

VOLUME 4 – CHAPTER 10

CONSTRUCTION PHASE SOCIAL MANAGEMENT PLAN

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10 CONSTRUCTION PHASE SOCIAL MANAGEMENT PLAN

10.1 INTRODUCTION

10.1.1 The Requirement for a Plan

The construction of the Nam Theun 2 Project will involve the employment of approximately 3600 workers over a 58-month period of construction. Provisions for housing and services as well as health and safety measures for workers within camps and on project sites is addressed in the Head Construction Contractor's and sub-contractors' agreements in accordance with the Concession Agreement and Lao law. However, it is expected that there will be a number of camp followers and service providers that will impact communities and areas adjacent to or nearby project camps. The prediction is that a large number of this influx population will be female spouses and service providers. It is expected that 2-3 times the worker population, largely male, will enter the area during the construction period, that is anywhere from 7-10,000 additional people. These assumptions are based on previous experience with large infrastructure projects in Lao PDR and are detailed below in this chapter.

A plan is required to mitigate, reduce and/or offset any additional impacts such 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 human trafficking. In addition, there is a need to assist local GoL organisations 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 WB and ADB policies, providing mitigation for indirect project impacts (population influx and camp followers) on communities in the vicinity of project camps and incorporating gender planning.

10.1.2 Objective of the Plan

The main objective of the plan is to propose suitable mitigation measures for the impacts of camp followers and related impacts on communities in the Nam Theun 2 Project Area. The plan needs to create a balance between providing necessary mitigation in order to create temporary and reasonable living conditions for camp followers but at the same time to control the scale of impacts by discouraging population influx. The plan also must address the heightened concerns of permanent residents of impacted areas, especially women, about the influx creating security and health concerns. These points imply that provisions should be 'adequate' in terms of standards for camp followers and take into consideration the needs of surrounding communities.

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

- The HCC 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, so that the general health of camp followers does not affect the health of workers or nearby communities.
- Local organisations involved in urban planning, enforcement, and monitoring of health and social impacts are ensured adequate training, personnel, technical assistance and support funds to plan, 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 trafficking in people and employment of minors, are quickly discouraged and heavily penalised, including the consequences of job loss and repatriation.

10.1.3 Outline of the Plan

This chapter is divided into the following sections:

- Description of existing conditions and trends related to demography and employment (baseline)
- Project description and impacts of camps and related construction activities, including the workforce requirements and potential impacts on services and communities in the project area
- Three mitigating measures:
 - Direct workforce local labour recruitment policy

- Social management of potential risks associated with spontaneous camp followers
- Human trafficking management and monitoring plan

The basic methodology for constructing the needs and plan was to analyse the existing socio-economic environment and then consider how the local sub region might change without the influence of the proposed Project. The spatial allocation of the non-local component of the work force was calculated using research conducted on other large projects in the same region of Lao PDR and also fieldwork conducted in the local study area during July and October 2004. In December 2004, gender impacts were factored into the overall plan. Impact analysis of the proposed development was then completed.

10.1.4 Terminology

Terminology used in the subsequent Sections has been defined below:

Local Component of the Workforce: Existing residents of the primary impact area who do not relocate to work on the project.

Non-local Component of Workforce: Those persons either Expatriates or Lao who move into and live permanently in construction camps in the primary impact area as a result of the project.

Commuters and workweek commuters: Those persons who live outside the primary impact area but commute on a daily or weekly basis to the site(s).

Economic Base: A region's economic base consists of those economic activities that involve sales to individuals or firms located outside the region, thus giving rise to inflow of money from non-local sources. An industry that is part of this economic base activity is considered a "basic" or "export" industry. All other industries make up the "service" or "local" activity since their output is consumed within the local region. This dichotomy of the entire economy can be contrasted with the input-output approach to regional analysis that uses a three-way division of individual industries. This division is known as the direct, indirect (production induced) and induced components (consumption induced) of an industry.

Camp Followers: Spontaneous camp followers are part of the multiplier service (indirect component) that provides services to the direct construction workforce by setting up facilities in a random disorganised ribbon in the vicinity of work camps. Services offered can vary from food and retail products to sale of NTFPs to massage and prostitution

Trafficking: There is no universal definition of trafficking. The working definition of trafficking as suggested by the Regional Conference on Illegal Labour movements: the Case of Trafficking in Women and Children:

“Trafficking is the movement and /or transportation of persons by others using violence or threat of violence, abuse of authority or dominant position deception or other forms of coercion for the purpose of exploiting them sexually or economically for the benefit or advantage of others such as recruiters procurers, traffickers, intermediaries brothel owners and other employers, customers or crime syndicates”.

Examples of the purposes of trafficking include, but are not limited to, the following:

- Prostitution
- Domestic work
- Illegal labour
- Bonded labour
- Servile marriage
- False adoption
- Sex tourism and entertainment
- Pornography
- Begging
- Use of “criminal activities”

10.1.5 Relevant Nam Theun 2 Policy and International Conventions

10.1.5.1 Labour Policy

The NT2 Concession Agreement stipulates in Schedule 18 that a Lao Labour Preference Plan is to be prepared by the HCC which offers 100% of unskilled jobs to Lao Nationals and a majority percentage of semi-skilled jobs as set out in the Schedule, subject to the local market being sufficient. Under the Concession Agreement, NTPC warrants that the Head Contractor will prepare a number of management plans, including a Construction Camp Management Plan. NTPC and GOL are to work together to prepare a Spontaneous Resettlers Plan. To date these two documents have not been finalized; however, this chapter provides a basis for the plan. All plans will incorporate gender-sensitive interventions with regards to recruitment, worker safety and health, camp facilities, and camp followers. As a social and gender safeguard, HCC and related companies will set up and enforce a NT2 Workers' Code for Appropriate Behaviour (signed by all employees), with a dismal clause for violation. (See 1.6.3.)

10.1.5.2 Construction and Spontaneous Camp Management Plans

Instructions from the Khammouane Resettlement Committee – 'Social Order Management and Small Trade during the Nam Theun 2 Project Construction Period' (No.257/RC.KM), dated 26 November 2004 addresses the issue of camp followers and provides a management framework. This document identifies target groups and estimates the number of people to be covered as well as methods for managing population movement through the issuing of identity cards, certificates and other official documents. Technical assistance is recommended in this plan for upgrading enforcement procedures and details on penalties.

10.1.5.3 Trafficking Treaties and Conventions

Lao PDR is a party to several international treaties that include provisions on trafficking. Article 6 of the Convention on the Elimination of All Forms of Discrimination against Women commits parties to take "all appropriate measures, including legislation, to suppress all forms of traffic in women". Article 35 of the Convention on the Rights of the Child requires parties to take "all appropriate national, bilateral and multilateral measures to prevent the abduction, the sale of or traffic in children for any purpose or in any form". Lao PDR is also a party to the Convention for the Suppression of the Traffic in Persons and of the Exploitation of the Prostitution of Others.

At the bilateral level, Thailand and Lao PDR recently signed an MOU on labour migration, but there is no MOU on trafficking (though the Thai-Cambodia MOU on trafficking provides a model. At the national level, there's no anti-trafficking law as such, but several provisions of the Penal Code address trafficking-related offences such as trade and abduction of humans, rape, pornography, prostitution and procurement for prostitution, forced labour, child labour, and heavy or dangerous work for women.

In October 2004, Laos signed a Memorandum of Understanding (MOU) with five other Mekong Region countries spelling out areas of practical cooperation to address human trafficking including:

- The creation of a network for repatriation of victims
- Building similar networks between special police units
- Improvement of Extradition Procedures
- Preventative measures

The signing was regarded as part of the Coordinated Mekong Ministerial Initiatives against Trafficking (COMMIT).

10.2 BASELINE CONDITIONS

10.2.1 Definition of the Study Area

The area can be described in general terms as being Khammouane Province and a smaller portion of Bolikhamxai Province in Central Lao. More specifically for the impact analysis, two geographic levels of analysis are referred to in the text. One covered an area within a four District Area which approximates 60 minutes travelling time (approximately 80 km) of the site which is referred to as **the primary impact area (the local workforce catchment area)**. This area includes some parts of Khamkeut District in the adjoining Province of

Bolikhamxai and the Districts of Nakai, Gnommalath and Mahaxay in Khammouane Province. This area will experience the most visible direct negative social and physical impacts.

The second refers to the wider sub region (**secondary impact area**), which includes the major centre of Thakhek and Xe Bangfai District. (Thakhek is 1 hour and 15 minutes travelling time to Oudomsouk township of Nakai District and 45 minutes from the Gnommalath in which the main construction camps for the project are located. The economic base of this area is much more diverse. Some direct employment will be generated from this area. As well the project will tend to have significant indirect and induced positive effects brought about by servicing the construction site(s) but with less visible physical negative effects.

10.2.2 Sub-Regional Trends in Population

Table 10-1 shows the sub-regional trends in population in the primary and secondary impact areas and Khammouane Province as a whole. In the seven year period 1995-2002, population has grown by 2.04% per annum at the Provincial Level and at a similar rate in the secondary impact area. This has been mainly affected by the more urban Districts of Xe Bangfai and Thakhek in which household size has slightly decreased during the 1995-2002 period. In contrast in the primary impact area the population has significantly exceeded the Provincial rate of 2.04%; Nakai, Gnommalath and Mahaxay have growth rates of 2.30%, 2.46% and 3.00%, respectively. As can be seen in the Table 10-1, average household size in the average household size in the three primary impacted districts rose from 5.2 to 5.4.

Table 10-1: Sub Regional Population Trends Primary and Secondary Impact Areas and Khammouane Province, 2002

| | Nakai | Gnommalath | Mahaxay | Xe Bangfai | Thakhek | Secondary Impact Area | Khammouane Province |
|------------------------------------|--------|------------|---------|------------|---------|-----------------------|---------------------|
| Men | 7,614 | 10,307 | 11,123 | 9,514 | 33,190 | 71,748 | 132,417 |
| Women | 8,021 | 11,300 | 11,859 | 10,348 | 35,242 | 76,770 | 140,046 |
| Population (1995) | 15,536 | 21,607 | 22,982 | 19,862 | 68,432 | 148,419 | 272,463 |
| Population (2002) | 18,217 | 25,612 | 28,261 | 23,114 | 75,549 | 170,753 | 313,927 |
| Growth Rate /Yr 2002/1995 | 2.30% | 2.46% | 3.00% | 2.19% | 1.42% | 2.02% | 2.04% |
| Illegal Workers to Thailand (2000) | 0 | 3 | 34 | 289 | 270 | 596 | 3,847 |
| Density Per Km2 | 4 | 15 | 10 | 21 | 75 | 25 | 17 |
| Total Households (1995) | 2,877 | 4,276 | 4,355 | 3,522 | 12,174 | 27,204 | 49,216 |
| Total Households (2002) | 3,309 | 4,889 | 5,246 | 4,182 | 14,152 | 31,778 | 55,393 |
| Average Household Size (1995) | 5.4 | 5 | 5.2 | 5.6 | 5.5 | 5.34 | 5.5 |
| Average Household Size (2002) | 5.5 | 5.2 | 5.4 | 5.5 | 5.3 | 5.4 | 5.7 |

Note: Nakai Gnommalath & Mahaxay Primary Impact Area Khamkerd District in Bolikhamxay will be affected by the Nakai Dam Site Construction.

10.2.3 Employment Structure

Data from the 1999 Agricultural Census (see Table 10-2) show that most employment in the primary impact area is based on the agriculture and livestock industries. Table 10-2 shows agricultural employment in the primary impact area to total 30,031 workers. At least 50% of agricultural workers are women and 23% of the households are vulnerable. Also of importance is the severe unemployment and underemployment within the agricultural workers group, with very high percentages of people working less than 6 months per year. The share of

agricultural workers declines significantly in Thakhek due to its primary function as a service centre for the surrounding sub-region. The number of agricultural workers available for employment in the primary impact demonstrates that there is a more than adequate supply of unskilled labour available locally. This potential workforce is to be given preference in recruitment policy to the extent that they are qualified.

Table 10-2: Population and Employment Primary and Secondary Impact Areas and Khammouane Province, 2002

| | Nakai | Gnommalath | Mahaxay | Xe Bangfai | Thakhek | Secondary Impact Area | Khammouane Province |
|---|--------|------------|---------|------------|---------|-----------------------|---------------------|
| Population (2002) | 18,217 | 25,612 | 28,261 | 23,114 | 75,549 | 170,753 | 313,927 |
| Total Households (2002) | 3,309 | 4,889 | 5,246 | 4,182 | 14,152 | 31,778 | 55,393 |
| Average Household Size (2002) | 5.5 | 5.2 | 5.4 | 5.5 | 5.3 | 5.4 | 5.7 |
| Vulnerable Households (Very Low Income) | 761 | 1,124 | 1,207 | 962 | 3,255 | 7,309 | 12,740 |
| Urban % | 6.1 | 1.1 | 5.1 | 12.1 | 37.7 | 12.42 | 15 |
| Number of Agricultural Workers* | 7,655 | 11,937 | 10,439 | 10,505 | 23,517 | 64,053 | 127,424 |
| % Population Working in Agriculture | 42 | 47 | 37 | 45 | 31 | 38 | 41 |
| Work <1 Hour/Day % | 57 | 53 | 34 | 34 | 38 | 43.2 | 40 |
| 1-5 Hours/Day % | 9 | 26 | 30 | 35 | 33 | 26.6 | 33 |
| > 5 Hours/Day% | 3 | 1 | 3 | 2 | 3 | 2.4 | 4 |
| Work 9-12 Months/Year% | 38 | 9 | 0.2 | 1 | 0.3 | 9.7 | 8 |
| 6-8 Months/Year % | 21 | 44 | 63 | 37 | 34 | 39.8 | 50 |
| < 6 Months/Year % | 41 | 48 | 37 | 62 | 65 | 50.6 | 43 |
| Holdings Using Outside Labour % | 14 | 15 | 7 | 34 | 35 | 21 | 26 |

Source: Agricultural Census 1998-1999. * These figures do not include Khamkeut District.

