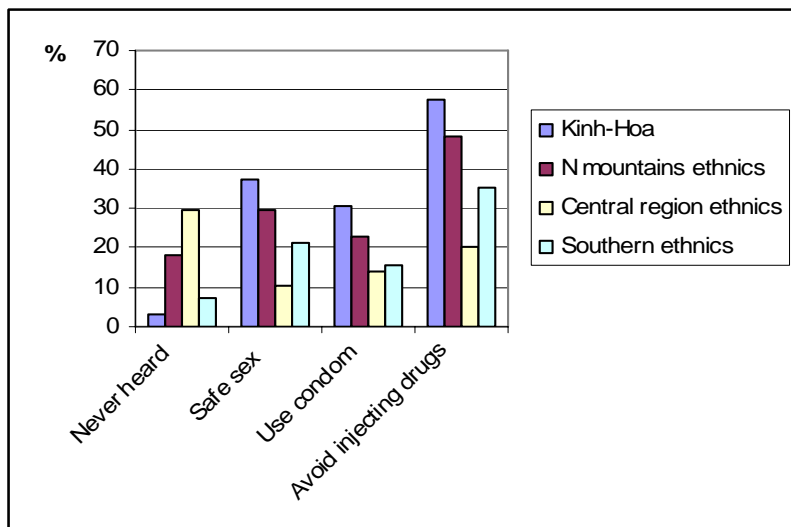
Source: Vietnam National Health Survey 2001-02

**2.10 HIV-Aids**

The number of HIV-Aids cases is increasing rapidly in Vietnam. In general the knowledge about the disease is relatively high. Nearly 80% of the people in VNHS had got some HIV-Aids information during the last six months. Still less than 30% of the respondents said that condom use could help one to avoid HIV-aids.

Figure 15 shows percentage of people that had never heard about HIV-aids, people knowing about safe sex in general, people knowing about safe sex more specifically as use of condoms and to avoid injecting drugs. Many of the central highland ethnics had never heard about HIV-Aids. Only 10-20% knew anything about safe sex.

**Figure 15: Percentage of people that have never heard about HIV-Aids or that know about safe sex by ethnic groups.**



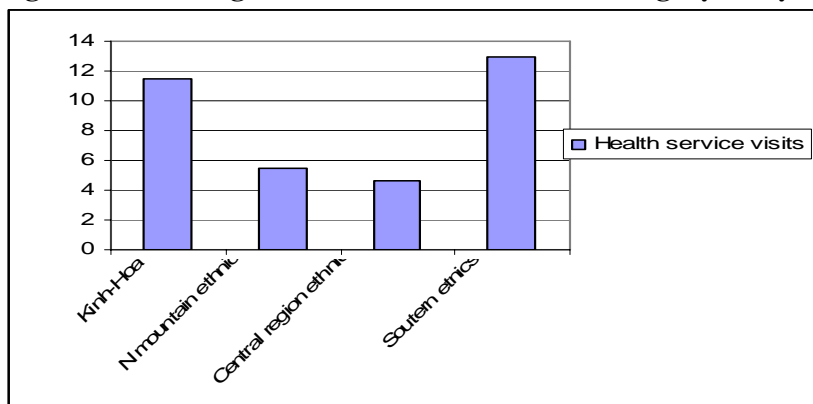
Source: Vietnam National Health Survey 2001-02

### 3. WHERE DO PEOPLE GO WHEN THEY GET SICK?

One important question to answer – What do people do and where do they go when they do not feel well in Vietnam? Some options are - no treatment, self-medication, using outpatient or inpatient care. The care can be western or traditional medicine, public or private care.

When looking at average health service utilization visits per person during 12 months the lowest utilization could be seen among the central region ethnics. They made in average 4,6 visits a year compared to 11,5 among Kinh-Hoa and 12,9 among southern ethnics. The main differences could be seen related to number of visits to pharmacies for self-treatment where the central region ethnics made 1.5 visit per year compared to 5,3 for Kinh-Hoa and 8,4 for the southern ethnics (see Figure 16).

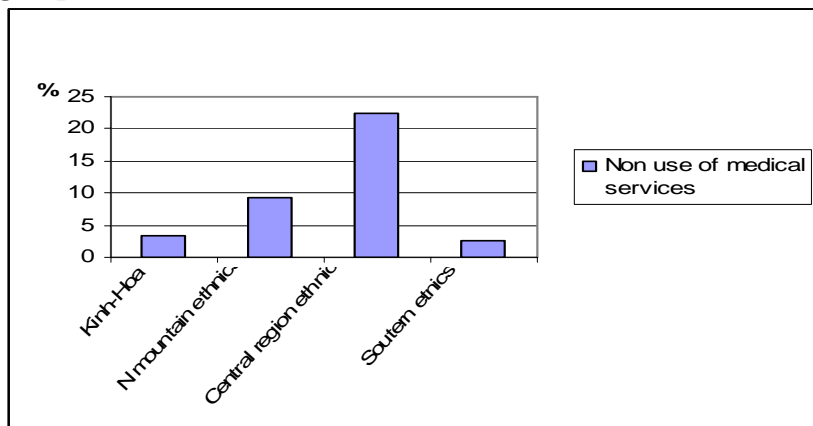
**Figure 16: Average health service utilization during a year by ethnic groups.**



Source: Vietnam National Health Survey 2001-02

Only 4% of people in Vietnam did not go for any treatment when they felt ill according to VNHS. More than 22% of the central region ethnics were not using health facilities when feeling ill compared to about 3% for Kinh-Hoa and southern ethnics, a more than 7 times difference (see Figure 17).

**Figure 17: Proportion of illness episodes left untreated in a 4 week period by ethnic groups.**



Source: Vietnam National Health Survey 2001-02

The proportion of people using *self-medication* was high in the VNHS. Self-medication consists of people who obtain medications without a medical examination or prescription from a doctor.

Self-medication was the treatment choice of **73% of all illnesses**. Among the central region ethnics 25% said that they did not use self-treatment for economic reasons compared to 6% among Kinh-Hoa. The central region ethnics used self-treatment only in less than 50% of the episodes of ill health.

**Outpatient care** includes diagnosis and treatment, as well as prevention, such as mother and childcare. The private health sector has developed rapidly the last years and is mainly providing outpatient services. The proportion of people using outpatient services during 4 weeks was rather high in VNHS, **17%**. The number of visits to private outpatient services was two times higher than for public services. The average number of outpatient visits during a year was more than 2 for the northern mountain and central region ethnics compared to between 4 and 5 for Kinh-Hoa.

The curative preventive mix in outpatient services varies depending on type of facility. At the commune level nearly 50% of the services are preventive and are often used for childcare, especially in rural areas. At the higher-level public health facilities 22% were preventive care and only 6% at the private clinics.

The rural population visited the commune level health care twice as much compared with the urban population. The situation was the opposite when looking at the public health services above the commune level. Some more people were visiting private practitioner in urban areas compared to rural areas. Outpatient visits to higher-level public facilities are strongly correlated to the education background. Among illiterate less than 15% were using the facilities compared to more than 40% among the post secondary educated in rural areas. The same pattern could be seen in urban areas.

When looking at different ethnic groups it is clear that the central region ethnics have less access to doctors, tests and drugs at higher public health care levels compared to other ethnic groups.

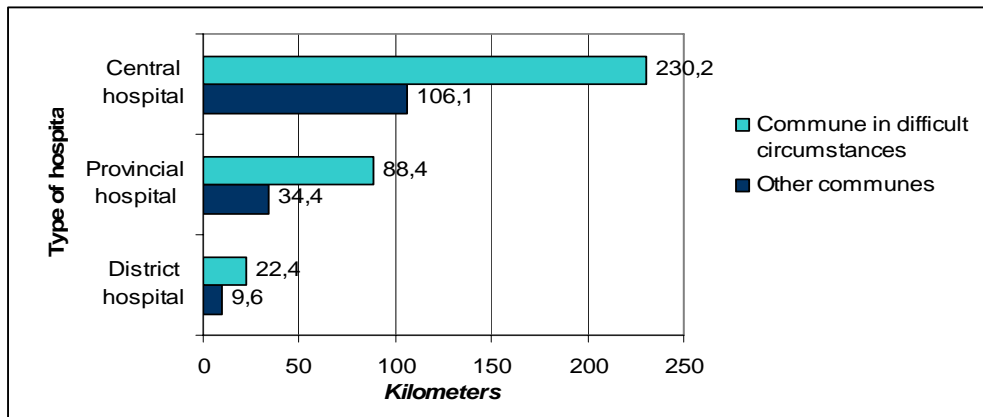
Only 6% of outpatient visits were made to a **traditional practitioner**. At communal health stations only 2% were treated with traditional medicines. The rich were using traditional medicines twice as much as poor.

The proportion seeking **inpatient care** during the last 12 months was a little more than **5%** (5,4%) in the VNHS. Use of beds at commune level was very low and mainly for women recovering after birth and for treatment of diseases in remote areas. On the other hand the central level hospitals were overloaded with inpatients.

In practice many patients assesses their own medical needs and go directly to the hospital of their choice even central level hospitals. More than 75% of the patients come to the health facility without a referral.

The VNHS showed that the distance to the commune health station (CHS) to the farthest VHW in the commune was 6 kilometer in average. However in the northwest and central highland the distance was double. The district hospitals were usually relatively close to the CHS in average only 12 kilometers. Again the distance was nearly doubled of even tripled in more disadvantaged areas. In communes not considered being difficult area it was only 34 kilometer from the CHS to the provincial hospital and 106 kilometer to reach a central hospital. However people in disadvantaged communes had to go 88 kilometer to the provincial hospital and 230 kilometer to the central hospital (see Figure 18)

Figure 18: Average distance from CHS to the nearest hospital by level of hospital and type of commune.



Source: Vietnam

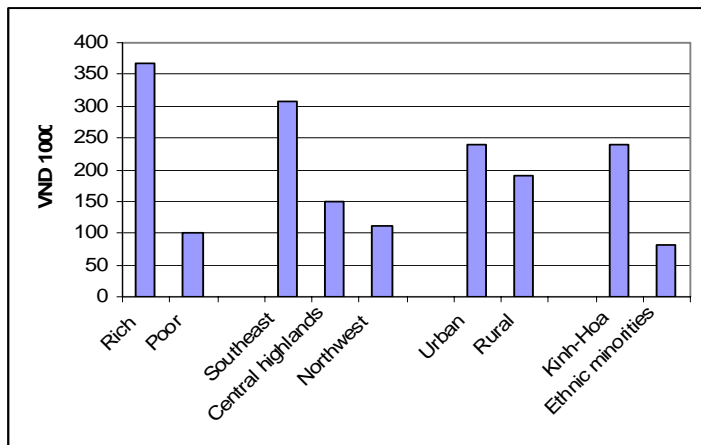
National Health Survey 2001-02

#### 4 HOW MUCH DO PEOPLE SPEND ON HEALTH?

The total household health expenditures make up for nearly 65% of the total expenditures. Household expenditures including costs of medications per capita over 12 months was 217 300 VND or 14.3 USD in the VNHS. Public expenditures was an additional 7.4 USD making the total health expenditures per capita in 2002 to 21.7 USD.

The expenditures vary strongly with the level of economic standard, region, residence and ethnicity. The rich are using 3.5 times more money on health compared to the poor. Kinh-Hoa is spending 3 times more money on health compared to other ethnic minorities (see Figure 19).

Figure 19: Average per capita annual household health expenditure by living standard, region and ethnicity.



Source: Vietnam National Health Survey 2001-02

The average cost for an inpatient stay was 851 100 VND in the VNHS. The poor spent 443 700 VND compare with the rich 1497 200 VND or 3.7 times more. About 60% of the expenses were on hospital fees. The expenditures varies between regions, urban rural and Kinh-Hoa and ethnic minorities. More than 50% of the poor had to borrow money for the inpatient costs. Many of them will fall into the medical poverty trap. About 3 million Vietnamese are calculated to fall into this trap yearly.

**Annex 2: The ethnic groups and regions in the VNHS****A Ethnic groups*****I Kinb and Hoa (Chinese)******II Northern mountains ethnic groups***

Tay, Thai, Muong, Nung, H'mong, Dao, Ngai, San Chay, San Diu, Giay, Kho-mu, Khang, Xinh-mun, Ha Nhi, Lao, La Chi, La Ha, Phu La, La Hu, Lo Lo, Mang, Pa Then, Co Lao, Cong, Bo Y, So La, Pu Peo

***III Central region ethnic groups***

Hre, Ra-glai, Bru-Van, Kieu, Tho, Co-tu, Co, Ta-oi, Chut, O Du, Gia-rai, E-de, Ba na, Xo-dang, Co-ho, Mnong, Gie Trieng, Ma Chu ru, Brau, To man

***IV Southern ethnic groups***

Xtieng, Cham Cho-ro, Khmer

**B Regions*****1 Red river delta***

Hanoi, Haiphong, Vinh Phuc, Ha Tay, Bac Ninh, Hai Duong, Hung Yen, Ha Nam, Thai Binh, Ninh Binh

***2 Northeast***

Ha Giang, Cao Bang, Lao Cai, Bac Kan, Lang Son, Tuyen Quang, Yen Bai, Thai Nguyen, Phu Tho, Bac Giang, Quang Ninh

***3 Northwest***

Lai Chau, Son La, Hoa Binh

***4 North central***

Than Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Tri, Thua Thien Hue

***5 South central***

Danang, Quang Nam, Quang Ngai, Binh Dinh, Phu Yen, Khanh Hoa

***6 Central Highlands***

Kon Tum, Gia Lai, Dak Lak, Lam Dong

***7 Southeast***

Ho Chi Minh City, Ninh Thuan, Binh Phuc, Tay Ninh, Binh Duong, Dong Nai, Binh Thuan, Ba Ria Vung Tau

***8 Mekong delta***

Long An, Dong Thap, An Giang, Tien Giang, Vinh Long, Ben Tre, Kien Giang, Can Tho, Tra Vinh, Soc Trang, Bac Lieu, Ca Mau

**Annex 3: Leading causes of morbidity and mortality according to the reporting system in Vietnam, 2004.****The ten leading causes of morbidity:**

- Pneumonia
- Acute pharyngitis and acute tonsillitis
- Acute bronchitis and acute bronchiolitis
- Diarrhea and gastroenteritis of presumed infectious origin
- Transport accidents
- Essential hypertension
- Gastritis and duodenitis
- Influenza
- Respiratory tuberculosis
- Intracranial injuries

**The ten leading causes of mortality:**

- Intracranial injuries
- HIV-Aids
- Transport accidents
- Pneumonia
- Intra cerebral hemorrhage
- Acute myocardial infarctions
- Stroke, not related to hemorrhage or infarction
- Respiratory tuberculosis
- Heart failure
- Septicemia

*Source: The Health Statistical Yearbook 2004, Ministry of Health, Hanoi*

**Annex 4: Budget for the health action plan***Allowances - training*

Lecturer, fees	600 000 VND per day
Assistant lecturer, fees	300 000 VND per day
Trainers in rural and mountain areas, fees	240 000 VND per day
Assistant trainer in rural areas, fees	120 000 VND per day
“on the job” training, 50% of the trainer fee is paid to the district hospital	120 000 VND per day
“on the job” training, 50% of the trainer fee is paid to the province hospital	300 000 VND per day
All participants for food in rural areas, province and district	50 000 VND per day
All participants in rural areas, commune and village	30 000 VND per day
Accommodation on the basis of the actual costs	30 000 VND per night
Travel costs	
Refreshment per participant	10 000 VND per day
Stationary max	20 000 VND per participant

**Annex 5 Laws and regulations related to occupational health**

The part "Legislation on OSH" on the Website: <http://www.osh.netnam.vn/> give all information related to occupational health and safety: obligations of employers.

- Labour Code

- Decree No 38/CP dated 25/06/1996 of the Government on penalization for administrative violations in the field of labor legislation

- Circular No 13 Dated 24/10/1996 of the MOH giving instructions for the administration of occupational health, employee's health and occupational diseases

- CIRCULAR No. 06/LDTBXH-TT DATED 04 APRIL 1995 OF THE MINISTRY OF LABOUR- WAR INVALIDS AND SOCIAL AFFAIRS  
Guiding the implementation of the Social insurance regulations attached to Decree No. 12-CP dated 26 January 1995 by the Government

- CIRCULAR No. 08/LDTBXH-TT DATED 11 APRIL 1995 OF THE MINISTRY OF LABOUR - WAR INVALIDS AND SOCIAL AFFAIRS  
Providing Guidance for Training in Labor Safety and Hygiene

- No. 09-LD-TBXH-TT 26 April 1996 PROVIDING GUIDELINES FOR ISSUANCE OF AND RECORD-KEEPING IN SOCIAL INSURANCE BOOKS

- CIRCULAR No 10/1998/TT-BLDTBXH DATED 28/5/1998 OF THE MOLISA GIVING INSTRUCTIONS FOR PERSONAL PROTECTIVE EQUIPMENT

- JOINT CIRCULAR No 10/1999/TTLT-BLDTBXH-BYT DATED 17/3/1999 OF THE MOLISA AND THE MOH INSTRUCTING THE IMPLEMENTATION OF PROVIDING ALLOWANCE IN KIND FOR WORKERS WHO ARE DIRECTLY WORKING IN CONTACT WITH HARMFUL AND DANGEROUS ELEMENTS

- CIRCULAR NO. 11/LD TBXH-TT DATED 3 MAY 1995 OF THE MINISTRY OF LABOUR - WAR INVALIDS AND SOCIAL AFFAIRS  
Guiding the implementation of decree No.197/CP of the Government concerning the wages of Vietnamese labor in foreign-invested enterprises, and foreign or international, agencies and organizations in Vietnam

- CIRCULAR No 19/LDTBXH-QD DATED 02/8/1997 GUIDING THE PAYMENT OF COMPENSATION FOR VICTIMS OF OCCUPATIONAL ACCIDENTS

- Circular No 16/LDTBXH-TT dated 23/04/1997 of the MOLISA guiding the reduction of daily working time for employees whose jobs are extremely heavy and dangerous

- Circular No.19/LDTBXH-TT date 02/08/ 1997 of MOLISA guiding the payment of compensation for victims of occupational accidents

- Circular N0.20/1997/TT-BLDTBXH date 17/12/ 1997 of MOLISA instructing the annual award on occupation safety and health activities
- Circular N0.22/TTLDTBXH-TT date 08/11/ 1996 of MOLISA giving instructions the implementation of occupational Health Administration and Employee's health and occupational diseases administration
  
- Circular No 23/LDTBXH-TT dated 18/11/1996 of the MOLISA giving instructions of implementation of the periodical statistics, reports on occupational accidents
  
- Decision No 1407/QD-LDTBXH dated 08/11/1996 of the minister of MOLISA ON THE PRINTING, PUBLICATION AND MANAGEMENT OF OPERATING LICENCES FOR MACHINERY, EQUIPMENT, MATERIALS, and SUBSTANCES HAVING STRICT OCCUPATIONAL SAFETY REQUIREMENTS
  
- Circular No 03 dated 28/01/1994 of the Molisa and the Moh stipulating harmful working conditions and list of occupations in which employment of female is prohibited
  
- Circular N0.03 date 26/03/1998 BLDTBXH-BYT-TLDDLVDN giving the guidance for report and investigation on occupational accidents
  
- Circular No 09/TT-LB dated 13 April 1995 by the interministries of labor, war invalids and social affairs - health Defining hazardous working condition and jobs in which the employment of junior labor is prohibited
  
- Join Circular N0.14/1998/TTLT-BLD-TLDDLVDN date 31/10/1998 of the MOLISA, MOH and Vietnam General Confederation Labor (VGCL) instructing the implementation of labor protection in enterprises and business premises

The workers should be officially contracted. Then the company has to pay for health and social insurances together with the workers.

# SONG BUNG 4 HYDROPOWER PROJECT SOCIAL MANAGEMENT PLAN

## PART II:

### CONSTRUCTION PHASE SOCIAL MANAGEMENT PLAN

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## 1 INTRODUCTION

### 1.1 The Requirements for and Objectives of the CPSMP

#### 1.1.1 *The Requirement for a Plan*

Construction of the Song Bung 4 Hydropower Project will employ approximately 2,000 workers over a total construction period of 45 months, i.e. almost 4 years. Provisions for housing and services as well as health and safety measures for workers within camps and on project sites are addressed in the Construction Contractor's and sub-contractors' agreements in accordance with the Vietnamese law. In Vietnam unskilled workers are not usually accompanied by their families to sites of working opportunities. However, a predicted number of approximately 500 additional persons, like consultants, supervisors and their spouses, will increase the number of persons in the camps to an estimated 2,500 persons. It is also expected that a large number of spontaneous camp followers will impact communities and areas adjacent to or nearby project camps, if not controlled. They consist of traders and providers of various services as well as opportunity seekers.

A plan is required to mitigate any impacts a population influx may cause communities in the Project Area. In particular, there is a need to manage this population, address health issues, prevent traffic accidents and discourage drug addiction, sexual exploitation and human trafficking. In addition, there is a need to assist local organizations in order to ensure that they have a good understanding of the challenges and ample resources to deal with these impacts and mitigate them effectively and in a gender-sensitive manner. The plan aims to fulfil the requirements of both ADB and GOV policies, providing mitigation for indirect project impacts (population influx followed by increasing trade, demand for services, cash economy etc.) on communities in the vicinity of the project construction areas.

#### 1.1.2 *The Objectives of the Plan*

The main objective of the plan is to propose suitable mitigation measures for the impacts of construction camps and of population increase on communities in the Song Bung 4 Project Area. The plan needs to create a balance between providing necessary mitigation in order to create temporary and reasonable living conditions for newcomers, but at the same time to control the scale of impacts by discouraging population influx. The plan also must address the increasing security and health concerns of permanent residents of the impacted areas, especially women. The provisions should provide adequate standards for spontaneous camp followers and also take into consideration the needs of surrounding communities.

More specifically, the plan will ensure that the following conditions are met:

- The Construction Contractor and sub-contractors carry out gender-sensitive local labour recruitment as a key measure to reducing potential population influx and optimising benefits for local communities.
- Health conditions among camp followers and residents adjacent to project sites and communities are of a reasonable standard with basic measures to ensure safe drinking water and sanitation and to reduce incidents of sexually transmitted diseases (STDs), so that the general health of camp followers does not affect the health of workers or nearby communities.
- Local organizations involved in community planning, mitigation, and monitoring of health and social impacts are ensured adequate training, personnel, technical assistance and funds to plan and manage all potential social and health risks, and carry out prevention and control measures and enforcement.

- Illegal social and economic activities by workers and camp followers, including drug addiction, trafficking in people and employment of children, are quickly discouraged and heavily penalised, including the consequences of job loss and repatriation.

The aim of the Construction Phase Social Management Plan is to present mitigation measures to reduce the expected negative impacts following the influx of new people to the area due to the Project, based on the present socio-economic baseline situation in the communities to be affected by the Project. The main construction phase impacts will be felt in the communities closest to the construction sites (see Section 1.4 below).