10.2.4 Local Population Centres in Site Vicinity in Khammouane Province

The two largest population centres affected by the larger construction sites are Oudomsouk in Nakai District and in the Gnommalath District. For Oudomsouk there will be a large camp inside the current town boundary. The township population in 2002 was estimated at 1490 made up of 280 households. There is no current urban plan for the township and the current development generally follows the main roads in the ribbon development pattern typical of Laos and many other South East Asian countries. Travelling time to Thakhek is approximately 1¼ to 1½ hours dependent on the type of transport.

Population in Gnommalath in 2002 was 1387 with 271 households. The largest camp will be located approximately 3 kms from the township to the south along Route 8b and there is a current plan to move the entire township to this same location over the NT2 construction period. An urban plan has been prepared by the Gnommalath District, and this shows a structure plan using the same land as the main construction camp. Travelling time to Thakhek – the nearest regional town is 45-55 minutes.

Both towns have education and health facilities (primary and secondary schools and District hospitals) but their ability to sustain large population influxes is extremely limited. All roads are unsealed and water and sanitation is basic with most houses using private or shared shallow wells and river water in the case of Gnommalath. It is important to note the very low provision of water and sanitation in Gnommalat, which is the location of the largest construction camp. Both towns have small markets that are well stocked with imported retail products but with very limited supplies of local agricultural produce. Food for sale at the markets sells out very quickly during the day. Food can also be purchased from noodle shops and there are two Vietnamese restaurants in Oudomsouk that cater to NT2 visiting personnel and service providers.

Both towns are particularly vulnerable to significant negative social impacts of the project. Accordingly the Social Development Plan and Spontaneous Resettlers Plan to be produced by NTPC and GOL and the Construction Camp Management Plan to be produced by the Head Contractor and his sub-contractors need to be agreed, coordinated and enforced. Many sub Contractors already have a significant presence on and around the vicinity of these towns. On the other hand, there is also an opportunity to employ numbers of local male and female workers who are generally underemployed or unemployed agricultural workers if they are qualified. These same people will also experience the social impacts arising from the interaction with the physical environment such as dust, noise, traffic and risks to current water supplies.

10.2.5 Population in Construction Site Vicinity Khamkeut District, Bolikhamxai Province

Data from the area of Khamkeut District (Bolikhamxai Province) that will be affected by the Project shows population growth rates of around 6% per year and total population in the section of the District from Lak Sao to the Nakai District boundary. It is generally higher than the more urban portions of both Nakai and Gnommalath (see Table 10-3). The data from this area is not complete so it needs to be interpreted carefully. It could be that the apparent high population growth is due to internal movement within the District rather than external influences. In such a situation there is potential for double counting from year to year. Some villages have been consolidated, either through spontaneous movement to roads and service centres or as part of a GOL focal zone strategy.

Table 10-3: Existing Population in the Vicinity of Lak Sao to Nakai District Boundary

| Village Name | Population | Households | Population | Households |
|---|------------|------------|--------------|--------------|
| Year | 1995 | 1995 | 2003 -04 | 2003 -04 |
| Lak Xao to Nakai | | | | |
| Namphao | 681 | 119 | 968 | 181 |
| Chengsavang | 118 | 23 | 765 | 120 |
| Nam Thi | | | 1,015 | 143 |
| Phontou | N/A | | | |
| Pounglao | N/A | | | |
| Phonxai | 210 | 34 | 439 | 74 |
| Ko Hai | | | 1,290 | 220 |
| Phonsouk | 1290 | 221 | | |
| Phonsi | 1290 | 222 | 433 | 88 |
| Phonsa at mai | N/A | | | |
| Phonkeo | N/A | | | |
| Phonsa at | N/A | | 1,016 | 172 |
| Pakkatan | 294 | 47 | 212 | 34 |
| Sop Hia (self-resettlement and in-migration by Tai) | 111 | 16 | 551 | 83 |
| Total | 3,994 | 2,677 | 6,689 | 1,115 |
| Growth Rate | | | 6.66% | 6.34% |

Lak Sao has very limited carrying capacity to absorb any increases in population and has virtually no services except secondary schooling and a District Hospital.

The main trend suggested is that people moved towards the main road, Route 8 and the population density along this road has grown significantly from 1995 to 2003/04. Taking into account that the population growth in Laos is 2.2 % per annum (*Human development Indicators, UNDP 2003*) for this period, the regional population growth in the survey appears to be higher. It has been suggested that there has been a significant in-migration into the area during this 8-year period, and that many new tenants have settled along Route 8. One reason suggested for this is the accessibility to markets, because Route 8 has been upgraded several times and is now considered as a secure link to markets in other regions, including Vietnam. Current access to Oudomsouk is closed during the wet season so the most likely means of servicing the construction at the Nakai dam site initially is from the Lak Sao area.. Services in the Lak Sao area are of higher standard than in Oudomsouk and Gnommalat but still not of suitable standard to cater to the needs of a large incoming workforce. Accordingly those internal service needs will need to be imported from further afield as part of the sub-contractor's responsibilities for camp management. Travelling time from Vientiane to Lak Sao is presently approximately four hours.

10.3 PROJECT DESCRIPTION AND IMPACTS

10.3.1 Construction Schedule

As nominated in the Concession Agreement, some preliminary works have already started before Financial Close. These include the construction of the access road from Road 8B to the site of the Nakai Dam, the upgrading of existing roads to provide access to the construction camps and work sites. Also, further roadwork to the Residence Nam Theun, excavation of the Power Station site, access and drainage tunnels, and campsite construction have commenced.

The construction of the Nakai Dam, saddle dams, headrace channel, inlet works, tunnels and shafts, power house, tailrace channel, regulating dam, downstream channel, Transmission Lines, substations, plant will be initiated after Financial Close.

The Nakai Dam is scheduled to be completed within 38 months. The mechanical and electrical installations will proceed as soon as possible in conjunction with the completion of the power station civil works. The total construction phase for the Project, including commissioning, is estimated to be 54 months from Financial Close. Commissioning, testing and acceptance under the EGAT PPA are scheduled to commence 46.5 months after Financial Close.

The critical dates in relation to resettlement are (i) construction of the coffer dam which is scheduled for completion beginning of the wet season approximately May-June 2006 (ii) the raising of the main Nakai Dam to a sufficient level to begin to impede the flow of the river in high flows more than the coffer dam in May 2007 and (iii) impoundment of Nakai reservoir at the beginning of the wet season in May-June 2008. Therefore all resettlement activities will be scheduled in relation to those key civil works activities.

10.3.2 Construction Contracts

Construction contracts will consist of five principal sub-contracts and one overriding Head Construction Contract (HCC). The HCC is to be undertaken by EDF. The Head Contractor is responsible for ensuring the timely construction of the Project and is liable for liquidated damages for any delays in completing the Project. The five principal sub-contracts are divided into two electromechanical packages (EM1 and EM2) and three civil works contracts (CW1, CW2 and CW3). EM1 includes the Power Station generating units and associated equipment, including the four Francis generating units, two Pelton generating units, mechanical auxiliaries, electrical auxiliaries, 500/115/22 kV substation equipment, SCADA equipment, telecommunications and workshop equipment and service facilities. EM2 includes the 500 kV double circuit, 138 km Transmission Line from the Project to the international border and the 115 kV single circuit 77 km Transmission Line from the Project to Mahaxai.

Four zones have been identified for the development of construction work camps within the Project area. These will accommodate a maximum construction worker population of approximately 4,200 (subject to confirmation by the HCC). These zones, from north to south are:

- Nakai Dam site to the north of Oudomsouk and the south of Lak Sao in Bolikhamxai Province

- Camp within Oudomsouk township
- Biggest camp at Gnommalat at the intersection of Route 8b and 12 b.
- Downstream area

There would also be smaller temporary camps at specific locations that have longer access times or technical reasons for keeping the workforce as close as possible to the work site. At the moment the largest other proposed campsite is for 30 personnel at the main Tunnel Portal Access. There is another proposed small camp for up to 5 workers at the Phou Pha Pheno Quarry.

Each of the main sites is now described in a little more detail.

10.3.3 Nakai Dam Site

This site is approximately 60 kms from Oudomsouk (currently by road to Talang and boat to the dam vicinity). It is approximately 20 kms from Lak Sao in Khamkerd District (Bolikhamxai Province) Physically the site was rated as having medium environmental sensitivity. The key features of the site, as they relate to the construction activities, are summarised below:

- The entire site is densely forested and is considered to have some biodiversity values because of the extent of vegetation on the site and adjoining land. The site layout has been developed to minimise vegetation-clearing requirements.
- The Nam Theun River forms the western boundary of the site. Measures to protect water quality have been considered in the development of environmental management measures for the site. A forest strip of 80-100 m along the river will be preserved from clearing.
- The southern part of the site slopes steeply to the Nam Theun River. Measures to control erosion and sedimentation in this area have been considered in the development of environmental management measures for the site.
- There is no residential or agricultural land use located on the site or nearby.

The closest town is Lak Sao in Khamkeut District and there is a plan to upgrade the roads from both north and south. This site will be the most remote site of the large camps from township or regional facilities and is considered to be at the highest risk of inducing spontaneous camp followers, without enforcement of the various plans

10.3.4 Oudomsouk Construction Camp

Overall, the site was considered to have low physical environmental sensitivity. The key features of the site, as they relate to the construction activities, are summarised below:

- The site is a relatively flat area and there are no drainage lines traversing the site.
- The site comprises cleared forest vegetation with a mixture of pine and broadleaved trees species. Most trees are less than 60cm DBH and the biodiversity values of the site are low. Notwithstanding, the extent of vegetation clearing has been minimised.
- There is a small area of acacia plantation in the north-east corner and the middle of the site. This area will be affected by the construction activities, but will ultimately be reinstated. There is no other agricultural land use on the site.

It has high social sensitivity. The nearest residential development is located to the NE of the site, where there is a group of about 20 houses with over 100 people living in the vicinity. The social impact of this camp is considered to be significant for these local people. During the dry season, there is a significant risk of air pollution from road dust as most of the residences front the main access road. Control of dust will be mitigated by water tankers during peak traffic times. There is also increased risk of traffic accidents, noise and amenity issues associated with an influx of high number of construction workers.

10.3.5 Access Tunnel Portal

Overall, the site has low to medium environmental sensitivity. The key features of the site, as they relate to the construction activities, are summarised below:

- The area that is the subject of a site-specific plan comprises four main elements:
 - Site of access tunnel portal excavation works
 - Internal access road alignment between the excavation area and the disposal areas
 - Permanent spoil disposal area
 - Temporary spoil disposal area (to be used while UXO clearing of permanent spoil disposal area takes place)
- Conditions at all areas are similar and consist of mainly disturbed areas with low-density tree and shrub coverage. There is no agricultural land use or built assets located in the areas that will be affected by the works.
- The access road generally follows the course of the Nam Katang River.

There is a gully/watercourse at the site of the tunnel portal excavation works that will require appropriate management to prevent erosion and sedimentation effects. This is a particularly sensitive social issue as it affects water supply and livelihoods downstream of the camp.

- The camp will be of limited size, providing temporary accommodation facilities to only few people (20 people at night time / 30 people at daytime).
- The sub- camp will be provided with sleeping areas, a basic kitchen/canteen, litterbins and basic shower areas.
- Storm water drainage channels will be constructed around the sub-camp.

10.3.6 Main Construction Camp Gnommalath

The site is 27 ha immediately adjacent to the intersection of Route 12b between Gnommalath and Nakai and Route 8b to Lak Sao.

Overall, the site has low to medium physical environmental sensitivity. The key features of the site, as they relate to the construction activities, are summarised below:

- The site is relatively flat and is traversed by a small drainage channel, which runs from the north and terminates in an intermittent swampy area in the SW of the site, which is used for rice paddies. This area is liable to flooding, but will not be affected by construction works. Another intermittent swamp area is located in the NW of the site. Measures to protect water quality in these locations have been considered in the development of environmental management measures for the site.
- Vegetation on the site is predominantly shrub land with scattered small trees. The site is considered to have low biodiversity values.
- There are scattered houses adjacent to the site and one house located within the site boundaries, although this will not need to be relocated by the construction works. The effects of the project on these houses will be managed through the implementation of air and water pollution control measures.
- The site has already been cleared and internal roads have been built.

From a social perspective the site is considered to be of high sensitivity. The area is within the designated boundary of the Urban Plan for the new planned township of Gnommalat. There is some on-going survey and preliminary construction of the new Education Department building immediately adjacent to the Italian Thai Layout and Gantry area to the east of the main construction camp. District and Provincial officials requested that the Construction Camp be placed in its present location as part of the long term development of this township. They have asked that the infrastructure to be built there be handed over to the District on completion of construction.

All plans for Water Supply and sanitation planning for the new town have been approved by GOL as part of the Preliminary Construction Activities agreed under the Concession Agreement. There is a potential opportunity for the host community's new town site to improve its quality of services in a coordinated fashion. Such planning would help to mitigate the potential social impacts generated by the construction activity to date.