The major areas to be affected by the construction are the villages of Thon Vinh and Pa Toi in Ta Bhing commune closest to the construction site, but also the other villages along the national road 14D in Ta Bhing and Ca Dy communes. The district town of Thanh My will be affected by influx of traders, services providers and others competing with the local people over the opportunities following the construction. The only inhabited area to be affected by the resettlement sites construction is Pa Pang village. The villages of Thon 2 and Pa Dhi are located in the vicinity of the resettlement sites construction areas and are going to be affected by the presence of construction workers during a limited time of approximately 3 months. If transportations to other resettlement construction sites pass by the villages, the time will be extended up to 9 months.

### ***1.1.3 Synchronizing of the Mitigation Measures***

The most significant issues in the social mitigation planning concern health and gender. The CPSMP and the Public Health and Gender Action Plans for Song Bung 4 Hydropower Project are complementary documents with many overlapping issues. Several mitigation measures addressed in the CPSMP coincide with activities planned in the Public Health Action Plan and have to be synchronized accordingly. Implementation of activities, organizational structure and suggested budgets are therefore harmonized between the different documents.

## **1.2 Relevant International and GoV Laws, Policies and Conventions**

### ***1.2.1 The Framework of International Labour Laws and Policies***

#### **1.2.1.1 The International Labour Law**

The International labour law is one category of The International law. The International law is the body of legal rules that apply between sovereign states and such other entities as have been granted international status by sovereign states. Concerning labour laws, the most important international entity is The International Labour Organization (ILO).

#### **1.2.1.2 United Nations Instruments**

While the United Nations does not deal with labour issues as such, and recognizes the ILO as the specialized agency responsible for taking appropriate action for the accomplishment of the purposes set out in its Constitution, some UN instruments of more general scope also cover labour matters.

A number of provisions concerning labour issues are contained in the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights, which are legally binding human rights agreements. Both were adopted in 1966 and entered into force 10 years later, making many of the provisions of the Universal Declaration of Human Rights effectively binding.

Because of their comprehensive nature, the Covenants are drafted in general terms, and the various rights relation to labour, which they recognize are dealt with in a less precise and detailed way than ILO standards.

The UN General Assembly has adopted also a number of legally binding Conventions concerning labour matters. The most important ones are the Convention on the Elimination of All Forms of Racial Discrimination (1969), Elimination of all Forms of Discrimination against Women (1979), Rights of the Child (1989), Status of the Refugees (1954) and Status of Stateless Persons (1960).

### 1.2.1.3 ILO Conventions

ILO Conventions are not ranked in terms of their order of importance, but there is an underlying hierarchy, which can be discerned. In the first category are Conventions dealing with freedom of association and collective bargaining (Conventions Nos. 87 and 89), forced labour (Conventions Nos. 29 and 105), non-discrimination in employment (Conventions Nos. 100 and 111) and child labour (Convention 138). These core Conventions were identified and given prominence in the Conclusions of the World Summit for Social Development in 1995 (Copenhagen Declaration on Social Development<sup>1</sup>). In the second category are technical standards, which establish norms to improve working conditions.

Core Conventions Include:

- **Forced Labour Convention**, 1930 (No. 29). Requires the suppression of forced or compulsory labour in all its forms. Certain exceptions are permitted, such as military service, convict labour properly supervised, emergencies such as wars, fires, earthquakes, etc. In December 1997, 145 countries had ratified this convention.
- **Abolition of Forced Labour Convention**, 1957 (No. 105). Prohibits the use of any form of forced or compulsory labour as a means of political coercion or education, punishment for the expression of political or ideological views, workforce mobilization, labour discipline, punishment for participation in strikes, or discrimination. In December 1997, 130 countries had ratified this convention.
- **Discrimination (Employment and Occupation) Convention**, 1958 (No. 111). Calls for a national policy to eliminate discrimination in access to employment, training and working conditions, on grounds of race, colour, sex, religion, political opinion, national extraction or social origin and to promote equality of opportunity and treatment. In December 1997, 129 countries had ratified this convention.
- **Equal Remuneration Convention**, 1951 (No. 100). Calls for equal pay for men and women for work of equal value. In December 1997, 135 countries had ratified this convention.
- **Minimum Age Convention**, 1973 (No. 138). Aims at the abolition of child labour, stipulating that the minimum age for admission to employment shall not be less than the age of completion of compulsory schooling, and in any case not less than 15 years (14 for developing countries). In December 1997, 59 countries had ratified this convention.

## 1.2.2 Wage and Labour Regulation in Vietnam

The Vietnamese Labour Code of 1994, which was amended in April 2002 and effective from January 1, 2003, provides the regulatory framework for the rights and obligations of workers and employers, labour standards and labour utilisation.

The minimum wage is defined as the legal minimum level of payment for work performed. The purpose of minimum wage is to protect vulnerable low wage labourers from exploitation and poverty. It usually applies to unskilled adults and is legally enforceable. The minimum wage should be set such that it is sufficient to attain a basic standard of living. However, two major factors play against the use of the minimum wage as a policy tool to combat poverty. The first is the level of

<sup>1</sup> See <http://www.itcilo.it/english/actrav/telearn/global/ilo/law/con87.htm>

under-employment and unemployment in the economy. The second is the extent of informalisation, as workers move out of the formal sector and into the informal sector.

In theory, the Labour Code applies to urban and rural labourers who have signed a labour contract or a labour agreement, or who have obtained a verbal agreement. However, the Labour Code does not directly impact all of the Vietnamese labour market, for example, labourers below the age of fifteen and labourers who have not signed a labour contract or agreement or a verbal agreement, including most of the self-employed. These labourers usually form a large part of the vast informal sector in developing countries and are - more often than not - poor.

#### 1.2.2.1 Recent Key Amendments to the 1994 Labour Code

The 1994 Labour Code was amended in April 2002, to be effective from January 1, 2003. In particular, chapters on labour contract, collective labour agreement and wages were amended. The amendments partly reflect the new priorities and requirements arising from the transition towards a market economy. However, the Labour Code regulation on wages falls short of establishing a market-based system of wage fixing.

Chapter IV on Labour contract, Article 27, was supplemented with the definition of different kinds of contract, such as indefinite term, definite term and seasonal work. There was also an amendment on new contract after contract expiration. Article 37 was amended such that in case of insufficient employment for all existing employees, there will be a proposal for the utilisation of the labour force. If workers must terminate the labour contract as pursuant to that article, they shall be entitled to the allowance of work loss. Chapter V on Collective labour agreement, article 48 was amended such that the provincial labour authority shall have the right to declare collective agreement void. Chapter VI on Wages, article 57 was amended such that, with consultation from Vietnam General Confederation of Labour and representatives of employers, the Government shall stipulate the principles for developing wage scales, wage tables and labour norms. The Government shall determine wage scales and wage tables for State-Owned Enterprises.

When developing wage scales, wage tables and labour norms, the employers have to consult the Executive Committees of enterprise trade union and the wage scales and tables shall have to be registered. Article 61 was amended such that on public holidays and holidays with payment, workers shall be paid an amount at least equal to 30 percent. Finally, article 64 was amended such that grant bonuses to workers shall have to be based on annual results in production and business activities and workers' performance. The rule of bonus system shall be determined by the employers with consultation from the Executive Committee of the enterprise trade union. Chapter X on separate provisions on women labourers, article 111 was amended to include provision for time off during pregnancy, maternity leave or when nursing a child under twelve months old. The female employee shall be exempt from unilateral termination of her labour contract. However, the Labour Code contains no such provisions applicable to male labourers nursing children under twelve months old.

Finally, Chapter XI on separate provisions concerning junior workers and other categories of workers, article 121 was amended such that the employment of junior workers in work and workplace which may give bad influence to their personality, as determined in a list issued by the MOLISA and the Ministry of Health.

#### 1.2.2.2 Minimum Wage Regulation in Enterprises

A decree of the government (No 03/2003/ND-CP) in January 2003 and effective since February 2003 was proposed by the Minister of Internal Affairs and Minister of Labour, War Invalids and Social Affairs and the Minister of Finance on adjusting salary and social subsidies and reforming the salary management mechanism. Article 1 stipulates that the minimum salary is raised to

290,000 Dong per month (up from 210,000 Dong from Decree 77/2000/ND-CP), applicable to persons who are entitled to salary and allowance financed by the State budget and employees working in enterprises, with exception of foreign-invested enterprises. This salary is based on a maximum of eight hours per day, six days per week and is equivalent to a daily salary of 12,080 Dong.

Decision No 708/1999/QĐ-BLĐTBXH of June 1999 stipulates that the minimum wage levels applicable to unskilled/untrained Vietnamese labourers in foreign-invested enterprises would be no less than 626,000 Dong per month for foreign-invested enterprises located in urban districts of Hanoi and Ho Chi Minh City, no less than 556,000 Dong for foreign invested enterprises located in the rural districts of Hanoi and HCMC and urban districts of Hai Phong, Bien Hoa and Vung Tau cities. For foreign-invested enterprises located in urban and rural districts of other provinces and cities, the minimum wage level shall be no less than 487,000 Dong per month. Finally, foreign-invested enterprises located in difficult geographical areas with poor infrastructure, the minimum wage level shall be no less than 417,000 Dong per month.

In sum, foreign invested enterprises are required to pay their employees minimum wages that are more than twice that of their domestic counterparts. Various macroeconomic factors can influence the level of competitiveness of industries, such as exchange rates and productivity levels. However, this dual wage system, which serves to protect domestic industries, can lead to pervasive government control of the labour market, and seriously challenge a smooth transition towards market economy.

#### 1.2.2.3 Female and Junior Labourers

Based on Decree No 23/CP dated June 1996, circular No 03/LĐ-TBXH-TT of January 1997 provides instructions on the execution of some articles stipulated toward female labourers. This circular states that female labourers should be at least fifteen years old, as is the case of male labourers. According to the circular, female labourers working at home are also subject to the Labour Code. However, the current labour law stipulates that female labourers are prohibited to work night shift. The usually higher wages for working night shift are thus solely reserved for male workers.

Section I of Chapter XI of the 2002 Labour Code presents separate provisions concerning junior labourers. Under the Labour Code, junior workers consist of workers under eighteen years of age. The admission to work of children under 15 years of age is prohibited, except in certain categories of occupations and works, determined by the MOLISA. More importantly, it appears that the application of the Labour Code is unclear for workers between the ages 15 to 18 years.

Thus, in theory, according to the Labour Code, wages should be agreed between the employees and employers (Article 7). This suggests that female and junior labourers are entitled to market-based wage rates. However, there is no reliable data on the economic variables taken into consideration whilst fixing the minimum wage rates. The application of the Labour Code faces many significant challenges, mainly resulting from remaining labour market weakness.

### 1.2.3 *Trafficking Treaties and Conventions*

Trafficking of women and children has grown into a serious problem in Vietnam, mainly in the northern part of the country bordering to China and in the South-Western part of country bordering to Cambodia. Trafficking within the country as well as between the other neighbouring countries Laos and Cambodia is deemed not to be of the same magnitude as cross-border trafficking to China, but reliable information is lacking. However, it is known that Vietnamese women are found working as waitresses and prostitutes in cities and larger towns in the neighbouring countries.

The United Nations Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children (the Trafficking Protocol, UNODC, United Nations Office on Drugs and Crime)<sup>2</sup> provides the first internationally recognized definition of trafficking. According to the Protocol:

*Trafficking is the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs.*

To combat human cross-border and domestic trafficking and decrease the vulnerability of women for sexually exploitation GoV has taken the measures below.

Vietnam has ratified the *UN Convention on the Elimination of All Forms of Discrimination against Women* in 1980 and accordingly established the *National Committee for the Advancement of Women (NCFAW)* with sub-committees on regional levels, in 1993. The Convention and the Committees build a base for all actions towards gender equality in Vietnam.