10.3.7 Direct Workforce Impacts

Construction employment effects are normally short term with abrupt peaks and very rapid declines in the workforce. A construction workforce is generally highly transient and although total numbers of the workforce may appear stable, this may result from equal numbers of incoming and outgoing workers. This highlights the need for flexible and well-managed accommodation arrangements. Due to the size of the proposed workforce and the relative geographical isolation, construction camps will be necessary in the locations discussed in the previous section.

There has already been a preliminary-construction period of approximately 4-5 months and on-site personnel were recently reported by the HCC to number 700 persons. The post Financial Close construction period will be approximately 54 months in duration and commence in May 2005. The construction workforce is presently anticipated to build to a peak at about 3600 persons in month 36.

The various construction camps and essential on-site infrastructure will be completed in stages and some workforces who have already mobilised have been accommodated off designated sites in what are described as “temporary camps”. Other workers are now using the main camp at Gnommalath.

From a rapid rural assessment of the employers on the site, approximately 30 % of the jobs are currently being filled by residents from the primary impact area in October 2004. The majority of skilled labour and some semi-skilled categories to date have been drawn from outside the primary impact area and internationally.

It is anticipated that the construction workforce will adopt a 12-hour shift roster system that will allow extended periods of work, followed by breaks to allow workers living in Camps to return home. The particular rotation currently depends on each sub-contractors workers contract.

The combination of the direct workforce and camp followers will significantly increase the total population living within the vicinity of each camp for a period of up to four years. The estimated breakdown of the work force by source of labour and also those expected to require camp accommodation are shown in Table 10-4 and . This table takes into account of the local labour to be employed that are anticipated to commute to the site on a daily basis. Local workers to be employed in each of the components of the project in Nakai, Gnommalath and Mahaxay Districts would generally be recruited from within the three Districts. Those recruited in the early phases of the work program for the Nakai Dam Site would generally tend to be recruited from the North (Khamkeut District) due to poor existing accessibility between Oudomsouk and Lak Sao.

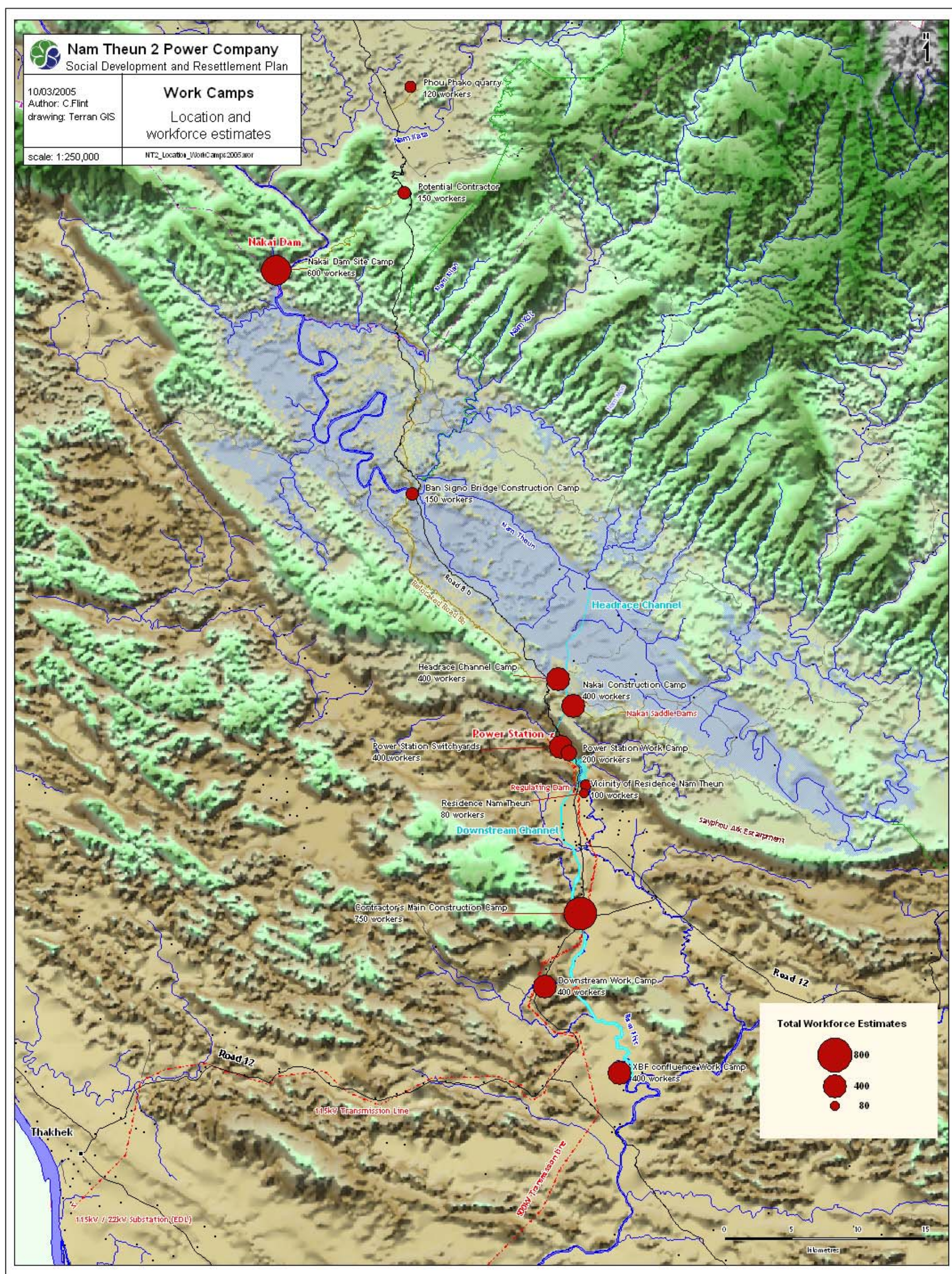
In the future, Workforce Planning Estimates and Detailed Workforce Summaries will need to present gender-disaggregated data in order to set Gender Balance Targets for various types of work, to afford women new work opportunities, to avoid gender discrimination in wages, and to accommodate the living needs of women workers. It is noted that the majority of women in the Lao PDR and surrounding countries already perform hard labour tasks in the course of being subsistence farmers or working in industry and construction. Therefore, the opportunity to gain a good wage for the same hard labour should not be denied to them due to sex. Furthermore, gender-mixed workforces tend to decrease social tensions and risky behaviour among workers.

Table 10-4: Direct Construction Workforce by Source of Labour at Peak (Estimated)

| No. | Contract | Camp Location | Works Sites Focus | Approximate Duration | Workforce Estimates | | | | Comments |
|-----|------------|--|---|----------------------------------|---|---------|----------------|-------------|----------|
| | | | | | Total Average | Foreign | Lao (Regional) | Lao (Local) | |
| 1 | HC | “Residence Nam Theun” (operator’s village), located approximately 4km north of Gnommalat | Overall project management and operation | 06/2004 – end Operating Phase | 80 | 72 | 4 | 4 | |
| 2 | CW1, 2 & 3 | “Contractor’s Main Construction Camp” for civil works, located at the Intersection of Routes 8B/12, approximately 5km south of Gnommalat | Power station, switchyards, tailrace channel, regulating pond and dam, downstream channel and roads | 06/2004 - end Construction Phase | 700 CW personnel, plus 40-50 HC personnel | 225 | 450 | 75 | |
| 3 | CW1 | Phou Phako (Pha Phen) Quarry work camp, located approximately 15km south of Lak Sao | Phou Phako Quarry | 06/2004 – end Construction Phase | 120 | 36 | 72 | 12 | |
| 4 | | Potential contractor work camp at Ban Phónkéo - indicative location provided in Concession Agreement, Construction Phase Land Area, Map 1, Dam Site Area | Road 8b, dam site access road | 11/2004 – 03/2008 | 150 | 45 | 90 | 15 | |
| 5 | | “Ban Signo Bridge Construction Camp” construction camp located at Ban Talang, Nakai District | Ban Talang (Signo) Bridge | 10/2004 – 05/2007 | 150 | 45 | 90 | 15 | |
| 6 | | “Nakai Dam Site Camp” located upstream of the dam site on the right bank of the Nam Theun | Nakai Dam | 12/2004 – 04/2008 | 600 | 180 | 360 | 60 | |
| 7 | | Near the headrace channel in Oudomsouk – indicative location provided in Concession Agreement, Construction Phase Land Area, Map 3, Downstream Area | Headrace channel, saddle dams | 11/2005 – 04/2008 | 400 | 120 | 240 | 40 | |
| 8 | | Downstream Work Camp, Ban Phit (roadside hamlet) | Downstream Channel / Tunnel | 11/2005 – 04/2008 | 400 | 120 | 240 | 40 | |
| 9 | | Downstream Channel / Xe Bangfai Confluence Work Camp, Ban Phoun Khian | Downstream Channel / Confluence | 11/2005 – 04/2008 | 400 | 120 | 240 | 40 | |
| 10 | CW2 | “Nakai Construction Camp” & LTI camp in Oudomsouk | Intake and underground work areas | 10/2004 – 04/2008 | 400 | 120 | 240 | 40 | |

| No. | Contract | Camp Location | Works Sites Focus | Approximate Duration | Workforce Estimates | | | | Comments |
|--------|----------|---|---|----------------------|---------------------|---------|----------------|-------------|--|
| | | | | | Total Average | Foreign | Lao (Regional) | Lao (Local) | |
| 11 | | Power Station work camp – indicative location provided in Concession Agreement, Construction Phase Land Area, Map 3, Downstream Area | Power station and tailrace channel | 10/2004 – 12/2008 | 200 | 60 | 120 | 20 | |
| 12 | CW3 | Vicinity of Residence Nam Theun – indicative locations provided in Concession Agreement, Construction Phase Land Area, Map 3, Downstream Area | Regulating pond, dam and downstream channel | 04/2005 – 04/2008 | 100 | 30 | 60 | 10 | |
| 13 | EM1 | Indicative locations provided in Concession Agreement, Construction Phase Land Area, Map 3, Downstream Area | Power station, switchyards | 10/2004 – 12/2008 | 400 | 120 | 240 | 40 | The EM1 Contractor is organising a one week mission, commencing 17/01/05, to define the areas required for its camps |
| | EM2 | Main construction camp (Savannakhet) - indicative location provided in Concession Agreement, Construction Phase Land Area, Map 4, Road 12 and 8b & 115 kV and 500 kV Transmission Lines | 500 kV T/L | 04/2006 – 05/2009 | 250-300 | 90 | 180 | 30 | Final locations of the two main construction camps not yet defined |
| | | Construction camp (Thakhek vicinity) | 115 & 500 kV T/L | | | | | | |
| | | Temporary (moving along the transmission line) construction camps | 115 & 500 kV T/L | | | | | | |
| TOTALS | | | | | 4,390-4,450 | 1,383 | 2,626 | 441 | |

Figure 10-1: Location of Work Camps and Estimations of Work Force.



10.3.8 Spontaneous Camp Followers

The issues associated with the boom and bust effects of the construction of large energy and infrastructure projects has been extensively researched in the literature in both Western and Asian countries, and the recent experience at the Theun Hinboun Project would support this to some extent.¹ The extent of the socio-economic impact of a project has been found to be explained by two main variables: The size of the workforce in relation to the host population and secondly the relative proximity of the project to a regional centre. As projects become more remote they tend to be in locations where towns are relatively small in size and there is a greater demand to import multiplier indirect and induced services and thus camp followers.

Based upon situations at similar infrastructure construction sites around the Lao PDR, it can be predicted that well over half of camp followers will be female, making this a high gender concern. The estimated total number of camp followers that could be expected without the implementation of a social management program is shown in Table 10-5 and Table 10-6. These tables represent the most the worst-case scenario and probable case, respectively. The worst case is based on the experience at the Theun Hinboun Project, which was built with no planning for the construction phase impacts. The multiplier reported from this experience was that for each direct worker there were four camp followers. In this case, many camp followers brought their families that led to the high multiplier. The following assumptions are made based on the study of spontaneous movement of people at the Theun Hinboun Project site (1993-2003) – See Annex 10-2 at the end of this chapter:

10.3.8.1 Worse Case Scenario

- An approximate factor of four is assumed as a general increase in population at the camp sites
- Approximately half of the influx is local Lao, that is villages within or immediately adjacent to the project area – this is due to proximity, knowledge about the project and expectation of work and other benefits. Many households split, leaving some members in the natal village and setting up a smaller residence near project camps.
- Majority of the remaining population will be Lao from the provinces where the project is located or from other parts of Lao (mostly urban areas) – 35-40%
- It is assumed that approximately 10-15% of the increase will be ‘foreign’ camp followers, from Vietnam and Thailand
- Numbers need to be adjusted in relation to actual camp location, proximity to urban centres and international borders – there are already Vietnamese working in the service sector in Oudomsouk and Gnommalath

Table 10-5: Population Impact Camp Followers by Location Worst Case Scenario

| Camp Locations * | Worst Case Scenario | | | |
|--|---------------------|--------------|--------------|---------------|
| | Local Lao | Lao Regional | Foreign | Total |
| Nakai Dam and Quarry (3, 4, & 6) | 1,500 | 1,000 | 500 | 3,000 |
| Oudomsouk and Nakai (5, 7 & 8) | 2,000 | 1,500 | 500 | 4,000 |
| Gnommalath and vicinity (1, 2, 9, 10 & 11) | 3,000 | 2,000 | 1,000 | 6,000 |
| Lower Downstream Channel | 500 | 300 | 200 | 1,000 |
| Totals | 7,000 | 4,800 | 2,200 | 14,000 |

* Numbers refer to Table 10-4.

The most probable case is considered to take account of the better accessibility of the southern components of the project to Thakhek. The multiplier was reduced to take account of the fact that the proposed camps at Gnommalath and Oudomsouk are within 45 minutes to 1 hour and 15 minutes to Thakhek, which offers a considerable range of services that could service the sites. On the other hand the

¹ Population increased in the area adjacent to the powerhouse and camps from 0 to 230 households or 1475 people due to voluntary relocation of a nearby village and camp followers during construction. At the dam site and camp area, the population increased from 0 to 118 households or 633 people in the same period.

Nakai dam site is more remote and thus there is a higher risk of an uncontrolled population and the higher population multiplier was utilised.

One should also consider the range of measures that are being and will be introduced to discourage and regulate population influx and the policy of hiring local people as unskilled labourers.

10.3.8.2 Most Probable Scenario

- An approximate factor of two is assumed as a general increase in population at the camp sites
- Half of the influx is still estimated as being local Lao, that is villages within or immediately adjacent to the project area.
- Majority of the remaining population was Lao from the provinces where the project is located or from other parts of Lao (mostly urban areas) – 35-40%
- It is assumed that approximately 10-15% of the increase will be ‘foreign’ camp followers, from Vietnam and Thailand
- Numbers are adjusted in relation to actual camp location, proximity to urban centres and international borders, as in the worse case scenario

Table 10-6: Population Impact Camp Followers by Location Most Probable Scenario

| Camp Locations * | Most Probable Scenario | | | |
|--|------------------------|--------------|-------------|--------------|
| | Local Lao | Lao Regional | Foreign | Total |
| Nakai Dam and Quarry (3, 4, & 6) | 750 | 500 | 250 | 1500 |
| Oudomsouk and Nakai (5, 7, & 8) | 1000 | 750 | 250 | 2000 |
| Gnommalath and vicinity (1, 2, 9, 10 & 11) | 1500 | 1000 | 500 | 3000 |
| Lower Downstream Channel | 250 | 150 | 100 | 500 |
| Totals | 3500 | 2400 | 1100 | 7,000 |

* Numbers refer to Table 10-4.

Table 10-7 shows the total population (direct workforce plus camp followers) impact (direct workforce plus camp followers) on each of the four urban areas or semi-urban areas in the vicinity of each group of camps. As shown in the table, the total population impact at the peak of construction is estimated to be of the order of 10,600, both workers and camp followers. The highest population impact would be in Gnommalath area (4,530) followed by the Oudomsouk (2,950), Nakai Dam Area (2,370) and downstream near Mahaxai (750). In terms of percentage increase of ‘urban’ population in the project vicinity, an over 300% increase is expected for the Gnommalath area and nearly 200% in Oudomsouk and on the Nakai Plateau. Lesser increases are expected for other areas. It should be remembered, however, that these estimates are average ‘peak’ estimates for workers and camp followers.

Table 10-7: Total Population Impact Direct Construction Workforce and Camp Followers Most Probable Case.

| Camp Locations | Number of Workers | Estimated Camp Followers | Pop. Nearest Existing Town(s) | Total Expected Pop. in area | Percentage Increase |
|--|-------------------|--------------------------|-------------------------------|-----------------------------|---------------------|
| Nakai Dam and Quarry (3, 4 & 6)** | 870 | 1500 | 2,748 | 5,118 | 86.2 |
| Oudomsouk and Nakai (5, 7 & 8) | 950 | 2000 | 1,490 | 4,440 | 197.9 |
| Gnommalath and vicinity (1, 2, 9, 10 & 11) | 1530 | 3000 | 1,387 | 5,917 | 326.6 |
| Lower Downstream Channel *** | 250 | 500 | 1,474 | 2,224 | 50.8 |
| Total Estimates | 3,600 | 7,000 | 7,099 | 17,699 | 149.3 |

* Numbers refer to Table 10-4.

** The closest town to the Nakai Dam Area Camp and Phou Pako Quarry is Lak Sao

*** Refers to Mahaxai

10.3.9 Overview of Impacts and Mitigation

Without social management interventions, the risk of significant social impacts arising from the project is considered high. The social impact of a workforce of this size will be significant with populations at least doubling in the vicinity of Oudomsouk and Lak Sao and increasing by almost 4 times in the Gnommalath area. A high percentage of the Districts affected will be indigenous populations. A high percentage of the workforce will be men and a high percentage of the camp followers will be women. Although the impact will be short term (3-4 years) it will also be intense. The groups that will be most affected include:

- Residents of the townships of Oudomsouk and Gnommalath and their immediate vicinity
- Residents with houses in close proximity to the main road
- Residents dependent on the Nam Katang River for water supply
- Farmers supplying food to local markets
- Farmers dependent on the Nam Katang for irrigation or stock water

The most significant impacts and mitigation that can be anticipated are listed in the Table 10-8.

Table 10-8: Overview of Construction and Camp Impacts and Mitigation

| Impact | Mitigation | Responsible Party and Budget |
|--|---|---|
| Potential for unregulated development of sub-contractor work camps | HCC responsible for sub-contractor camp construction and monitoring of conditions | HC to cover costs of supervision and monitoring |
| Potential for a proliferation of random disorganised camp follower developments with unhealthy and unsanitary living conditions | Social Management and Mitigation Plan for Camp Followers (see Section 1.5) Social Mitigation Committee (SMC) detailed in 1.5.1 Population Management and Security (PMS) Task Force detailed in 1.5.5 Public Health Action Plan (PHAP | RC, RMU to advise. SMC solves immediate problems and makes recommendations to RC PMS Task Force implements and monitors field duties. NTPC Social Unit and Technical Assistance assists the SMC and PMS Task Force. Budget for SMC and PMS operations under Social Management and Mitigation Plan Budget from PHAP |
| Unplanned development without coordination with authorities and negative long-term results for urban growth | Social Management Plan and Mitigation Programme for Camp Followers (see Section 1.5) and Chapter 7 of Volume 4 | Budget and responsibility included in the Social Management Plan and Mitigation Programme for Camp Followers (various implementing agencies and components) |
| Increases in risks to worker and local resident health | HCC's Health and Safety Plan to be finalised for worker safety Public Health Plan – see Chapter 5 of the SDP for health improvement for local populations and camp followers | HCC's budget to cover worker safety issues Health interventions for population in vicinity of camps covered under the PHAP |
| A risk of violence and security problems due to the unusual, temporary population influx of workers and camp followers, and to the lack of local resources and human capacity. | Social Management and Mitigation Plan for Camp Followers (see Section 1.5) 1. Governor's Policy on Social Management. 2. Social Mitigation Committee 3. PMS Task Force (Section 1.5.5) monitors, reports, conducts awareness programmes, trains police and districts, and assists victims. Addition and upgrading of women on district police forces. | NTPC budget for PMS work plans and PMS Team, supported by the NTPC office. Short-term Technical Assistance on Population Management and Security |

| Impact | Mitigation | Responsible Party and Budget |
|---|--|---|
| A risk of human trafficking in the camp follower population | Trafficking Management and Monitoring Plan (see Section 1.6) 1. Governor's Policy on Social Management. 2. Monitoring by PMS Task Force 3. Addition and upgrading of women on district police forces. 4. PHAP's monitoring of work camps and camp followers. | NTPC budget for Social Management and Mitigation Plan includes support for Trafficking Management and Monitoring Plan, the PMS Task Force and the short-term Technical Assistance on Trafficking NTPC budget for Public Health Action Plan |
| An increase in the demand for food and other essential supplies in town markets and inflation | Nutritional issues and prices of key commodities under socio-economic monitoring programme | Monitoring costs under Project Monitoring Budget Possible interventions under various component budgets |
| Potential for discontent among local people if a significant percentage of workers are not given work | Direct Workforce Local Labour Recruitment Plan (see Section 1.4) | Recruitment of local workers covered by HC. Support to be provided by District and local GoL authorities. |
| Potential for local discontent due to inappropriate social behaviour of workers (drinking, gambling, seeking prostitutes, and harassing local women.) | Workers' Code for Appropriate Behaviour will be signed by all employees of NTPC (see Section 1.6), with work dismal as a consequence. Village monitoring by the PMS Task Force with reporting to SMC | Implementation by HCC and related companies NTPC Budget for PMS Task Force NTPC budget for Public Health Action Plan (PHAP). |
| Lack of supply of potable water and water for domestic use for local population and population influx | Provisions for improved water supply and sanitation as part of the Social Management Plan and Mitigation Programme for Camp (see Section 1.5) Water quality and monitoring programme under EAMP. | Budget for water supply and sanitation, if unavailable through external donors, HCC to provide budget. |
| A significantly increased risk of traffic accidents with unregulated control of construction vehicles | 1) Traffic safety programme (on site) 2) Traffic safety programme between sites and along main routes within the region 3) Need for coordination between HCC, NTPC and GoL organisations regarding traffic safety and regulation | 1) HC responsible for project vehicles and equipment within project sites 2) HC responsible for traffic safety programme – additional costs in the Social Management Plan and Mitigation Programme for community and child safety programmes 3) Coordination costs covered under the administration cost of each organisation |
| The generation of dust and noise by project vehicles on residents with houses in close proximity to the road | 1) Dust and noise control measures for all project sites and adjacent populated areas 2) Monitoring of measures by HCC of all sub-contractors 3) Monitoring by HCC and EAMP Monitoring unit | 1) Included in HCC budget 2) Included in HCC budget – see EMMPs 3) Monitoring costs covered in EAMP |
| The project has the potential to significantly increase jobs, employment and incomes of men and women in the local area which would help to mitigate the above negative impacts | Direct Workforce Local Labour Recruitment Plan (see Section 44.4) Includes Gender Balanced Targets to guide local and external hiring. | Costs for the requirement of local labour covered by HCC. Assistance to be provided by District and local GoL authorities |

10.4 DIRECT WORKFORCE LOCAL LABOUR RECRUITMENT POLICY

10.4.1 Concession Agreement Obligations

The recruitment policy has been developed in accordance with the provisions of Chapter 24 (Lao Preference Requirements) and 25 (Project Labour), and Schedule 18 of the Concession Agreement and in some cases confirms requirements for all Project employers that are already in place. The local labour recruitment policy includes the following provisions.

Targets

The Policy is to be implemented in accordance with Chapters 24 and Schedule 18 of the Concession Agreement that “priority is to be given to Lao workers over foreign workers” and Part 4.7 “requirement to Prepare and implement Lao Labour Preference Plan:

- All unskilled job categories to be taken by suitably qualified Lao Nationals.
- Semi skilled jobs to be taken by suitably qualified Lao Nationals in accordance with Tables 1, 2 and 3 of Schedule 18 of the Concession Agreement

Recruitment Location

Recruitment at the project site(s) will only be allowed for Lao Nationals resident in the primary impact zone of Nakai, Gnommalath and Mahaxai and Khamkeut Districts. All other recruitment is to be managed through the HCC and Sub Contractor offices in Thakhek and/or Vientiane.

Reserved Positions for Nakai Resettlers

There will be 300 reserved positions for Nakai Resettlers (PAP's/AP's) as set out in the Social Development Plan (SDP).

Catering

All HCC and Sub Contractor Construction camps will provide at least the mid shift meal sourced from a catered mess for all direct workforce personnel regardless of their origin.

Training

Training is to be provided by all employers in accordance with the Concession Agreement Schedule 18:

Part F

“All employers must ensure that workers under their authority are trained and acquire qualifications and expertise to enable them to gradually become skilled workers.”

Part G

“shall establish a scheme and set aside an annual budget sufficient to cover expenses for short ,medium and long term training and retraining of Lao workers”.

All labour units in socioeconomic sectors working for them both within the Lao PDR and abroad.

Transport

The HCC will plan and implement a public transport system from Nakai and Gnommalath at peak periods in order to encourage construction camp workers with down time and on Sundays to use the regional town of Thakhek for personal and business services.

Workforce Discrimination

There will be no ethnic or sexual discrimination in recruitment procedures. The HCC will establish Gender Balanced Targets (GBTs) within all recruitment documents and hiring plans to ensure that women have increased opportunities to enter into the work force at all levels.

Camp Follower Policy

A policy on Camp Follower Management has been prepared by the RMU and issued as an ‘Instruction’ by the Khammouane Resettlement Committee. It is presently being considered by NTPC and GoL and then, after any necessary amendment, will be issued as a Decree by the Governors of Khammouane and Bolikhamxai Provinces.

The inter-sectoral, inter-district Social Mitigation Committee (SMC), assisted by the RMU, and RO, will review and make recommendations about penalties and enforcement consequences applicable to the RC's Policy on Camp Followers and Social Management. Where there are enforcement gaps or confusing legal procedures, recommendations for amendments will be submitted to the RC. Thereafter, these laws, penalties and enforcement procedures will be published and distributed for public dissemination to workers, camp followers and residents by the Population Management and Security (PMS) Task Force. (See Sections 1.5.1 and 1.5.5.)