GoV has through Decree 130/1200/QD-TTg dated July 14, 2004 approved a *Plan of action against trafficking of women and children for the years 2004 to 2010*. *Steering Committee of National Action against Crime of Trafficking in Children and Women* during the period of 2004–2010 has been established to follow the implementation of the plan through different ministries, sectors, mass organizations and PPCs. The major components of the plan consist of:

1. Propagation and education within community on prevention and combating of trafficking in women and children;
2. Fighting against the crime of trafficking;
3. Receipt and support to returned victims of trafficking;
4. Development of the legal framework related to prevention of and combating trafficking of women and children.

The aim of the plan is accordingly to work through the different ministries, sectors, mass organizations and PPCs for prevention of trafficking, mainly by awareness raising campaigns among their staff and among local communities, and by strengthening and capacity building of legal agencies and staff working on combating trafficking. This is urgently needed, as the local level awareness, competence and resources are indeed very poor. Cooperation among the Greater Mekong area countries is an integral part of the measures against trafficking, and the countries have accordingly in 2005 agreed on cooperation to combat trans-boundary trafficking in the area.

### 1.3 Construction Schedule

Preparatory Works, such as the access road to the construction areas from Highway 14D, is scheduled to commence in January 2008.

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<sup>2</sup> Vietnam has not signed this protocol ([www.unodc.org/unodc/en/trafficking\\_protocol.html](http://www.unodc.org/unodc/en/trafficking_protocol.html)), but has reviewed and considered applications in the Vietnamese context (CEDAW and Combating trafficking in Women in Vietnam, Powerpoint presentation for UNESCAP Meeting, Bangkok Sep. 2005 by Tran Thi Mai Huong, Permanent Secretary of the National Committee for the Advancement of Women in Vietnam).

Construction of Main Works, such as for the dam and spillway structure, waterway and power station, is scheduled to commence one year later, i.e. January 2009.

The first turbine-generator unit of the powerhouse is scheduled for commissioning in mid 2012, and the second 3 months later, i.e. after a total construction period of 45 months after commencement of the Main Works.

The critical dates in relation to resettlement are the following:

- Commencement of the filling of Song Bung 4 Reservoir by the beginning of December 2011.
- Completion of the filling of Song Bung 4 Reservoir up to the Full Supply Level of +222.5 m by June-July 2012.

All resettlement activities need to be scheduled in relation to the above key dates.

A tentative construction schedule for Song Bung 4 Hydropower Project, with main activities, is given in the figure below.

#### Tentative Construction Schedule

	2008				2009				2010				2011				2012			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Construction</b>																				
Preparatory Works	■	■																		
Commencement of Main Works					▼															
Dam and Spillway					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Intake					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Waterway					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Power Station					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Power Station Equipment					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Transmission Line																				
<b>Reservoir Filling and Commissioning</b>																				
Reservoir Filling																				
Commissioning of First Unit																				
Commissioning of Second Unit																				

#### 1.4 Construction Sites, and their Operation

The construction sites are mainly concentrated to the following six areas in accordance with the Feasibility Study:

- Construction Site 1: Construction areas along Highway 14D.
- Construction Site 2: Dam site area.
- Construction Site 3: Power station area.
- Construction Site 4: Sand pit.
- Construction Site 5: Relocation of Highway 14D.
- Construction Site 6: Transmission line.

Construction Site 1 is located some 2 km from Thon Vinh village along Highway 14D, in the vicinity of the access road to the dam site, and consists of the areas for crushing of rock for construction and borrow area of rock, as well as of the access road to the dam site from the national road.

Construction Site 2 is located some 5 km from the off take from Highway 14D, some 1 km from Thon Vinh village, Construction Site 3 some 5 km downstream of the dam site, and Construction Site 4 in Song Cai some 30 km downstream of the powerhouse site. Construction Site 5 is located along the rim of the future Song Bung 4 Reservoir some 4 km upstream of the dam site. The existing Highway 14D needs to be relocated to a higher elevation for a length of about 6 km, and a new 350 m long and 60 m high bridge across Tru Vinh River needs to be constructed.

Construction Site 6 consisting of the 220 kV transmission line from Song Bung 4 Power Station to the existing 220/110 kV substation at Thanh My, with a length of some 35 km, will mainly run along Highway 14D, however, at a distance of some 200–500 m from the road.

Details on the different Construction Areas can be found in REMDP Volume 3, Section 1.2.1.

### 1.5 Workforce Composition, Workers Camp Site

Vietnamese contractors have vast experiences in hydropower construction and therefore it is likely that they will be engaged as main or sub-contractors for the civil works construction of Song Bung 4 Hydropower Project, even if these contracts are under international competitive bidding. If international contractors are engaged as main contractors for the civil works construction, the number of expatriate personnel will probably be limited to management positions, while the main workforce will be Vietnamese. The unskilled labour will likely be recruited from Quang Nam Province.

Vietnamese contractors also have strong experiences in erection of equipment for hydropower projects, and even if equipment supply will be by international suppliers, it is expected that the erection would be by Vietnamese sub-contractors, with expatriate personnel from the supplier limited to management and supervision.

A peak workforce of 2,000 people is estimated to be employed during the construction of Song Bung 4 Hydropower Project, while the number of expatriate personnel may be limited to 50 for the management of the construction. The total number of persons, including accompanying family members, that is expected to reside in the workers' camps is estimated at 2,500.

Two areas for the worker's camps were tentatively identified in the Feasibility Study as given in Table 1.

**Table 1: Tentative camp sites**

Camp Site	Usages	Location	Tentative Area (ha)
Auxiliary Area 1	Living quarters, office, lab, etc	Off take from Highway 14D	28.9
Auxiliary Area 2	Contractor's housing	Along access road to dam site, 2.5km from the highway	5.7

The two camp sites are located fairly close to each other and along the access road to the dam site, and some 30 km from Thanh My Town along Highway 14D. It is envisaged that the campsites will be facilitated with the following:

- Water supply
- Electricity
- Sanitation
- Waste disposal
- Health services

- Canteen
- Shops for daily necessities
- Recreational facilities

## 1.6 Transportation

For the construction of Song Bung 4 Hydropower Project, a considerable amount of materials need to be transported from Da Nang City, some 100 km to the east of the Project Site, with a deep-sea port. The quantities of construction materials envisaged to be transported from Da Nang during construction of Song Bung 4 Hydropower Project are seen in Table 2.

**Table 2: Quantities of Construction materials to be transported**

Item	Unit	Quantity
Cement	Ton	145,000
Steel rods	Ton	13,500
Steel nets	Ton	38,200
Steel plates	Ton	1,150
Oil	Ton	16,500
Explosives	Ton	2,850

Access to the Project Site from Da Nang is via the existing Highway 14D that is reported to be adequate for this purpose, and no additional upgrading of this road is foreseen. For transport of heavy equipment, at least the last part from Nam Giang would probably need to be closed during the transportation.

Some 450,000 m<sup>3</sup> of sand will be taken from the riverbed of Song Cai near Thanh My some 30 km downstream of the powerhouse site, and be transported to the Project Site via Highway 14D. From Highway 14D an estimated 5.4 km long access road will be constructed to the dam site along the right edge of Bung River. The standard of the road will be Grade 4 in mountainous areas with asphalt coating.

A 100 m long temporary bridge across Bung River is planned some 400 m downstream of the dam site, to be used during the construction of the dam structure and thereafter removed. Permanent access across the river will be through the crest of the dam.

## 2 BASELINE CONDITIONS IN/AROUND CONSTRUCTION AFFECTED AREAS

This section gives the baseline socio-economic and cultural situation in the communities located near the construction sites and that are going to experience various environmental and social consequences from the construction. The villages of Thon Vinh and Pa Toi in Ta Bhing Commune lie closest to the project construction site and to the workers' camps, and will consequently be impacted by the construction and the arrival of new people in the area. Other villages of Ta Bhing Commune along the National Road 14D are expected to be affected by the influx of workers and camp followers as well<sup>3</sup>. Moreover, all the people living and working along the Highway 14D in Ta Bhing and Ca Dy communes and within areas of Thanh My town will be affected by the construction transportations and increasing traffic. Further away from the

<sup>3</sup> The baseline socio-economic and cultural situation in these villages is accounted for in Volume 3, as these villages are within the affected area for the transmission line as well.

construction sites, inhabitants all along the road to Da Nang city will be affected by the heavy transportations and other traffic increase as well.

Additional communities that will experience construction activities connected to the Song Bung 4 Project during a limited period of time are the areas in Zuoih Commune that will be affected by the resettlement areas construction. Present residents in and close to the resettlement villages and the areas for roads construction will experience increasing amount of mainly male workers in the area. This construction period is, however, limited to an estimated 9 months. Baseline conditions in these communities are accounted for in Chapters 2 and 4 of Volume 2 of the REMDP.

## 2.1 Population, Demography and Ethnicity

The two villages of Thon Vinh and Pa Toi in Ta Bhing Commune lie only 1-2 km from the closest construction site and the off take of the access road from Highway 14D. Both these villages lie along the road, and only at 1 km distance from each other. Population, demography and ethnicity details on these villages are given in Table 3 to Table 5 below.

**Table 3: Population and ethnicity in the affected villages**

Village	No of HHs		No of persons			No of Co Tu HHs	No of Kinh HHs
	Total	Female headed	Total	Male	Female		
Thon Vinh	94	6	540	280	260	88	6
Pa Toi	23	1	109	57	52	22	1
<b>Total</b>	<b>117</b>	<b>7</b>	<b>649</b>	<b>337</b>	<b>312</b>	<b>110</b>	<b>7</b>

**Table 4: Household size in the affected villages**

Village	No of HHs with No of persons						Total
	1	2	3	4	5	>5	
Thon Vinh	1	3	5	12	21	52	94
Pa Toi	0	1	6	8	3	5	23
<b>Total</b>	<b>1</b>	<b>4</b>	<b>11</b>	<b>20</b>	<b>24</b>	<b>57</b>	<b>117</b>

**Table 5: Age distribution in the affected villages**

Village	No of persons in ages							Total
	<5	5-15	16-20	21-35	36-40	41-60	≥61	
Thon Vinh	58	148	63	110	100	40	21	540
Pa Toi	17	30	7	40	5	9	1	109
<b>Total</b>	<b>75</b>	<b>178</b>	<b>70</b>	<b>150</b>	<b>105</b>	<b>49</b>	<b>22</b>	<b>649</b>

There are totally 117 households in the two villages with 649 persons. Gender division is rather even with 337 are male and 312 female residents. 7 out of totally 117 households are female headed. Majority of the inhabitants are Co Tu ethnic minority people, only 7 households are registered as Kinh. No households with another ethnic affiliation are found in the two villages.

Households are in general large in Thon Vinh Village: More than half of the households, 55% consist of at least 6 persons, and further 22% consist of 5 persons. Large households are typical for ethnic minority people, among them Co Tu. This is both due to their preference to have many

children, and, in the Co Tu case, due to the common habit of sons staying in the parents' household with their wives until they have at least one or two children. In Pa Toi village households are surprisingly small to be ethnic minority ones; 65% consist of 4 or fewer persons.

Population in the villages is young: 39% is in ages 0-15 years, added to that 50% is under 21 years of age. 12% of the total population is children under five years. In Pa Toi Village few persons are elderly; 86% of the inhabitants are under 36 years of age, and only one person is found in the eldest category of over 60 years. In Thon Vinh the age category distribution is more even: 38% 0-15 years, 32% 16-35 years and 30% over 35 years. However, only 4% of the villagers are over 60 years and 50% are under 21 years of age.

These population features reflect Co Tu culture of large families, low marriage age and life length far below the average in Vietnam<sup>4</sup>. Their health status is poor and access to health services far from satisfactory. Hard manual labour and lacking basic hygienic conditions add to the unprivileged status of the Co Tu as is seen below.

## **2.2 Infrastructure and Social Services**

### ***2.2.1 Road Infrastructure***

The two villages are located along the National Road 14D and consequently have easy communications to other villages in Ta Bhing Commune and further to Ca Dy Commune and to the district town. The road facilitates villagers' access to trade and to services like health care and education. In Thon Vinh village 60 households have motorbikes, but in the poorer Pa Toi village only three households. Mobile motorbike traders visit the villages daily, selling sea fish and buying agricultural and forest products.

National Road 14D leads to the border between Vietnam and Laos through the Dat Occ border gate, which was opened as a national border gate in February 2006. Traffic along the road has since then increased considerably according to the villagers.

### ***2.2.2 Housing***

More than 60% of the houses in Thon Vinh are wooden, 29% are of bamboo and the rest are made of brick. Kinh households have brick houses. In Pa Toi 78% of the houses are wooden and the rest are built of bamboo.

### ***2.2.3 Water and Sanitation***

Household water is lead to the villages from natural streams through pipes using self-flow system. Household toilets are dug in the ground at a small distance from the houses or people relieve themselves in the nature, where free roaming pigs find their food. Pigs also take care of most of the household waste.

### ***2.2.4 Education and Educational Level***

There is a village school with grades 1-5 in Thon Vinh Village providing education also for Pa Toi children, who walk or bicycle the 1 km distance between the villages. Education in grades 6-9 is available in the inter-communal school in Ca Dy, where the children stay during the week and only come home over the weekend. There was previously a commune school with grades 1-9 in Ta Bhing, but year 2004 it was closed down and the educational services were removed into the inter-communal school. Upper secondary education is available only in the district town.

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<sup>4</sup> According to the Population Census in 1999, the life expectancy among ethnic minority people in the Central Highlands is 8 years below the general one in Vietnam for both men and women.

Poverty and long distance to school contribute to children not finalising their secondary education. In Thon Vinh and Pa Toi villages families find it difficult to support children's education in the boarding school. According to women in Ta Bhing, families have to provide the school with approximately 6 kg rice/month, added to vegetables, fruit and firewood. Consequently many children drop out of school during grade 6 or 7.

Education level of the adult population (over 18 years) is low and is summarized in Table 6 below. 60% of the adult population in Thon Vinh and 84% in Pa Toi have only elementary level education. Only one person among Pa Toi adults has finished secondary and one person upper secondary education. In Thon Vinh 13.5% have secondary education and 3% upper secondary education. No villager has any higher education.

**Table 6: Education level of persons over 18 years**

Village	No of adults with education at level					Total No of adults
	Grade 1-4	Grade 5	Grade 9	Grade 12	Higher	
Thon Vinh	176	70	40	10	0	296
Pa Toi	51	8	1	1	0	61
<b>Total</b>	<b>227</b>	<b>78</b>	<b>41</b>	<b>11</b>	<b>0</b>	<b>357</b>

### 2.2.5 Health and Health Services

There is a Village Health Worker in both villages. Commune Health Centre with an under doctor, nurse and midwife is located in the commune centre at a distance of 20km from the two villages. Doctors are available only at the district hospital, but child vaccination program is implemented in the villages. All Co Tu villagers have access to free health care within the national Program 139, but they have to pay the transportation to the health centres themselves. Poor families often abstain from seeking health services due to the cost, and try to treat the sick with traditional medicine. The most common health problems are respiratory infections and stomach diseases, especially diarrhoea. Men drink a lot of home-made alcohol leading to stomach problems. Most Co Tu women give birth at home in the village without assistance from any trained birth attendant.

## 2.3 Socio-Economy

### 2.3.1 Socio-Economic Systems in the Villages

Household economy is based on agriculture, forestry and livestock breeding. All the households in the two villages rely on upland cultivation, 37% in Thon Vinh and all but one household in Pa Toi also cultivate wet rice. Cattle are an important income earning activity for most of the people. Fishery is a main economic activity for very few households, but 3/4 of the households in Thon Vinh have fishponds for family food. Forestry is the main economic activity for 20%, respectively 30% of households in Thon Vinh and Pa Toi villages, but all households utilise forest resources to some extent.

### 2.3.2 Agriculture

All the households in the two villages rely on upland cultivation. The main crop is upland rice, cultivated together with maize, beans and cassava. The total area utilised for upland cultivation is 65 ha in Thon Vinh and 12 ha in Pa Toi Village, which means an average field size of 0.7 ha/hh and 0.5 ha/hh, respectively. Except maize and cassava, selling beans is important for household income in Thon Vinh Village where income from beans varies between 1.5 and 6 MVND per household per year.

In Thon Vinh the total wet rice area is 5 ha divided between 35 households, of which 30 have land certificate for the wet rice fields. The average wet rice land size for a household is 0.14 ha. In Pa Toi the total area under wet rice cultivation is 2.3 ha divided between 22 households, which gives an average field size of 0.11 ha/household.

Agriculture is done manually and is low productive. Land quality is poor and few farmers use fertilizers. District agricultural extension resources are very limited in Nam Giang District, and poor farmers have no access to training.

Fruit trees contribute to the diet and bring income for households. Local people cultivate and also sell fruit like banana, pineapple, loong boong, jack fruit, mango and papaya.

### ***2.3.3 Livestock Breeding***

Livestock breeding is an important income bringing activity for Co Tu people. Animals are mostly kept for selling. Most households have chicken and pigs. Cows and buffaloes bring most income, 5–6 MVND/cow. In Thon Vinh FIDR<sup>5</sup> has provided most households with cows and organized training in livestock breeding, which has led to reducing occurrence of cattle diseases. District Ethnic Minority Office has also provided Pa Toi villagers with cows; most households have 1-2 cows, but the most well-off ones have 7-8 cows.

### ***2.3.4 Forest Utilization***

Utilization of forest resources is important for both food and income of the local people. Women gather fruit, vegetables, mushrooms and leaves mainly for household food and medicine, and bamboo shoots for selling. Selling rattan is a major income source for most households. Both men and women collect rattan in the forests. According to villagers, an average household income from selling rattan is 1 MVND per year. Selling palm leaves for hat making is also important for household income.

A lot of illegal logging and hunting occurs in the forests, but it has not been possible to assess the magnitude and the involvement of the local people in these activities. People mention that some men in Ta Bhing have been arrested and even detained for illegal logging, which has reduced involvement of the local people. Loggers use the Song Bung River for timber transportation, and women say they never go into the forest alone but always in groups of 5-10 for fear of loggers. Local people apparently hunt wild boars and sell them to Kinh traders.

### ***2.3.5 Fishery***

There are few families fishing and selling fish in the villages. Fishery is a main economic activity for about 10% of the households. Pa Toi villagers say they were fishing a lot in the Bung River in the past, but with the intensified gold mining in the river, fish has reduced a lot, and today villagers go down to the river for fishing only in special occasions like for festivities. Fish is mainly caught in mountain streams and in the streams close to villages. Most villagers buy sea fish from mobile Kinh traders on motorbikes coming daily to the villages.

75% of the households in Thon Vinh Village have fishponds, but only three households in Pa Toi. Fish is raised for family food, but also sold to other families in the same village. This selling is, however, at a very small scale.

### ***2.3.6 Trade and Other Non-Farm Income Bringing Activities***

Kinh people run the shops along the national road, but trade is not specified as the main economic activity for any households according to the village survey. This may be due to the

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<sup>5</sup> Foundation for International Development Relief, A Japanese NGO working in Nam Giang District

traders not being licensed, and therefore claiming trade to be a supplementary activity. In Thon Vinh Village all the six Kinh households are doing trade. There are no labour workers in the villages, but 2 government employees in each village.

### 2.3.7 Household Income, Food insufficiency and Poverty

The main cash income of rural households comes from selling forest products, mainly rattan, bamboo shoots, palm leaves and wild animals, and from selling agricultural products like beans, rice, cassava, maize and fruit. However, food insufficiency appears in most of the villages every year, and the food produced is mainly needed for household consumption.

According to the village survey made by the consultancy team in May 2006, Pa Toi Village is clearly poorer than Thon Vinh Village. Here 14 out of 24 households, 61%, are living under the national poverty line and the rest have a low household income with less than 300,000 VND/person/month. In Thon Vinh 25% of the households are living under the official poverty line, but also 16% have a monthly income/person of more than 450,000 VND.

Food security data shows that the situation is comparable in the two villages, approximately 17% of the households have enough rice throughout the year, but 19% suffer from severe food insufficiency (more than 6 months/year). 29% of households suffer from short-time (less than 3 months) rice insufficiency and 35% of moderate insufficiency (3 to 6 months per year). Data on food insufficiency in the two villages is given in Table 7 below.

**Table 7: Food insufficiency, number of households with insufficiency months**

Village/Insufficiency No of HHs	No insufficiency	<3 months	3–6 months	>6 months	Total
Thon Vinh	15	30	31	18	94
Pa Toi	5	4	10	4	23
<b>Total</b>	<b>20</b>	<b>34</b>	<b>41</b>	<b>22</b>	<b>117</b>

## 2.4 Cultural Issues

The two villages to be most affected by the construction are inhabited mainly by Co Tu ethnic minority people. Up to year 1973 they lived in Zuoih commune, between the today Bo Di and Thon 2 villages, but moved to their present location following an administrative order. Co Tu is the largest minority group in the whole Nam Giang District, and in a large majority of the population in all the villages along National Road 14D between the construction site and Thanh My district town. Co Tu people have their own language and distinctive cultural features. They are patrilineal and patrilocal, meaning that descent and residential location follow the male family line. The village decision-making body consists of an elected male Village Elder who is supported by the council of elder men. Co Tu religion is animistic, the whole nature being inhabited by different spirits that interfere in human lives. People also respect and fear the souls of their dead relatives. The community *Guol* house has a central place in Co Tu culture. Several *Guol* houses in various Co Tu villages are located next to National Road 14D between the construction site and Thanh My town.

### 2.4.1 *Guol* House

The Co Tu community *Guol* house is the heart of the cultural and social life in a village. It is the meeting place for the whole village and is therefore bigger and higher than all the other houses. In the *Guol* house all the village meetings and elders' meetings take place. Also visitors to the village

are met in the Guol house. Everybody in the village is allowed to enter the Guol house, but only unmarried young men are allowed to sleep there.

Guol house is the spiritual and cultural centre of the village. All important calendar celebrations and offerings are carried out in the Guol house. Also occasional offerings in case of a crisis are made in the Guol house. Apart from spiritual ceremonies, popular events like folk dance and music performances take place in the Guol house as well. There is an open yard around the Guol house with buffalo pole for killing the ritual buffalo, and space for the traditional festivals as well as for sports.

Guol house is the symbol of the village, its spirit and strength. It is built on poles in a rectangular form. Walls without a door are approximately 80 cm in height. In order to enter the house, people are allowed to climb over the wall from three directions: left, right and from the front. In the middle of the house there is a main pillar through the floor up to the tortoise-formed roof. Construction material is wood and bamboo, and the roof is covered with palm leaves. The Guol house of Thon Vinh Village located next to National Road 14D is richly decorated with carvings on walls and on the roof, representing moon, stars, people, birds, animals, flowers, trees and plants. Inside the Guol house there are both spirit statues and paintings of Co Tu life and of visionary figures the young men sleeping in the house have seen in their dreams.

#### **2.4.2 Graves**

Graves are considered to be the place where the dead bodies lie, while the soul of the dead is living with the ancestors in another place. Co Tu believe that there are connections between the living and the dead, and the souls of the dead have the power to injure the living, if not treated well by the living. Cemeteries are located outside the village residential area in the forest, usually in the Western direction and in a higher place than the village. Co Tu respect and fear the dead, and regularly visit the grave of a dead person only once a year on the death day of the person concerned. That day they are obliged to hold a ceremony to please the spirit of the dead. In the construction areas there are some Co Tu cemeteries that have to be relocated before the project start<sup>6</sup>. It is of crucial importance to do the relocation in a proper way, respecting the culture and traditions and with full participation of the affected people.