10.4.2 Head Contractor's Agreement on Labour Recruitment

In the Head Construction Contractor's Agreement refers to the hiring of personnel in Chapter 6. This states that:

- The Head Construction Contractor and sub-contractors are to comply with the Lao Preference Requirements as outlined in the CA, including vocational training of Lao nationals for project labour (Section 6.1)
- Rates of wages shall not be lower than the general level and conditions will not be lower than those for local industry in the area (Section 6.2)
- Contractor will comply to all existing Lao law relating to employment conditions, health and safety, legal rights of workers and working hours (Sections 6.4 and 6.5)
- Contractor is to provide the necessary accommodation and facilities as well as amenities, services and other structures free of charge and to maintain these facilities in good condition (Section 6.6)
- It is stated that personnel shall have the appropriate skills and experience in their respective trades or occupations and that the contractor has the right to terminate any person for lack of performance and misconduct (Sections 6.9 and 6.11)

In addition, the HCC and sub-contractors will formulate a unified NT2 Workers' Code for Appropriate Behaviour, which all employees will be required to sign and abide. The ultimate consequence for violation is job disqual. The Code will be explicit and sensitive on local concerns regarding gender, culture and social issues. Regarding the terms of the Code, the HCC will consult with the Lao Front for National Construction, LWU and LYU of the concerned provinces to ensure appropriateness to local conditions.

The HCC will be obligated to ensure that all sub-contractors follow these regulations in the HCC Contract and conform to conditions in the CA and existing Lao law regarding labour recruitment.

10.5 SOCIAL MANAGEMENT AND MITIGATION PROGRAM FOR CAMP FOLLOWERS

It is clear that the existing social environment within the primary impact area has virtually no social carrying capacity to absorb and service the estimated workforce and camp followers. Using the most probable scenario from the impact analysis, population has the potential to more than double in the vicinity of Oudomsouk and Lak Sao and could increase by up to four times in the vicinity of Gnommalath.

It is also clear that there is a risk of large numbers of camp followers living in uncontrolled and unsanitary conditions. The risk of incoming human trafficking and to lesser degree outgoing human trafficking will be substantial, and are discussed in detailed in section 1.6.. There are also a number of specific impacts arising from the interaction between the social and physical environment which requires immediate mitigation such as the risk of exposure to dust, the increased risk of traffic accidents and the increased risk to water supply in the vicinity of Gnommalath. The interaction of the project with current new town development in Gnommalath will require a continuation of the current coordination process. This opportunity to support the local community will be an additional project benefit.

In order to reduce these risks, a social management and mitigation program has been prepared. The main components of this plan are:

- Capacity Building for Local Agencies and Staff
- District Town Planning
- Infrastructure

- Health Issues
- Security and Population Management Issues
- Traffic Safety and Regulations

10.5.1 Capacity Building Requirements for Local Organisations

A key aspect of this mitigation plan for social impacts from camp workers and related aspects is to ensure that local organisations and GoL agencies have the capacity and resources to deal with mitigation impacts and undertake necessary monitoring. The RC Instruction (No. 257/RC.KM) refers to a ‘Task Force Committee’ in Section 6.

10.5.1.1 Formation of Social Mitigation Committee

It is essential that an institutional arrangement be established to deal directly with the challenges and problems of population management, (influx of camp followers and the demands on local infrastructure and service), security, trafficking and other related issues. The following aspects need to be considered:

- Formation of an inter-district, multi-sector Social Mitigation Committee (SMC) and its Secretariat, which should strive to 1) be gender and ethnically balanced, and 2) consist of senior representatives of line agencies, including health, planning, social affairs, road construction, women’s union and police/security.
- Advice and guidance from RC, RMU, NTPC, and particularly from the Institutional and Capacity Building Advisor (SDP, Chapter 7) on strengthening enforcement regulations, working routines, roles and responsibilities and reporting procedures as well as clear linkages with other project-related organisations and relevant GoL agencies
- Orientation regarding the tasks required for mitigating camp followers, including review and translation of key sections of Volume 4 of the SDP (see Disclosure Section in Chapter 7)
- Assessment of capacity and capacity needs in order for the committee to perform its tasks successfully
- Support from donors and other organisations, including Technical Assistance projects that are planned or ongoing and formation of additional short-term Technical Assistance
- Funding for equipment, vehicles, meetings and daily operation
- Close supervision of the field operations of the inter-Sectoral Population Management and Security (PMS) Task Force in order to take immediate follow-up actions.

10.5.1.2 Support for District Planning Offices

The District Planning Office (DPO) is responsible for urban planning and the development of the services and facilities at District towns. The offices at Oudomsouk and Gnommalath will play key roles in this plan since project construction activities and the anticipated situation of camp followers directly and indirectly affected them. These offices will require support for improving the performance of the District Town Planning Offices:

- Plan for the DPO – see Section 1.5.2 below;
- Renovation of buildings and supplying equipment, computers and logistics for a more efficient operation;
- Additional funds for meetings and planning in relation to NT2 tasks and daily operation in carrying out tasks for the SMC Secretariat, including participation in the SMC;
- Assessment of capacity to perform tasks and identification of suitable training for local staff in relation to NT2;
- Provision for short-term Technical Assistance for DPO.

10.5.1.3 Support for District Police Offices

The District Police Office will play a key role in relation to security and population management. The following aspects need to be addressed:

- Plans for the District Police Offices in Nakai, Gnommalath, Mahaxai and Khamkeut Districts in accordance with the NT2 needs;

- Assistance in establishing routines, roles and responsibilities and reporting procedures as well as clear linkages with other project-related organisations and in accordance to the measures outlined in the RC Instruction (No. 257/RC.KM);
- Renovation of buildings and supplying equipment, computers and logistics for a more efficient operation;
- Additional funds for meetings and planning in relation to NT2 tasks and daily operation in carrying out tasks for the Secretariat, including participation in the SMC;
- Assessment of capacity to perform tasks and identification of suitable training for local staff in relation to NT2;
- Support to each relevant District Police Office during construction for at least three additional women police officers due to the increased tasks on women's security, anti-trafficking measures, and female camp followers.
- Assignment of one female and one male police officer per district to the Population Management and Security Task Force, whose duties include work on Trafficking (see 1.3.9 and 1.6).
- Provision for short-term Technical Assistance for District Police Offices.

10.5.1.4 Support for the Department of Road Offices

The District Offices of the Department of Roads will play a key role in relation to security and population management. The following aspects need to be addressed:

- Plans for the Provincial and District Offices of the Department of Roads in Khammouane and Bolikhamxai Provinces (Nakai, Gnommalath, Mahaxai and Khamkeut Districts) in accordance with the NT2 needs – see Section below on traffic safety and regulation;
- Establish linkages with other DOR projects and coordinate plans and inputs in accordance with available resources and funding (GoL and donor sources);
- Renovation of buildings and supplying equipment, computers and logistics for a more efficient operation;
- Additional funds for meetings and daily operation in carrying out tasks for the SMC Secretariat, including participation in the SMC and for carrying out NT2-related activities;
- Assessment of capacity to perform tasks and identification of suitable training for local staff in relation to NT2;
- Provision for short-term Technical Assistance for DOR Offices.

10.5.2 District Town Planning

Both Gnommalath and Oudomsouk will be significantly affected by the project and subsequent population influx into the area. As well as the social impacts identified in Section 10.2.4, Oudomsouk will also be affected by the flooding of the Nakai reservoir, leading to a spatial structure based on the future irregular shoreline of the area. It is necessary to coordinate project activities, mitigation of camp followers and long-term development plans in order to optimise benefits for the inhabitants of Gnommalath and Oudomsouk.

10.5.2.1 Institutional Arrangements

The most immediate need is to set up a Steering Committee composed of the District Government, relevant Provincial bodies and the HCC so that common needs and priorities can be assessed in relation to town planning and coordination. An integration program can then be prepared. The tasks of this committee would be to organise temporary residential areas under the control and supervision of local authorities so that new arrivals will have to register and pay a tax to the District authorities and confine their activities to specified areas.

10.5.2.2 Drafting Urban Plans

It is proposed to integrate the planning of the new town spatial structure with the planning requirements of infrastructure once final designs of the project are available. A ToR and initial analysis is presented in Chapter 7 of Volume 4.

Similarly for Gnommalath there is also an urgent need to coordinate planning of the new township with the development and completion of the Main Construction Camp. As a new urban structure plan has already been prepared for the town, there is an opportunity to maximize benefits to the host community

so that service provision to the main camp could be integrated with the needs of the township. Presently there is site preparation works for the new Gnommalath Education Department that will be immediately adjacent to preparation activities for the lay out area for construction of the Nam Theun residence. Access to the Government site is through the Contractor controlled equipment and vehicle yard.

It is recommended that Quickbird be used to development GIS mapping of the old and the new town plans, based on current town layouts. The main features of the plan should include the following:

- Identification of and the designation areas for (a) permanent business development and (b) temporary business development in relation to camp followers and population influx
- Identify and designate areas for (a) permanent housing development and (b) temporary housing development for camp followers and population influx
- Sites for the provision of water supplies for both long-term arrangements and possible sources for camp followers, if required (see Infrastructure section below)
- Sites for drainage and waste disposal areas – dependent on infrastructure provided during the construction phase
- Implementation arrangements for fencing off and/or signposting designated areas for camp followers and structures
- Roles and responsibilities for local organisations and an assessment of technical assistance needs in order to carry out the plan
- Steps required for consultation to affected parties (beyond those directly affected by the Nam Theun 2 Project, such as local businessmen) and disclosure of the plan

10.5.2.3 Funding Sources for Urban Development

There are two main sources of potential funding regarding Urban Development of Oudomsouk and Gnommalath. The first source is to seek additional donor funding from agencies not necessarily involved with NT2. There are a number of potential agencies that are presently involved in urban development, including water supply, sanitation and waste disposal. Once a draft Urban Development Plan for these two towns is drawn up, it will be necessary to consult with potential donors on this matter.

The second source of funding would be direct taxation by local and national authorities of temporary and permanent structures and facilities in the new urban development area. Assistance may be required in order to:

- Improve and implement system of land taxation
- Improve and implement system of business taxation
- Modifications to tax collection for temporary arrangements, in particular with camp followers and temporary services – this should include fees for temporary residence and business during the construction phase

10.5.3 Infrastructure

There are three main issues to be addressed under infrastructure development: water supply, sanitation and waste disposal. The aim is to have ‘adequate’ infrastructure – enough to provide for basic needs – but not to encourage further population influx. There is a need to balance temporary development in terms of providing enough support to avoid health and social problems, but not to exceed local standards. A number of measures are to be introduced to ensure that camp followers and new arrivals in the project area pay for services and adhere strictly to responsible use of such services.

10.5.3.1 Water Supply

With an expected increase in population of 50-325% in urban areas at the peak of the construction phase and with only a third of that increase being supplied with safe drinking water (workers within camps) and the present weak water supply systems of urban areas, there is a need for ensuring a regular supply of safe drinking water to designated camp follower areas. The following steps are needed:

- Draft a plan for the supply of water to camp follower areas, based on estimated population increase and scenarios for the construction period

- Plan should access needs, resources and be linked to town planning (temporary and permanent) and Project Lands compensation measures (see Chapter 7 of Volume 4 of the SDP) – all types of safe water sources should be examined
- Minimum of one tube well or tap for 20 camp follower families would be an acceptable rate
- Depending on the outcome of the study, BoQ for developing or augmenting a public water supply system and a call for tenders carried out
- Construction to commence as soon as possible in order to ensure a successful management of camp followers
- Management arrangements for water supply to be considered in Plan, including private water supplier for camp followers
- Camp followers areas will be a key location for water quality and use monitoring due to the relative high population density and risk of contamination of water supplies by the different users (households, business and small industries)

10.5.3.2 Sanitation

Sanitation relates to the construction of toilets in camp follower areas. This will require the following activities:

- Draft a plan for the construction of toilet facilities for camp follower areas, based on estimated population increase and scenarios for the construction period;
- Plan should be linked to town planning (temporary and permanent) and Project Lands compensation measures (see Chapter 7 of Volume 4 of the SDP);
- Minimum of one toilet for 15 camp follower households would be an acceptable rate;
- Depending on the plan, BoQ for construction of toilets and a call for tenders to be issued
- Construction to commence as soon as possible for health reasons;
- Management arrangements for maintaining toilet facilities to be outlined in the plan – responsible party to be identified and funds secured for maintenance.

10.5.3.3 Waste Disposal

Given the expected population increase, there will be a need to organise an effective waste collection and disposal system. The following steps are required:

- Draft a plan for waste collection and disposal system for camp follower areas, based on estimated population increase and scenarios for the construction period;
- Plan should be linked to town planning (temporary and permanent) and Project Lands compensation measures (see Chapter 7 of Volume 4 of the SDP);
- Depending on the plan, BoQ for a waste collection and disposal system and a call for tenders to be issued;
- Contractor should be engaged to construct disposal areas as identified in the plan;
- Work should commence as soon as possible for health reasons;
- System to be funded through collection fees or as part of the direct tax for camp follower areas.

10.5.4 Health Issues

In addition to safe water supply, sanitation and waste collection and disposal, there are a number of other outstanding health issues. The District Health Office will be required to carry out a number of monitoring activities and possible interventions for camp followers and will requiring additional training and funding in order to do this.

- Price monitoring of essential goods since inflation is likely to occur with demand exceeding supply at various times during construction (socio-economic monitoring will cover these issues and camp follower and towns will be key locations for monitoring)
- Monitoring of births, mortality, causes of mortality and illness by Village Heads or provincial health authorities to be reported on a monthly basis
- Monitoring of similar data in camp follower areas and adjacent areas that are directly under District Authorities

- Support to district health staff for carrying out the above work in camp follower areas
- The PCCA and DCCA will be responsible for STI monitoring in the camp areas: this includes the monitoring of target groups (sex workers, drivers and project workers). Support will be provided under the Health Monitoring Plan in the PHAP
- The Weekly Epidemiological Surveillance Report (WESR) will be extended to cover camp followers areas under the District Health Office. This will monitor infectious diseases, injuries, violence and other potential health problems. Additional support will be required in order to carry out this monitoring among camp followers. This health monitoring will be linked into the monitoring by the PMS Task Force and be submitted to the SMC, RC and NTPC.