#### **2.4.3 Co Tu Villages and the Kinh Culture**

The Co Tu villages of Thon Vinh and Pa Toi are located along the National Road 14D. The ethnic minority people in these villages therefore have more contacts with the majority Kinh society than the Co Tu groups living in more remote areas like in Zuoih Commune. They have daily contact with Kinh traders and the majority society through improving communications and the increasing number of TVs. However, the Co Tu villages confirm their own strong ethnic identity and unity, built on family ties, especially the further they are located from the district centre. This might explain the low occurrence of mixed ethnicity marriages between the Co Tu and the Kinh, apart from the superior attitude of the Kinh towards ethnic minority people.

### **2.5 Women's' Situation and Vulnerability to Trafficking**

Almost all the women in the impacted villages belong to Co Tu ethnic minority. They work in a physically hard subsistence economy system, stagger under or slightly over the national poverty line, have low educational level, poor access to education, and no access to extension training. Girls get married young, deliver their babies in the village without any trained birth attendance aid, and have significantly lower life expectancy than the average Vietnamese population, connected to poor health and nutritional status. Women have poor representation in community decision

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<sup>6</sup> See Volume 3 of REMDP.

making, which is dominated by men, but their labour burden in food and income production and household tasks exceeds that of the men both in scale and time.

Co Tu women traditionally have less contact with the majority society outside their community than men. Women are more bound to their daily work in the fields, forests and the village and less mobile outside their daily living environment. Their knowledge of and communication with the Kinh society is limited. This makes them extremely vulnerable in change situations. Single women (female-headed households) are especially exposed.

Increasing number of Kinh men in the area due to the construction will have a major effect on the local Co Tu population and the gender balance in the area. There is an increasing risk for women, especially young girls, being socially and sexually exploited by the workers.

Some Co Tu villages in in Ta Bhing and Ca Dy have previous experience from hosting construction workers when the National Road 14D was upgraded. A situation with several fatherless children left behind by the Kinh workers are reported by FIDR and also confirmed by the PTA team during the field visit. The situation and knowledge level of women makes them easily manipulated by more “well-off” men arriving in the area. Young girls are especially exposed. Co Tu children walk along the national road to school, both small children between Pa Toi and Thon Vinh villages and secondary school children a long distance from Thon Vinh, Pa Toi and other villages to the inter-communal secondary school in Ca Dy. These children are defenceless towards any evil attempts to them from travellers along the road leading to Laos and they are exposed to kidnapping and trafficking, especially with the expected traffic increase during the Project construction.

Moreover, the cash income level among the Co Tu is low, and especially women lack experience in handling money. They may therefore be easy to manipulate and become exploited economically as well as lured to selling sex for easy money.

Women in the villages of Zuoih Commune in the areas and close to the resettlement construction sites have an equal but even more disadvantaged situation in that they live far more isolated in their own Co Tu community with very little communication outside than the Co Tu women residing along the national road. Even though the construction period and magnitude there is going to be much more limited than in Ta Bhing, the risk of social and economic exploitation of women by the workers remains.

The specific Gender Action Plan prepared for the Song Bung 4 Project address the measures needed to reduce and mitigate the expected risks and negative impacts of the Project on women and children.

### **3 POTENTIAL SOCIAL IMPACTS OF THE CONSTRUCTION PHASE**

#### **3.1 Direct Workforce Impacts**

The manpower of the construction workforce varies over the various phases of the total construction period of more than four years. Unskilled labour is usually highly transitory, and the actual composition of the workforce changes over time. The accommodation arrangements in the workers camps therefore have to be flexible and well-managed. The number of construction workforce will by far increase five times the number of persons residing and strolling in the areas close to the construction sites. The unbalance between female and male population is going to be drastic; approximately 300:2,300, or more than seven males to one female. This unbalance is added to all spontaneous camp followers who are expected to a large extent be male and to a lesser

extent female. However, some of the unskilled labourers are going to be recruited locally and will not reside in the workers camps.

Most of the workers are Kinh men coming from other, far-away provinces. They are doing hard physical work in long working hours and are isolated from their families during a long period of time. Their need of entertainment and relaxation during free-time will contribute to a considerable increase in the number of karaoke and drinking bars in the area along the National Road 14D. Their need of goods and services will bring various new people into the area to provide these. Workers' need of female company added to new working opportunities will potentially bring Kinh women into the area to work as waitresses and in prostitution, but also local Co Tu women will be exposed to getting involved in sexual relationships with the workers. Unmarried girls are in an especially weak position and easily manipulated. Given the low marriage age of Co Tu girls (18 years at the most) the group that runs the largest risk of being abused is very young in age.

The influx of male construction workers into the area will potentially increase the risk of both sexually transmitted and other contagious diseases. Drug addiction and access to drugs is predicted to increase. Numerous construction workers have certainly been contracted previously at large infrastructure construction projects, and have habits of heavy drinking, drug addiction and sexual abuse of local girls.

The impact of an invasion of new people into a small, homogenous ethnic minority community will turn the inhabitants from majority into minority group in their residential area. Increasing population will impact both on the natural and on the socio-cultural and economic environment of the local communities.

### **3.2 Impacts of Spontaneous Camp Followers**

The arrival of construction workers and the construction of their camps will bring about various new opportunities for traders and other service providers. Spontaneous migration into the area will increase, and newcomers will erect their shops and houses wherever they find lucrative space for business and residence. If not regulated the spontaneous construction of shops, bars and restaurants as well as residential houses will lead to uncontrolled settlements with poor sanitary conditions. This will potentially lead to increasing risk for epidemic and contagious diseases. If the formation of camp followers areas is not regulated, it will lead to many conflicts over land and to exploitation of the existing permanent population of their land and water resources.

Most of the spontaneous camp followers are expected to be Kinh traders and opportunity seekers. They will bring about not only goods, services and for the Co Tu new habits, but also new employment opportunities for the local population. As the local Co Tu people, especially women, have poor or no knowledge of labour and wage regulations they will be easily utilised as cheap labour resource by the newcomers in many different ways.

### **3.3 Impacts of Transportation and Traffic**

The construction is going to increase both heavy transportations and traffic related to the project and spontaneous traffic due to increasing number of people moving around, in and out of the area. Risk for traffic accidents will increase, and inhabitants along the national road will be exposed for more noise and pollution. The expected increased number of bars serving alcohol in the area will also contribute to drunk driving and road accidents connected to alcohol and drugs abuse.

Both people in cars, on motorbikes, bicycles and pedestrians will be exposed to dangers of increasing traffic. Especially vulnerable are women and children without access to vehicles. Women use the national road for walking to reach their fields and collection forests and carry

heavy loads of agricultural and forest products along the road. Children walk long distances to school along the national road and are exposed to the traffic.

### 3.4 Health Impacts from Workers and Camp Followers

In the Public Health Action Plan the health impacts related to construction workers, camp followers and transportation workers are summarized as in Table 8 below.

**Table 8: Potential health hazards during construction and operation phases.**

Disease/Health risk	Construction	Operation
Poverty related diseases	+	+
Child health	+	+
Maternal health	+	+
Sanitation and water born diseases	++	+
Accidents and injuries	+++++	+
Nutritional disorders	++	+
Infections including vector born	++	+
Sexually transmitted diseases	+++++	+
Psychosocial ill-health	+++	+
Life style related ill health	++++	+

The health problems related to accidents and injuries and sexually transmitted diseases have to be stressed, but also ill health related to changed life style and psychosocial ill health.

## 4 SOCIAL MANAGEMENT AND MITIGATION PROGRAM

The Project Construction will lead to major impacts on the local inhabitants in the adjoining areas to the Construction Sites. The construction will bring about changes that affect their natural and village environment, their livelihoods, income earning opportunities, social and cultural life. The major affected communities are the two villages of Thon Vinh and Pa Toi, but the rest of the villages in Ta Bhing Commune that are located at a distance of 15 to 30 km from the construction workers camps and along the Project transportations highway will be affected as well. Therefore, all the social mitigation measures have to be planned and implemented in full cooperation with these communities.

Preventive measures are crucial for the social management of the Project. Requirements for construction workers camps and camp followers areas are therefore of first importance and will be part of the constructor's contract as given below. Proper conditions for spontaneous camp followers are likewise essential and will be implemented by the district authorities.

Implementation of the identified mitigation measures are recommended to be mainly the responsibility of various district level organizations in cooperation with local bodies and village organs. They will be provided with adequate capacity building and instruments to organize and manage the mitigation of the expected negative impacts and potential conflicts arising from the upcoming social situations in the affected areas. A national consultancy firm will be contracted for organizing, supervising and facilitating implementation of the various activities.

## 4.1 Workforce Labour Preference Policy

### 4.1.1 Vietnamese Regulations

There is no local labour preference policy in the Vietnamese Labour Code per se. However, Article 132 do state that “With regard to jobs requiring high technique or managerial jobs which the Vietnamese side cannot yet fill, the said business, organization or individuals is authorized to sign on a foreigner for a given period of time but it must have a plan or programme of training so that a Vietnamese may soon carry out his job and replace the foreigner”. The Labour Code also states the following:

- Vietnamese citizen working for foreign organizations come under the jurisdiction of the Labour Code.
- A labourer must have attained at least 15 years of age.
- The labourer is paid a salary based on his agreement with the employer, but his salary shall not be lower than the minimum salary prescribed by the State.
- The labourer has the right to found, join and work for the trade union according to the Trade Union Law.
- The labourer has the right to go on strike as described by law.
- The State shall enact preferential employment policies to attract and use the labour force among the people of ethnic minorities.
- The State ensures the right to equality of women and men in all domains of work, and shall adopt policies of encouraging the employers to create conditions for women labourers to have regular job.
- Foreigners working on a permanent basis in Vietnam must have a work permit issued by the Ministry of Labour, War Invalids and Social Welfare.

According to Article 1 of Decree 93, foreign contractors (main and sub-contractors) being awarded a contract in Vietnam are permitted to employ foreign employees. The laws and decrees covering foreign workers in Vietnam are the following:

- The Vietnamese Labour Code dated 23rd June 1994.
- Decree 105/2003/ND-CP dated 17th September 2003 detailing the Labour Code in respect to recruitment and management of foreign employees working in Vietnam.
- Decree 93-2005-ND-CP dated 13th July 2005 that amends and add a number of articles to the Decree above.

The ratio of foreign and Vietnamese employees is not stated, but approval is to be obtained from the chairman of the people’s committee of the province. Foreign workers may be employed according to Article 4.3 of Decree 93 as follows: “...must have highly technical skills or highly professional qualifications (including engineers and persons of a standard similar to or higher than engineers...), and be very experienced and be senior professionally in the direction of production or business operation, or in management work which Vietnamese employees are not yet able to perform.”

### 4.1.2 Project Workforce Labour Preference Policy

Considering the vast experiences in hydropower construction among Vietnamese contractors, the main part of the workforce will anyhow be Vietnamese employed by Vietnamese main and/or sub-contractors, with foreign workers/expatriate personnel limited to management positions. Unskilled labour will preferably be recruited within Quang Nam Province.

The Construction Contractor and sub-contractors are obliged to carry out gender-sensitive local labour recruitment to largest possible extent. The specific requirements are given in the following section.