The RC Instruction (No. 257/RC.KM) states that health and sanitation management will be the responsibility of the affected districts. The district will supply a dispensary, health service units to camps and basic medical service for emergency needs. The District is also committed to monitoring health impacts, including intermitted inspection of restaurants, sanitation and waste disposal.

The health, water quality and socio-economic monitoring plans should specifically target camp follower areas since these areas are likely to be places where disease outbreaks can occur and where other social and health problems may arise.

Provisions to deal with negative health impacts that are detected through monitoring will be part of a general health initiative since it is unlikely that health problems are localised only to camp follower areas alone.

10.5.5 Population Management and Security Issues

Security and population management are important aspects for camp followers, both from the point of view of internal security (ensuring safety and order) and potential negative impacts on nearby communities (crime or negative social influences). There are two main preventative issues: 1) supporting and improving security measures; and 2) demographic management and monitoring.

10.5.5.1 Population Management and Security (PMS) Task Force

For coordination and implementation of field activities, an interim Population Management and Security Task Force (PMS Task Force) will be formed. The PMS Task Force will be carefully culled from the police, administration, and LWU of Nakai, Gnommalath and Khamkeut districts. The team will be trained and assisted by a full-time Lao Specialist (5 years) and an international Technical Advisor (24 months during construction) working out of the RO /RMU offices. The duties of the PMS Task Force will include monitoring of villagers concerns on trafficking, security, and population movements, conducting trainings for local authorities, assisting with information campaigns and reporting to the SMC. As these issues raise serious gender concerns, the PMS Task Force will be gender-balanced. At least two female police officers from each district will be included.

10.5.5.2 Security Issues

The RC Instruction (No. 257/RC.KM) outlines a number of measures aimed at managing population influx of camp followers. Local organisations will have to be mobilised, trained and monitored to ensure that security issues are properly addressed throughout the construction phase. Consideration will be given to the following:

- Review and strengthening of existing regulations by the RC, from recommendations of the SMC and Technical Assistance;
- Monthly consultations with impacted villages and other stakeholders;
- Setting up and support for local monitoring in villages and towns near camps – these can be temple-based, school-based or community-based (village or village-section);
- Training and support for local police organisations and village militia – establishment of responsibilities, routines, reporting procedures and supervision;
- Monitoring and taking actions on Human Trafficking concerns (see Section 1.6);
- Reporting to review meetings by SMC.

10.5.5.3 Population Management Issues

A number of interventions are recommended in the RC Instruction (No. 257/RC.KM) to manage the potential population influx into the project area. These form the basis for a management plan but require support and linkages to other NT2 activities:

- Issuance of new family registration books (improved family book system designating two heads of household) and citizen cards selected communities in the vicinity of project sites and camps—support to district authorities to develop such as system (see Institutional arrangements and SMC above);
- Regarding Nakai, it is necessary to coordinate all urban development (temporary and permanent) with Town Planning and land regulation;
- Local authorities in a number of villages in Gnommalath and Khamkeut and District authorities in Oudomsouk will require training and support to carry out and enforce population management measures;
- Development of an improved system for the registration of temporary residents;
- Monthly reporting to the SMC and NTPC on the demographic status in each District, including populations of villages near project sites and camps and camp followers in designated areas.

10.5.6 Traffic Safety and Regulation

As a result of project activities and the upgrading and construction of a number in the project area, there are likely to be more accidents and injuries if proper measures are not introduced as soon as possible. Traffic will probably double along the new transportation corridors in addition to project vehicular movement, as has been the case on road projects in Lao PDR (see Benefit Monitoring Report for NR9, Kampsax 2004).

The following tables indicate the sections of road to be upgraded and new construction. A new transportation corridor will be created traversing the project area, linking Lak Sao and the Vietnamese Border to Oudomsouk, Gnommalath and Mahaxai District towns to Thakhek and Nakhom Phanom in Thailand. It is not expected that this transportation corridor will result in a drastic increase in the amount of traffic, as is the case with NR9 in Savannakhet Province or NR12 in Khammouane.

Table 10-9: Upgrade of Existing Roads

| Location | Route | Distance (km) | Width (m) | Pavement Type |
|---|-------|---------------|-----------|------------------|
| From Thakhek Route 12/13 junction to the junction of Route 8 & 12 | 8 | 55 | 9 | Gravel |
| Route 8 & 12 Junction to Ban Gnommalat | 8 | 5 | 9 | Gravel |
| Ban Gnommalat to regulating dam | 8 | 5 | 9 | Gravel |
| Regulating dam to the crossroads with the power station access road | 8 | 4 | 7 | Gravel |
| From the crossroads with the power station access road to Oudomsouk (Nakai) | 8 | 7 | 7 | Concrete /Gravel |
| Resettlement roads south of Oudomsouk (Nakai) | Other | 30 | 7 | Gravel |
| Total | | 106 | | |

Table 10-10: New Road Construction

| Location | Route | Distance (km) | Width (m) | Pavement Type |
|--|-------|---------------|-----------|---------------|
| Oudomsouk (Nakai) to Ban Nam Nian (including Ban Signo Bridge) | 8 | 41.3 | 7 | Gravel |
| Dam site access road (a side road from Route 8b Ban Phonkeo to the Nakai Dam site) | Other | 15.4 | 5 | Gravel |
| Total | | 56.7 | | |

The HCC is responsible for condition of roads in the project area and will follow 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 (HCC, Section 4-14 to 4-17). However, there is a need for further measures relating to general awareness and monitoring, especially in camp follower areas where population density will be relatively high.

The following measures will be carried out under the CSM:

- Develop traffic regulations and monitoring for implementation in Project Construction areas;
- Implementation and monitoring carried out in coordination with HC/sub re-scheduling of vehicle movements, etc.;
- Road safety programme for schools in the vicinity of project sites and along upgraded or new roads.

10.6 HUMAN TRAFFICKING IMPACTS AND MANAGEMENT

The project offers the potential to provide some new information about the incidence of trafficking in relation to large infrastructure projects. There are a number of organizations presently involved in research and implementation projects on trafficking in Laos and the broader region.

10.6.1 Existing Vulnerability to Trafficking

As described in the first section of this chapter, trafficking involves a wide range of activities and many of them are open to interpretation as to the circumstances under which trafficking begins and ends. In general terms, poverty and economic disparity are described as the “push” factors for labour trafficking. However, there is a problem with identifying trafficking as defined by the ILO and distinguishing it from illegal migration for the pursuit of economic interest (referred to as ‘economic migration’) According to a report of the Immigration police of Thailand in Bangkok from January to July 2000 the immigration police had sent back 150,000 illegal labourers in which the majority were from Myanmar and Cambodia. From Lao PDR there were more than 10,000 people that had been sent back. Lack of job opportunities is one of the key push factors of illegal cross border labourers. However, crossing borders illegally is not trafficking. Consequently, the actual incidence of trafficking is not known.

Table 10-11: Illegal Migrant Workers in Thailand from Khammouane Province, March 2000

| District | Migrant Workers in Thailand | | | | | | | | Border Pass | | Illegal | | Total |
|------------|-----------------------------|-------|-------|-----------|-------|-------|-------|-------|-------------|-----|---------|-------|-------|
| | Women | Men | Total | Age Group | | | | | Women | Men | Women | Men | |
| | | | | 15-20 | 21-25 | 26-30 | 31-35 | 36-49 | | | | | |
| Nongbok | 1,508 | 1,446 | 2,954 | | | | | | | | 1,508 | 1,446 | 2,954 |
| Xe Bangfai | 140 | 149 | 289 | 133 | 62 | 47 | 25 | 22 | | | 140 | 149 | 289 |
| Hinboun | 203 | 94 | 297 | 97 | 132 | 62 | 6 | | 106 | 50 | 95 | 46 | 141 |
| Gnommalath | 2 | 1 | 3 | 1 | 2 | 1 | | | | | 2 | 1 | 3 |
| Thakhek | 186 | 84 | 270 | | | | | | | | 186 | 84 | 270 |
| Mahaxai | 27 | 7 | 34 | | | | | | | | 27 | 7 | 34 |
| Nakai | 0 | 0 | 0 | | | | | | | | 0 | 0 | 0 |
| Boualapha | 0 | 0 | 0 | | | | | | | | 0 | 0 | 0 |
| Total | 2,066 | 1,781 | 3,847 | | | | | | | | 1,958 | 1,733 | 3,691 |

Source: ILO Preliminary Assessment

In this situation where the presence of trafficking is hard to distinguish from illegal migration for employment purposes, hard data on incidence of trafficking is still difficult to collect. Assuming there is a correlation between trafficking and the rate of illegal migration, data collected on illegal migration can at least give an indication of the problem over time particularly if there are anomalies detected between

Districts with the same push factors. Nongbok District stands out as an example of such an anomaly with very high comparative numbers.

Illegal migrant workers originating from the primary impact were very low compared to the Districts that adjoin the Mekong River, some of which are in the secondary impact area. This was considered partly due to the high percentage of ethnic minorities in the more inland Districts. Illegal migrant workers in Thailand are mainly Lao from lowland based groups and few are from ethnic minorities. In Nakai, Gnommalath and Mahaxai the percentage of ethnic minorities is higher than 50% whereas in Thakhek, the figure is 4% and in Nongbok 0%.

However, there is also a location factor involved based on accessibility to the border crossing points. Until recently, the primary impacted districts have had very poor road links with Thakhek. Now that the project has improved accessibility it may induce more illegal movement activity.

Baseline survey data collected in 8 villages in Nongbok and Hinboun Districts by ILO estimated 29% of illegal migrant workers were children (under 18 years) of which 80% were girls. This suggests a need to monitor closely and continually the patterns of illegal migration by age and gender, as often the most significant numbers and most abusive cases in trafficking involve adolescent girls. The overall District data in Table 10-11 suggest that the gender difference is less marked (about 53% female and 47% male).

It was also found that rates of internal migration within Laos are very low compared to international migration figures. In a recent study (ILO, 2003) the internal migrating population of the three provinces in the survey was only 1.2% of the total sample and the majority were male (59.1%). The overall migration into the capital city (Vientiane) was 42.5% of the internal migration and into the southern region where the project is located only 3.8%.

10.6.2 Impact of Trafficking

Trafficking is a complex issue. It can be incoming or outgoing, and it can be externally or internally sourced. Discussion and research cited by UNDP and ILO confirms that has been very little research on the labour trafficking issue in relation to large projects like NT2. Recognizably, data collection on trafficking is difficult, but not impossible. However, without baseline information on the current extent, types and sources of trafficking taking place prior to construction within the primary and secondary impact areas, monitoring and intervention become vague exercises.

Most current research in the Lao PDR focuses on outgoing trafficking. It centres on illegal migrant workers going abroad on a seasonal basis to do legitimate (although technically illegal) temporary work to support themselves and remit money to their families back in the villages. As shown from the results of the continuing ILO surveys in Khammouane Province and two other neighbouring Provinces, trafficking in Laos at the moment has been mainly external. It has been occurring from Laos into Thailand. There are considered to be significant incentives for Thai employers using traffickers to import cheap labour into the country. The attraction of the prospect of consistent employment and significantly higher wages offered in Thailand creates the incentive for the worker to seek out traffickers. According to the data, the groups that have migrated illegally to Thailand tend to be from Lao ethnic groups because of their similar language and lifestyles. Furthermore, there are relatively low numbers of illegal migrants coming from Districts with high ethnic populations. Also, internal migration within Lao into southern Provinces was found to be very low by ILO surveys.

The risk of external trafficking within primary impact areas is considered low, as the characteristics normally associated with it are less applicable in the impact area. The project will improve the current employment situation in the impact area, which has historically shown a consistent pattern of underemployment by agricultural workers. As shown in Section 10.2.3, up to 50 % of agricultural workers work less than 6 months of the year. During the construction period, current projections suggest that there will still be a net excess of workers available so there should be no pressure on local wage rates to increase. What is being offered by the project is more stable and continuous employment for qualified workers. Also, the primary impact area has a high ethnic minority percentage and historically the area has shown very low rates of illegal migration to Thailand. Visibility of external trafficking in the relatively lower population density areas of the primary impact area would also tend to reduce risk.

On the other hand, incoming trafficking into the impacted areas presents much higher risks, especially in areas where of worker camps and spontaneous camp followers. The internal trafficking could easily be sourced from Vietnam and destined for Gnommalath camp area and Nakai Dam area. Both locations have had recent new road developments and improvement from the Vietnam border to both Gnommalath and also to Lak Sao. In this case the pattern of incentives may be different with Vietnamese from potentially poorer areas across the border seeking out job opportunities. Trafficking amongst this group may also create less concern among the local resident population. GOL Provincial and District officials are well aware of this potential and have instituted District level committees to monitor and control the situation.

According to local residents of Nakai and Gnommalath, there is concern about the internal traffickers appealing to local unemployed youth of impacted villages. For example, in late 2004, for the first time Gnommalath developed a ribbon of over thirty new drinking establishments along the main road. Some places have recruited rather young girls as servers. While some personnel appear to be from Vietnam, local residents suggest a portion is coming from poorer and less educated surrounding villages. In Nakai, a few establishments have developed. Local concern focused on individual incidents involving external workers propositioning local women into informal servile marriage.