#### 4.1.2.1 Contract Specifications

The Construction Contractor is obliged to follow the Particular Conditions of Contract (PCC) to be prepared for the Song Bung 4 Hydropower Project. Accordingly the contractor is compelled to pay attention to the following requirements:

- The Contractor is required to employ national staff and labour to the greatest extent practicable and reasonable. Foreign staff will be limited to management positions.
- Preference will be given to the employment of local people affected by the Works as skilled/unskilled labour (as appropriate) to mitigate the impacts of the construction, and to other labour recruitment of workers from Quang Nam Province.
- Female workers are required to be guaranteed employment in tasks that are possible for both male and female labourers.
- The Contractor shall ensure that same wages are guaranteed for male and female workers for work of equal type.
- The constructor is required to inform the unskilled labourers of their legal rights and national wage and labour regulations.
- The employment of child labour by the Contractor or any sub-contractor shall be restricted in accordance with the 2002 year Labour Code, or any amendment thereto.
- All matters which affect the engagement, importation, transport, housing, feeding, welfare and payment of labour, and other arrangements in connection therewith shall be subject to relevant national laws.

The Contractor will cooperate with and provide RMIU-ATD3 with regular information on how these labour recruitment requirements have been followed.

## 4.2 Recommendations for Mitigation of Health and Social Impacts from Construction Workers and Camp Followers

### 4.2.1 Actions Required of Contractors

The construction contractor is required to provide adequate living, health, water, sanitary conditions and solid waste management in the workers camps in order to avoid increasing health risks from the workers on the local population. Specific measures have to be implemented to reduce the negative social and health impacts on women and children and the risk of trafficking as well as prevention of contagious diseases spreading.

To reduce the demand for sex, as well as prevent other “social evils”, the contractor is required to set up pro-active prevention mechanisms in the workers camps areas such as establishments for sports, entertainment and eating. The camp entrance restrictions have to be rigid.

The construction contractor is required to carry out information campaigns targeted to the construction workers of STDs, HIV/AIDS and other health issues. In implementing these actions the Contractor is required to fulfil the following requirements:

- The contractor is required to sub-contract a Service Provider to implement a HIV Prevention Program for the Contractor's Personnel. The Program is to commence as soon as practicable following the arrival of the Contractor's Personnel on Site and extend for the duration of the Construction.

- The Contractor shall undertake in cooperation with the Service Provider, throughout the construction period, an information and education programme relating to socially transmitted diseases, including HIV/AIDs, for his workforce. The programme shall be formulated, implemented and reviewed with local health authorities involved in campaigns directed at such diseases. The Contractor shall provide education facilities and all information necessary for the programme. The Contractor shall also provide for his workforce the appropriate means of protection against such diseases.
- The Contractor shall ensure that the health clinic at the workers camps provides to the Contractor's Personnel, on request and without charge: (a) counselling and advice on HIV/AIDs, and (b) condoms that comply with the WHO/UNAIDS "Specification and Guidelines for Condoms", 1998 or any more recent equivalent publication to a maximum of 20 per member of the Contractor's Employees per year.
- The Contractor shall give any representative of the Service Provider all reasonable access to the Site in connection with the HIV Prevention Program.
- The Contractor shall instruct the Contractor's Personnel to participate in the HIV Prevention Program in the course of their employment and during their normal working hours or any period of overtime provided for in the relevant employment contracts and uses all reasonable endeavours to ensure this instruction is followed. The Contractor shall do nothing to dissuade the Contractor's Personnel from participating in the HIV Prevention Program.

#### ***4.2.2 Actions Required of RMIU***

The RMIU-ATD3 will support the district authorities, specifically the District Construction and Urban Management Section, the Planning and Investment Section and Land Management Department to plan and implement adequate basic conditions for the spontaneous camp followers areas. They will also support the district legal units and the local police in monitoring and controlling the camp followers living and health situations and their impacts on the local communities.

The RMIU will also monitor that the Contractor follow all the labour and health requirements according to the Contractor's contract.

#### ***4.2.3 Actions Required of the District***

The District Construction and Urban Management Section, the Planning and Investment Section and Land Management Department will be responsible for planning and implementing adequate basic conditions for the spontaneous camp followers areas.

The district authorities will be responsible for registration of the camp followers and informing them on applicable regulations. The district authorities will issue the necessary certificates and permits for the camp followers and supervise the Contractor on any requirements or policies and their application in the Project, district and province areas.

### **4.3 Community Management and Infrastructure development**

Many new people will appear in the areas close to the Project sites. Both workers and camp followers will arrive in the area. People with different backgrounds, culture and habits will move around in an area, which prior to the project is socially, culturally and ethnically homogenous and rather isolated.

An influx of people into the Project Areas can be expected to lead to increasing conflict situations. Alcohol misuse, access to drugs, illegal activities and crime can potentially increase. Security

management is important for camp followers, both from the point of view of internal security (ensuring safety and order) and potential negative impacts on the affected communities (crime or negative social influences). The preventive and mitigation measures are connected both to regulation of settlements, traffic control and management, conflict resolution and management, trafficking prevention and public health management.

The RMIU will have an overall responsibility to supervise and coordinate all the required actions of preventing and mitigating the expected negative impacts on the local communities. Supporting measures are needed for district and local level authorities and organizations to increase their capacity to manage the situation.

#### ***4.3.1 Regulation of Settlements***

Many spontaneous migrants will arrive in the adjoining areas to the construction sites in search of all the new opportunities a large infrastructure project with many construction workers brings about. They will locate their shops, restaurants, karaoke and drinking bars, and other service constructions as well as residential houses wherever they find a suitable place. Uncontrolled constructions will potentially lead to both conflicts between people and to health risks due to deficient hygienic and sanitary conditions.

A plan of areas for spontaneous camp followers to erect their shops and homes has to be made prepared by the district authorities. It has to be emphasized that the plan for the new establishments has to be made with participation from the local communities that will be affected by all newcomers. It is recommended that the Village Chiefs of the villages of Thon Vinh and Pa Toi participate in planning of the new business and residential areas. It is recommended that the areas reserved for the newcomers will be located along the national road close to the take off of the access road and close to the workers' camps area.

##### Implementing agency:

- District Construction and Urban Management Section with support from the Planning and Investment Section and Land Management Department

A measure to reduce the influx of opportunity seekers into the area is to require the newcomers to have a permit issued by the district authorities for business and settlement in the new areas. The permit has to have an agreed fixed price in order to discourage corruption. Routines for the local police have to be established for regular control of the legality of settlements and the business. The local police will be the authorized body for the legal regulation and control of the spontaneous camp followers' establishments.

##### Implementing agency:

- The body of Justice in the District Administration Section
- The local police

#### ***4.3.2 Water Supply, Sanitation and Waste Disposal***

Increasing number of people in the construction adjoining areas will add to the risk of epidemic and contagious diseases and health hazards affecting both the local and the migrating population. The standard of water supply and sanitary conditions plays a key role for the risk level.

Water supply has to be included in the plan for the camp followers' areas. Simple cemented clean water posts will be constructed in the planned area for spontaneous camp followers.

Regulations for latrines and taking care of waste have to be strict, and made and monitored by the District Construction and Urban Management Section. Funds to manage the water supply and

sanitation and organizing the waste disposal during the construction period is provided the district from the Project budget.

Implementing agency:

- District Construction and Urban Management Section

#### ***4.3.3 Traffic and Pedestrian Control and Management***

The contractor will be responsible for following standard safety procedures and regulations regarding noise and dust pollution, such as regulating working hours for heavy machinery, signposting and watering of roads in inhabited areas). However, there is a need for further measures relating to general awareness and monitoring especially in areas with many spontaneous camp followers where population density will be relatively high, but also all along the national road to Thanh My town with many villages located along the road.

The following measures have to be carried out:

1. Development of traffic regulations and monitoring to be implemented in the Project Construction areas.

Implementing agency:

- Construction Contractor

2. Implementation and monitoring carried out in coordination with scheduling of vehicle movements, etc.

Implementing agency:

- Construction Contractor

3. Road safety programme for village schools along the national road and the inter-communal school in Ca Dy, as well as schools in Thanh My town. This is integrated into the ordinary school curricula.

Implementing agency:

- District authorities IEC group as suggested in the Public Health Action Plan (PHAP) given in Part I of this Report.

4. Traffic Safety Regulation Programme for the Project has to be developed for the entire areas from the access road along the transportation roads (National Road 14D).

Implementing agency:

- District authorities and IEC group

#### ***4.3.4 Conflict Management and Resolution***

People with different socio-cultural background, perceptions, values and habits will meet around the Project construction. A range of conflicts may occur between villagers and construction workers and/or camp followers. The situation of multiplied population, new habits and gender imbalance will potentially increase domestic conflicts and disputes between villagers as well. Conflict avoidance and early resolution at an informal level is of first importance, but when disagreements cannot be solved, conflict management should be targeted to avoiding escalating conflicts. Early recognition of a potential conflict is important, as well as an early resolution in a way that is acceptable for the conflicting parts.

Measures to prevent and mitigate various negative social effects from the construction are all also aimed at avoiding conflict appearance. Added to this, specific capacity building in conflict management will be provided for the villages of Thon Vinh and Pa Toi as well as for the local police. The existing local conflict management system includes the village leaders negotiating an

agreement with the conflicting parties. If a solution cannot be achieved at village level, the conflict is taken to the Commune's Party Leader who is the person legally managing conflicts in the Commune. If a conflict still has not been settled, the next judging body is the DPC, followed by the Province Court.

The local level conflict management bodies and the local police have to be strengthened through capacity building in conflict management. Moreover, the traditional conflict management body has to be made more gender balanced and at least one female village representative and a female commune level representative have to be added to the conflict resolution group. The constructor company is required to appoint a representative for resolving any conflicts arising between the workers and the local population.

Implementing agency:

- A local conflict management group will be set up, consisting of the traditional conflict management bodies with village leaders, added with female representatives and the local police, and the construction company representative (at any instance of conflict with the workers and the local population)
- NGO will coordinate and support the group with capacity training in legal or any other appearing issues needed throughout the construction period
- NGO will monitor the conflict appearance and management situation throughout the construction period

Conflict management and grievance procedures concerning the reservoir area resettles are accounted for in Volume 1 Chapter 6 of the REMDP and therefore not included in the Construction Phase Social Management Plan.

#### ***4.3.5 Human Trafficking Prevention and Management***

During the Project construction a lot of people will be moving around in the areas close to the Construction sites and along the national road 14D. Traffic and the number of passers by will increase as well. New karaoke and drinking bars and restaurants will be set up in the area. Main part of the new people will be male workers. The fact that the area lies only some 30 km from the border, and that the national road leads over the border to Laos might increase the risk of trans-boundary trafficking, both of women from Laos and women and children from Vietnam to Laos.

There will be a demand for female waitresses and for sexual services. Local women and girls, but also children of both sexes risk to fall prey for sexual exploitation and other trafficking activities. The vulnerable groups and risks can be expected to be the following:

- Local unmarried girls who are persuaded into a relationship and risk to be later abandoned when the male worker leaves the area (several single Co Tu mothers have been left in the roadside villages after the national road construction workers).
- Women and children walking along the national road outside the villages run a risk of being kidnapped or abused.
- Local women and children, especially young girls can be manipulated to sexual relationships. Unaccustomed to handling cash, they run a risk of being tempted to selling sex.
- Local women and children who can be spontaneously violated.
- Local and migrant women working in the shops, bars, cafés etc. run increased risk of all kinds of abuse and trafficking. This is also the most exposed group for STDs.

To prevent the increasing risk of STDs and trafficking and ensure the security of women and children the measures required from the Construction Contractor are listed in Section 4.2.1 above.

The specific measures and capacity training to be implemented by a national consultancy firm, District authorities and local organizations are the following:

1. Community information campaigns. All members of local communities will be informed of the risks of trafficking, illegality of different activities and women's legal rights. They will also receive adequate information on the national labour and wage regulations. This information will be coordinated with information campaigns on STDs, HIV/AIDS and other health issues as proposed in the PHAP. Information meetings will be arranged separately for different target groups; men, women, children, young girls and young boys.