10.6.3 Risks and Interventions

The most notable risks on Anti-Trafficking actions are:

- Communities may produce unreliable information, as people are in denial about their children leaving the village.
- There may be reluctance by officials and villagers in general to take actions on Trafficking as they or their colleagues may be involved in trafficking.
- Law enforcement and the justice systems prove unsuccessful because of unspecific legislation and inadequate penalties.
- Police and military enforcers participate heavily in the sex business, which compromises their abilities to enforce.

Thus, five strategies are recommended for controlling and monitoring Trafficking.

1. Assistance from the Population Management and Security (PMS) Task Force (section 1.5.5.1)

A full-time Lao Trafficking Specialist and an international Technical Advisor from an agency already working on Trafficking in the Lao PDR will assist the PMS Task Force. Due to the high gender sensitivity related to Trafficking, the unit must be gender balanced. The budget for Monitoring of Trafficking will allow for monitoring, training, public campaigns, reporting and repatriation of victims. The PMS Task Force will work closely with the RMU, the RO, the SMC, and the PHAP team (see 1.6.4), which will monitor health and social concerns inside the work camps.

2. Constant and Pro-Active Monitoring of Trafficking

Foremost is the need for the compilation of baseline levels of trafficking and a system of regular reporting on Trafficking within the impacted areas. Monitoring will be done by the PMS Task Force and will focus on situations concerning:

- Prostitution
- Domestic work
- Illegal labour
- Bonded labour
- Servile marriage
- False adoption
- Sex tourism and entertainment
- Pornography
- Begging
- Use of “criminal activities”

For monthly reporting on Trafficking, the PMS Task Force will draw from its own monitoring as well as from:

- 1) District police reports involving incidents on the above.
- 2) RO/RMU staff observations while working in impacted areas.
- 3) PHAP's team health monitoring inside and outside the work camps
- 4) Village Monitors on Trafficking within each impacted village.

The PMS Task Force will submit monitoring reports directly to the SMC and the HCC on a monthly basis, making recommendations for immediate actions. These monitoring reports will be shared with the POE, and other monitoring teams.

3. Community-Focused Actions

- Informing villagers of the dangers and types of Trafficking, including information on STI / HIV-AIDS and other health and social issues.
- Training of VRC / VDC leaders about where to seek help when Trafficking issues arise.

4. Reducing Demand

- NT2 companies and contractors agree to have all workers sign a NT2 Workers' Code for Appropriate Behaviour, which explains local laws and penalties, and which has a work dismissal clause for violation.
- NT2 companies set up pro-active prevention mechanisms within living quarters (e.g., regulated in-camp establishments for sports, entertainment and eating, and camp entrance restrictions).

5. Law Enforcement

- Province Governor sets a unified enforcement strategy with clear penalties and prosecution procedures.
- District Governors ensure that procedures on safe and legal migration are followed.
- NTPC provides support funds and TA to train and support a special Policing Unit on Trafficking (PUT) in Gnommalath, Nakai and Lak Sao, consisting of 2 women and 2 men trained in Trafficking issues.
- Each district increases the number of women police officers to 30% of the force in all affected districts to protect women's rights and security and to handle women offenders.
- NTPC provides support funds and TA to upgrade legal procedures and enforcement on Trafficking, and to train all relevant district authorities on Trafficking regularly.

6. Post-harm support:

- Assistance to unaccompanied minors and women in vulnerable conditions to help them with mitigation and repatriation, if necessary.
- Local courts promote justice and redress

For the NT2 Project, interventions would most likely be for Interventions 1 to 5. The degree for support will depend on the results from the monitoring program.

10.6.4 Monitoring

Monitoring will focus on the most likely Trafficking areas: Nakai, Gnommalath, Lak Sao and Thakhek. For monitoring on trafficking, considerable time and a longitudinal approach are needed to establish enough trust so that assessors gain reliable insights. In addition, trafficking is a strong gender concern. As local women will need to be interviewed on sensitive subjects, the monitoring team will require women.

Two types of monitoring will take place during the construction period on a regular basis, preferably monthly. First, there will be regular consultations within impacted villages by the PMS Task Force. This constitutes an early warning system, not an enforcement process. Within each village, 4-5 respected women will be asked monthly to give indications about possible trafficking problems. Here, it is

important to note several conditions for effective village monitoring: (1) women will likely be more frank than men about Trafficking problems; (2) women will be hesitant to express their opinions on Trafficking if men are present; (3) the report should be confidential and with no names, and provide only types of incidents, numbers of women and men involved.

The second type of monitoring focuses on destination points in the most likely locations – in and nearby the work camps. Destination monitoring will be incorporated into the PHAP's Village Sentinel and Surveillance System (Chapter 5, SDP), which will monitor work camp sites. This method would be more efficient than assigning this task to the PMS Task Force. The PHAP's report will be attached to the Monthly Monitoring Reports on Trafficking, compiled by the PMS Task Force.

If not the PHAP is not a suitable means of monitoring, destination monitoring would need to be integrated into the responsibilities of the PMS Task Force.

10.6.5 Information Campaigns

It is proposed that an information campaign be run on behalf of the NT2 project by one of many qualified bodies currently undertaking research and implementation on trafficking. It would target the direct workforce and local residents of the four Districts of the Primary Impact Area and Thakhek. The campaign would give information to potential clients of workers at risk who may have very little understanding of the trafficking issues involved and the potential risks and sanctions. Local resident groups would also be targeted as they can also help by increasing the visibility of the characteristics of trafficking and how to take action if such activity is suspected.

Organisations involved in research and implementation of trafficking have also expressed interest in providing third party monitoring for reliability purposes if considered necessary.

10.6.6 Village Anti Trafficking Network

There is an existing Pilot Project running in three southern Provinces including Khammouane in which villages can join an Anti Trafficking network. To date, 22 villages and 8 Districts of the 3 Provinces have established their network to combat trafficking and significant results have been achieved particularly with regard to illegal labour migration. It is anticipated that the project will assist villages to join this network if intervention is considered necessary based on participatory monitoring results.

10.7 RESOLUTION OF CONFLICTS BETWEEN VILLAGERS AND CONSTRUCTION WORKERS / CAMP FOLLOWERS

Because of different perceptions, values, objectives and responsibilities among different stakeholders, a range of conflicts may occur between villagers and construction workers and/or camp followers. Obviously, the most important step in conflict resolution is conflict avoidance, and the consultative and participatory nature of decision making under the SDP is aimed at reducing the occurrence of disagreements and conflicting positions. In instances where disagreements do occur, it is similarly important that they are resolved quickly before positions harden and the conflict escalates. Different approaches may be required according to the level that any conflict has reached, while at the same time, recognizing that the earlier a potential conflict is recognized and dealt with, the higher the chance of a successful outcome.

If a conflict has arisen between one or several villagers and one or several construction workers and/or camp followers, and efforts to solve the conflict amicably have failed, the offended party should send a letter to the District Resettlement / Compensation Working Group with copies to Head Contractor and the NTPC).

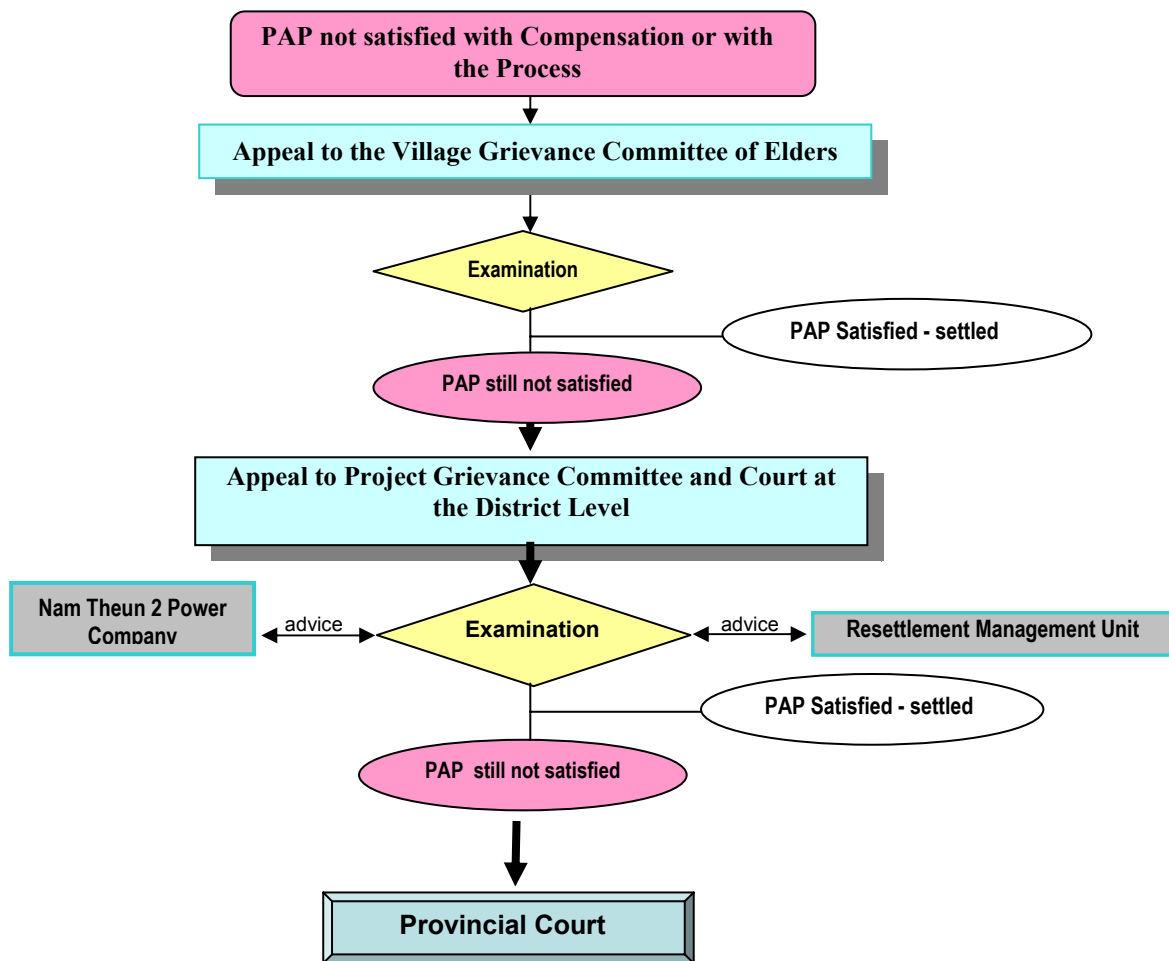
These phases of conflict development and appropriate interventions can be summarized as follows:

- | | |
|-------------------------------|---|
| ❖ Conflict avoidance: | > Consultation & participation in planning, decision making |
| ❖ Simple disagreements | > Informal negotiation, discussion and mediation |
| ❖ Early conflict development | > Reference to Village Resettlement Committee |
| ❖ Conflicting positions taken | > Reference to Grievance Committee as District level. |
| ❖ Intractable conflict | > Refer conflict to Provincial Court. |

To ensure that the basic rights and interests of resettlers are protected, that concerns are adequately addressed and that entitlements are delivered, a grievance procedure has been designed for the NT2 Project. An independent Grievance Committee will be established. It will be chaired by a senior provincial official, probably from the Justice Department, with other members the Lao Women's Union, the Ethnic Council, civil society, a resettled villager representative and a member of the Resettlement Committee. Justice departments at district and provincial levels are already responsible for resolving village conflicts and property disputes, while the LWU and Ethnic Council are active in solving problems faced by village women and the elderly.

If an affected person or group of persons is not satisfied with the compensation package or if, for any reason, the compensation does not materialize according to the CA, he or she has the right to make a claim. There are three basic steps to resolve grievances, as depicted in Figure 10-2.

Figure 10-2: Steps in the Grievance Process Regarding Issues of Compensation and Resettlement



The first step is for a householder or a group of householders to approach the Village Resettlement Committee (VRC) to present their grievance and allow its consideration at the lowest level of the resettlement hierarchy, where frequently issues can be resolved through discussions and adjustments. If the VRC cannot resolve the complaint or if the claimant is not satisfied with their decision, the next step can be taken, either by the claimant or the VRC on his/her behalf.

The second step is to present the grievance or complaint to a Grievance Committee to be formed at the District level. This committee will be based in the District Court, but will also have representatives from all relevant departments, as they will be in a good position to resolve issues brought to their attention by affected individuals. This Committee must respond to any claim within 15 days.

At this district level the NTPC's RO and the GOLs RMU would be primary witnesses in order to both;

- (a) respond to the claimants grievance in terms of prior activities undertaken etc; and
- (b) to ensure that the claim is reviewed within the context of the existing policy, regulations, procedures and entitlement limits, and that the compensation awarded does not go beyond established matter of practice or outside the limits of the budgets.

The findings of the Grievance Committee are binding on the RMU and RO. The Committee must maintain a public book showing all claims received and the decisions made, which must be made within 30 days. The Grievance Committee cannot award compensation that goes beyond what is established as a matter of practice or what would be outside the limits of the budgets within which they are operating. If the above action does not yield any results, then the claimant has the right to present their case to Provincial Court. Access to the Court is obviously a last resort. It will be in the interest of the RO and the RMU to resolve issues before they are brought to the Committee.