Implementing agencies:

- The health related information: the District Preventive Health Centre, CHC staff and female Village Health Workers.
  - Trafficking, legal issues and women's rights: An national consultancy firm. The national consultancy firm will also be responsible for supporting the district and local bodies with information and capacity building in AIDS, STDs and other health issues
  - The national consultancy firm is required to provide the local communities with adequate information and advice on the national labour and wage regulations
2. Information campaign for relevant District Sections staff, DPC and CPC members in Zuoih, Cha Val, Ta Bhing, Ca Dy and Thanh My town concerning trafficking, women's situation and rights, STDs and potential conflict situations prevention and management.

Implementing agency:

- National consultancy firm
3. Capacity building and increased staff resources for the local police to control and reduce the illegal activities. Training of female police officers.

Implementing agency:

- District police authority with capacity training from the provincial level
  - The national consultancy firm will be responsible for capacity training of the police on trafficking and sexual exploitation of women and children
4. Strengthening of the District Women's Union and its local representatives in commune and village levels in Ta Bhing, Zuoih, Ca Dy and Thanh My town. Awareness raising of risks and mechanisms of trafficking and STDs, women's legal rights, and capacity building to support vulnerable persons in risk and persons that have fallen victims for sexual exploitation and trafficking.

Implementing agency:

- A national consultancy firm in cooperation with the Province WU and other relevant organizations like the District Preventive Health Centre
5. Strengthening the District Preventive Health Centre through capacity building to give assistance to women and children who have fallen victims for sexual abuse or other trafficking activities.

Implementing agency:

- National consultancy firm
6. Village level monitoring programme for following the development of possible "social evils" including trafficking regularly during the whole construction period. Capacity building for the VHWs, selected male and female villagers, local police and local organizations to provide

regular information and act as a “social evils” management group.

Implementing agency:

- National consultancy firm in cooperation with
- The District Preventive Health Centre, which will also be responsible for implementing any measures that might be needed to mitigate upcoming situations

The national consultancy firm will have a coordinating, supervising and supporting function.

#### 4.3.6 Public Health Management and Development

The Song Bung Project Areas are today rather isolated and the Co Tu people there are living in their own communities with their own culture. When the outside world will come closer with new roads, new information channels, new life styles and new resources people will be indirectly affected and their traditions and habits are challenged. The new situation will affect the well-being of the local people. Life style related ill health may increase in the area as well as the “social evils”.

There is an increased risk that the arriving people for the construction phase will bring in diseases that have not been found in the area or have been under control. One is HIV-AIDS. Traffic accidents and water-borne diseases may also affect the people close the construction areas.

More pressure will be put on the local authorities that have to manage the new project and integrate the project into the local planning and budgeting system. The pressure will also increase on the local health services. They have to take care of the construction workers and the camp followers in case of health emergencies. Then health care resources are taken from the ordinary health care for the local people.

**Table 9: Potential indirect health hazards for local people.**

	Construction	Operation
Poverty related diseases	+	+
Child health	+	+
Maternal health	+	+
Sanitation and water born diseases	++	+
Accidents and injuries	++	+
Nutritional disorders	+	+
Infections including vector born	++	+
Sexually transmitted diseases	+++	+
Psychosocial ill-health	++	++
Life style related ill health	+++	+

To manage the increasing health risks and negative health effects both during and after the construction phase, the focus of the Public Health Action Plan for Song Bung 4 Project (Part I of this Report) is on capacity development of the local health staff and increased health awareness among the local people in the Song Bung Project Areas. The following actions will be undertaken:

1. **Increased health capacity building:** The provincial health authorities are prepared to technically support a core trainer group in the Nam Giang District. More specifically, this relates to training in active learning methods, need based training assessment and local training management. This district core trainer group would then be prepared to take on regular re-training of local levels health workers according to the local needs. Related to the health workers in the construction area the training could be focused on priority health

issues like accident and injury prevention, sexually transmitted diseases and life style related ill health.

2. ***Improved health awareness:*** The provincial health authorities are also prepared to support a district core group related to health information and communication to the local people. The aim would be to increase the awareness towards the increased health risks in the construction area.
3. ***A local “social evils” management group:*** The provincial authorities suggest a support to the District Preventive Health Centre with regards to stricter supervision of ill health related to “social evils”. A local “social evils” management group will be set up including the important local actors as health workers, police, mass organizations etc.
4. ***Safe community development:*** Consideration will be given to how to make the whole construction area into a safe community area. This means that the local level has to set up an inter-sector management group with all important local actors. The group has to look at the safety risks, make priorities and take actions against the increased risks in the area. The international Safe Community Network is a collaborative WHO centre with the secretariat at Karolinska Institutet in Sweden. Vietnam has been developing Safe Communities since 1996 and the first communities will be certified at the end of this year.

#### 4.4 Implementation

Implementation of the Construction Phase Social Management Plan is based on utilising and strengthening the existing knowledge, capacity and resources of the district, commune and village level organisations. When training for capacity building is found at the province level, it is utilised. In matters where the existing capacity in district and province levels is known to be insufficient, a national consultancy firm with experience from working in the Project area will take responsibility for organizing, supporting and supervising the implementation of activities.

##### 4.4.1 Supervising and Facilitating

A national consultancy firm will be contracted to coordinate and supervise various planned activities and provide support for the local communities and implementing organizations. The activities include:

- Support community information campaigns on trafficking and women’s legal rights in cooperation with local organizations. Provide implementing agency with knowledge and capacity training.
- Provide the local communities with information on national labour and wage regulations.
- Support the Women’s Union at district level, involving the commune and village level WUs. Organize capacity building of WU to do awareness raising work concerning the risks and mechanisms of trafficking and STDs, women’s legal rights, and to be able to support vulnerable persons in risk.
- Supervision and supporting of the village level monitoring program of “social evils” and the “social evils” management group consisting of the villagers, local organizations, local police and VHWs.
- Capacity building of the District Preventive Health Centre and WU on capacity building to give assistance to women and children who have fallen victims for sexual abuse or other trafficking activities.

##### 4.4.2 Capacity Building and Support for Local Organizations

Capacity building for different bodies and organizations is needed for the implementation of the planned social mitigation measures. The capacity building and other strengthening measures vary

for the different groups. The target groups and their need of information, training and capacity building are listed below.

- District Preventive Health Centre: Supporting women and children who have fallen victims for sexual abuse or other trafficking activities. Other capacity building measures are included in the PHAP. Organizing body: The national consultancy firm
- District Women's Union and its local representatives in commune and village levels in Ta Bhing, Zuoih, Ca Dy and Thanh My town: Knowledge about the risks and mechanisms of trafficking and STDs, women's legal rights, and ability to support vulnerable persons in risk and persons that have fallen victims for trafficking. Organizing body: The national consultancy firm.
- Local police: Conflict prevention and management, risks and prevention of "social evils" including trafficking. Recruiting and training of female police officers. Organizing body: District and province policy and legal units and the national consultancy firm.
- Village Health Workers in Ta Bhing villages: Monitoring of "social evils". Organizing body: The national consultancy firm and District Preventive Health Centre.
- Village conflict management groups in Thon Vinh and Pa Toi villages: Conflict prevention and management. Capacity training coordinated by the national consultancy firm.
- Selected male and female villagers in Ta Bhing villages: Monitoring of "social evils". Organizing body: The national consultancy firm and District Preventive Health Centre.

#### 4.4.3 *Physical Infrastructure for the Implementation*

Most of the activities to prevent and mitigate the upcoming social and health problems during the construction phase are managed from the existing district and local organizations' localities. The contracted national consultancy firm will work in close cooperation with both RMIU-ATD3 and with the different authorities. The national consultancy firm will be guaranteed office space and equipment in the RMIU office in the Nam Giang District Town and access to transportation vehicle when needed for work in the villages.

## 5 RESETTLEMENT AREAS CONSTRUCTION PHASE SOCIAL MANAGEMENT MEASURES

Reservoir resettlement areas will be constructed in four different areas in Zuoih Commune. The present village of Pa Pang is located on the spot and the villages of Thon 2 and Pa Dhi in the vicinity of the planned resettlement villages and the new road infrastructure. These three villages will be affected of the presence of the construction workers and construction activities in the area during a limited time, approximately 3–9 months depending on the location. Due to the remoteness of the area and the short construction period the number of spontaneous camp followers is presumed to be minor. The potential negative social impacts of the male workers staying in the area during the construction period are expected to be mostly felt by Co Tu women and girls that may be abused by the workers, and the following conflicts. The following two preventive actions will be taken:

- Workers camp will be located in Bo Di close to the national road with daily transportation of the workers between the camp and the respective construction site. Implementing agency: Construction Contractor.
- Information campaign with leaflets and awareness raising participatory meetings on unexpected pregnancies, STDs, HIV/AIDS, trafficking and drugs is to be organised targeted to all the villagers with separate meetings for men and boys and women and girls. Implementing agency: District Preventive Health Centre, CHC staff and Village Health Workers involved, supported by the national consultancy firm.

## 6 IMPLEMENTATION SCHEDULE AND BUDGET

All the preventive measures have to be implemented in the onset of the construction period. This applies to measures at the workers camps and camp followers areas, community information campaigns, strengthening of the local police, training of the village level organizations, and capacity building of the district level authorities and organizations. Information campaigns will be repeated during the third year of the construction and will have both a reminding and a follow-up function.

Follow-up and monitoring of conflict management, trafficking and “social evils” will be done continuously during the whole construction period and special mitigation measures will be provided whenever needed.

Budget for the Construction Phase Social Management Plan is provided in Table 10 below. Items 1, 2 and 3 will be required to be part of the contractor’s contract, and Item 4 will be covered by the JFPR grant.

Table 10: Budget for Construction Phase Social Management Plan

	Item	Unit Cost US\$	Unit	No. of Units per year				Total No of Uni	Cost US\$ per year				Total
				2008	2009	2010	2011		2008	2009	2010	2011	
<b>1</b>	<b>Settlement planning and regulation</b>												2 000
1,1	Survey and mapping of settlement and business areas - Plan	1500	1	1				1	1 500				1 500
1,2	Issuing of settlement and business certificates	500	1	1				1	500				500
<b>2</b>	<b>Water supply, sanitation and waste disposal</b>												10 000
2,1	Survey and design of required WSS and waste disposal facilities	1000	1	1				1	1 000				1 000
2,2	Construction of required WSS and waste disposal facilities	5000	1	1				1	5 000				5 000
2,3	Support to management and operation of WSS and disposal facilities	1000	1	1	1	1	1	4	1 000	1 000	1 000	1 000	4 000
<b>3</b>	<b>Traffic and pedestrian control and management</b>												7 100
3,1	Development of traffic safety regulation programme	1500	1	1				1	1 500				1 500
3,2	Information campaigns, material	1000	1	1		1		2	1 000		1 000		2 000
3,3	Road signs	1000	1	1				1	1 000				1 000
3,4	Staff salaries	100	1	2	1	2	1	6	200	100	200	100	600
3,5	Safety program for schools	1000	1	1		1		2	1 000		1 000		2 000
								-					-
<b>4</b>	<b>Community Social Stability</b>												5 120
4,1	Local conflict avoidance and management training	320	1	1	1	1	1	4	320	320	320	320	1 280
4,2	Labour law and workers' rights	320	1	1	1	1	1	4	320	320	320	320	1 280
3,3	Risk of trafficking and sexual exploitation	320	1	1	1	1	1	4	320	320	320	320	1 280
3,4	STDs, HIV/AIDS	320	1	1	1	1	1	4	320	320	320	320	1 280
3,5	Capacity building of Women's Union	200	1	1	1			2	200	200			400
3,6	Capacity building of District Preventive Health Centre	500	1	1		1		2	500		500		1 000
3,7	Community information campaigns	100	1	9		9		18	900		900		1 800
	Conflict management Ta Bhing	200	1	1	1			2	200	200			400
	<b>TOTAL</b>												24 220