A conflict between RO and RMU would in the first instance be resolved at the RC level. If this is not acceptable to either party, then the matter will be reviewed by the Vice Prime Minister responsible for NT2. If still no agreement is reached, the matter shall be handled according to the Consultation and Dispute Procedures set forth in the CA.

While every effort will be made to resolve conflicts by mutual agreement of the parties involved, in some cases, arbitration and adjudication on disagreements and conflicts by an external mediator will be required. Responsibility for arbitration and the means of adjudication will vary according to the parties involved, but will need to be referred to a higher level of authority than the parties concerned. The strategy for this is outlined as follows:

| Parties to the conflict | Final decision/adjudication | Key mediator/arbitrator |
|---------------------------------|--|--|
| Within village disputes | Majority decision of village meeting | Village Chief. |
| Disputes between Village | Joint agreement of appointed village representatives | Relevant district authority. |
| Village - RMU/district disputes | Joint agreement of both parties endorsed by province | Grievance Committee |
| RMU-district disputes | Joint agreement of both parties endorsed by province | Grievance Committee and Provincial authorities |

10.8 BUDGET AND SCHEDULE

Table 10-12 provides as summary of the budget allocated by NTPC to implement the Construction Phase Social Management Plan. This budget does not include the contribution of GOL towards the implementation of the Plan, as much of the plan is based on (improved) implementation of current GOL public governance and service provision activities.

Table 10-12: Summary Budget of (NTPC's contribution to) Construction Phase Social Management Plan

| Item | Budget (up to COD) |
|---|--------------------|
| Security | \$ 30,000 |
| Traffic control / traffic hazards control | \$ 20,000 |
| Population and social maintenance | \$ 5,000 |
| Human trafficking control | \$ 35,000 |
| Town planning | \$ 10,000 |
| Infrastructure | \$ 150,000 |
| Total | \$ 250,000 |

Table 10-13 below provides a schedule of the main activities to be undertaken to effect the implementation of the Plan.

Annex 10-1: Instructions of RC on Social Order Management and Small Trade during the NT2 Project Construction Period.



Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity
=====000=====

Khammouane Province
Resettlement Committee

No.: 257/RC.KM
Date: 26 November 2004

**INSTRUCTIONS OF PRESIDENT OF RESETTLEMENT COMMITTEE ON
SOCIAL ORDER MANAGEMENT AND SMALL TRADE DURING
THE NAM THEUN 2 PROJECT CONSTRUCTION PERIOD**

Reference to:

- Lao PDR constitution 1991,
- Local Administration Law,
- Prime Minister Decision No.64/PM, dated 14.11.1998, on Nam Theun 2 Project Resettlement Committee Nomination,
- Concession Agreement, dated 3/10/2002, between Lao PDR Government and Nam Theun 2 Power Company Ltd.,
- Nam Theun 2 Project Resettlement Plan approved by the Lao PDR Government, No. 1550/PMO, dated 8/9/99.
- Actual Requirement in terms of management, service supply and population control during the Nam Theun 2 Project construction period,

President of Resettlement Committee instructs:

PART I: GENERAL OBJECTIVE

1. Social order management and service supply during Nam Theun 2 Project construction period

- 1.1 This Instruction forms as base for the Province District, Village, Worker's Camp and involved persons in terms of rule elaboration for social management and service supply during Nam Theun 2 Project construction period.
- 1.2 To control the various groups and local population entry conformity with the Laws.
- 1.3 To maintain the social order in the worker's camps, the villages and project's areas.
- 1.4 To preserve good local and national traditions in a sustainable manner.
- 1.5 To protect national, local and individual interest in conformity with rules and laws.
- 1.6 To protect national natural environment avoiding short and long term destruction and pollution against human and animal life.

2. Project Areas

2.1 Khammouane Province

- **Nakai District:** Nam Theun 2 reservoir area consisting of 17 villages to be resettled, new relocated villages (including Ban Oudomsouk and Ban Phon Phan Pek), worker's camps, various state and company offices.
- **Gnommalath District:** Power house area, regulating weir and pond, channel area, transmission line along Road 8B area, access roads, worker's camps, villages, state and private offices.

- **Mahaxay District:** Transmission line, channel, along road No. 8B and access roads areas, worker's camps, villages and offices.
- **Xe Bangfai District:** High voltage transmission line, along Road No. 13 and villages on the Xe Bangfai river bank.

2.2 Savannakhet Province

- **Saybouly District:** High voltage transmission line, along Road No. 13 and villages on the Xe Bangfai river bank.
- **Khanthabouly District:** Substation area and high voltage transmission line.

2.3 Bolikhamsay Province

- **Khamkeut District:** Phouphaphen area, new village relocation of Ban Sop Hia/Nam Niane, worker's camps area, along Road No. 8B, along access road to Keng Mone and Nakai Dam area and other areas according to Concession Agreement.

3. Target Groups

Local and foreign groups involving with NT 2 Project are divided into 6 categories:

- 3.1 Staffs and workers of the Project
- 3.2 Accompanied persons
- 3.3 People coming for service supply
- 3.4 Officials, staffs and workers not directly working with the project
- 3.5 Tourist and other visitor
- 3.6 Local staff and population

4. Number of target people

It is estimated there will be regular movement of people during the project construction:

| | |
|--|------------------------|
| 4.1 Staffs and workers | 8,000 persons |
| 4.2 Accompanied persons | 16,000 persons |
| 4.3 Service supply people | 2,000 persons |
| 4.4 Official and indirect staffs | 2,000 persons |
| 4.5 Tourist and other visitor | 1,000 persons |
| 4.6 Local staff and population (7 districts) | 155,000 persons |
| TOTAL = | 184,000 persons |

PART 2: MANAGEMENT

5. Management Method

5.1 In and Out population movement

In and Out movement of each office, camp and village staff/worker shall comply with Administration Law means every person possesses identity card, family certificate, passport or other referred paper.

- Various office and worker's camp issue their card to all members. In case of relative or visitor for more than 3 months period the office or camp should also provide the card indicating clearly the visit time limit.
- The resettler shall have the family certificate and resettlement certificate approved by the village authority according to the rule.
- The provisory resettler or person coming for provisory service supply shall have the provisory resettlement certificate from his permanent residence village according to the rules.

5.2 Activity Management

- 5.2.1 Individual or committee wishing to establish agent or office shall have the administrative approval prior any action. Land for agent or office building construction shall have full set of documents such as: allocation certificate lease agreement, ownership transfer certificate

(purchase/order document) and damage compensation notice for project construction according to Concession Agreement.

- 5.2.2 Any construction should be consistent with the Nam Theun 2 Project.
- 5.2.3 Village administrative authority, office, worker's camp are responsible of their member's activity according to the existing rules.
- 5.2.4 In respect of specific and location of Nam Theun 2 Project, it is recommended to District to elaborate the rules for management of public order within their own District and to worker's camp to have their own interior rules for proper control and inspection, the village also should improve the village rules accordingly.
- 5.2.5 All vehicle including the motorcycle shall have full set of papers such as: license, road fee, technical check, etc.
- 5.2.6 All driver has the driving license, it is prohibited for children under allowed age to drive vehicle on national road.

5.3 Behaviour and service management

- 5.3.1 Administrative authority, office, worker's camp and work site shall manage the various behaviour under their responsibility such as: illegal meeting, gambling, scuffle, drinking abuse, disturbing noise, sexual abuse, environment, erotic photos and CD, drug, illegal arm, wild animal environment etc.
- 5.3.2 The District shall provide service area and facilities such as:
 - Market area, fresh food near the public community, close the bus station or port and access roads.
 - Restaurant area at least 1km far from the school, hospital, office/camp.
 - Workers' camp should have canteen and shop.
 - Shop and restaurant shall comply strictly with the provincial notice.
 - Provision of waste disposal far from the community.
- 5.3.3 All shop shall have business and tax license hanged at a visible place.
- 5.3.4 Individual or community wishing to establish a new business should apply to the relevant license authority according to the regulation.
- 5.3.5 In and Out goods, merchandises of Agent, office, and shops in line with allocation. If not punishment will be applied according to the Laws.
- 5.3.6 Shops shall pay obligations to the state according to the regulations.

5.4 Health and Sanitation Management

- 5.4.1 All office, bureau, worker's camp shall take care of sanitation of their responsible area in a proper and clean manner in order to protect the environment in a sustainable manner.
- 5.4.2 District and village shall provide solid waste disposal area, issue instruction on waste management. If possible may be establish a group of contractor for the solid waste service.
- 5.4.3 Office, bureau and camp shall have recreative area, sport area if possible.
- 5.4.4 Office, bureau, worker's camp and shop shall have the toilet at a basic standard and safe.
- 5.4.5 Every office shall have a health service unit as following:
 - At district level, the dispensary.
 - At office or camp level with more 500 persons the health service unit.
 - At office or camp level with less 500 persons, the necessary basic medical service for emergency need.
- 5.4.6 Food cooking and service should assure consumer's health and subject to intermittent inspection.

PART 3: IMPLEMENTATION

6. Organization

- 6.1 At relevant provincial and district level the task force committee shall be established, composing of: commerce/custom, security, defense, health and other necessary organization, to monitor the activities of office, bureau, camp and shop in line with rules and regulations.
- 6.2: The above said committee shall elaborate control and inspection plan to be submitted to the Governor of the Province for approval.
- 6.3: Monitoring operation implementation:
- Provincial level every 6 months.
 - District level, every month.
 - Village level, every week.
 - District and village can inspect any time in case of necessity.

Every month end the Governor of Province has the right to organize the meeting to approve the report and plan of operation to improve the efficiency of the implementation activities.

7. Public Consultation and Information

The District shall disseminate effectively laws and regulations on social and service management, including official notice and poster at the public place, office, camp, shop and target groups.

PART 4: EFFECTIVENESS

8. All various services of 3 Provinces, Districts, Villages

Villagers and concerned organizations shall acknowledge and implement properly. These instructions become effective from the date of the signature.

Governor of Khammouane Province
President Resettlement Committee
Signed and sealed

Khambay Damlat

Annex 110-2: Spontaneous Movements of Peoples in and around the Theun Hinboun Project Area (1993-2003)

All infrastructure projects in the Lao PDR will be affected by the phenomenon of the spontaneous movements of people into project areas. This is due to the low standard of living, lack of adequate services and infrastructure and lack of work opportunities in many rural areas of the country. As the name of the new village beside the Theun Hinboun Project powerhouse, Khoun Kham or ‘Golden Opportunity’, implies, infrastructure projects offer people a unique opportunity for employment and improved services and infrastructure. The project area is an extremely mixed region containing a range of ethnic groups, including Upland Tai (Tai Mène, Tai Meuy, Tai Pao, etc.), lowland groups Lao Kaleung, Tai Khang, Phou Thay, Tai Lao) and recent arrivals, Hmong, that are spread along the rivers. Many of the villages are mixed although intermarriage is not common. Livelihoods are similar with swidden agriculture predominating along the Nam Theun and Nam Ngoung and rainfed paddy along the Nam Hai (Ovesen 1993; Sparkes 1995).

The experience of the Theun-Hinboun project clearly indicates trends for future infrastructure projects in the country. By looking at the table and maps provided below, one can observe two important trends:

1. Migration to roads (and camp areas)
2. Significant in-migration

The most notable example of movement towards roads is the village of Nahin, which was located just south of the powerhouse camp. From 1993 to 1996 the whole village relocated two kilometers to the north along Route 8, causing a considerable headache for developers and contractors. In 1993 there were 60 households or partial households attracted by the completion of the new road and project camp. The rest of the village relocated over the next three years. This was done in stages with the household splitting such that some members resided in the old village and carried on as farmers while others sold items from small stalls.

Another example is the village of Kengbit that was originally located on the northern bank of the Nam Theun near the dam site. Most of the project construction activities were on the southern bank, as were the camps. At first some villages rowed over in boats to sell produce, then a few built small structures and finally the whole village moved over in 1995. This also caused problems of crowding, sanitation and traffic safety for planners. Recent data indicates that the migration towards roads has been persistent even after the completion of Theun-Hinboun dam. The number of households in Kengbit increased by 63% from 1999 to 2004. There seems to be a trend that people prefer to live in bigger villages, because in the nearby villages of Kengbit the number of households has declined or villages have been abandoned.

The biggest village in the area, Khoun Kham, experienced a tremendous growth in population during the construction phase. The net population growth in Khoun Kham has been negligible for the last four years, while the surrounding villages still experience an increase in number of households. While some people moved back to their home villages after the construction phase was over, in-migration continued for roadside villages. Hence, the increase in surrounding villages and an apparent stable population in Khoun Kham. One example of this phenomenon is the combined village of Phon Lom and Katok where the number of households decreased during the construction, but has almost doubled over the last four years.

Other villages that have moved to the road along the transmission lines are Ban Nam Sanam, Nakham-Phonngam and Vangtakhong, the latter two being inside the designated rural development area. In 1993, only three of 25 villages were located along roads (Ban Thabak and Ban Lat Muang were on Route 8 and Ban Thasala had a logging road through it), while in 2000 eight of 16 villages were located beside roads. This means that the population now on roads has increased from approximately 15 percent to over 50 percent in seven years.

The villages along the Nam Hai/Hinboun River have not experienced an explosive population growth as many of the villages along Route 8. During the construction phase these villages experienced a small increase in the number of households, but from 1999 to 2004 the net population has been stable or even decreased in Vang Dao and Khongphat due to the continued flooding problems in the area.

There has been a fair amount of in-migration to villages along the roads during the construction of the project and as a result of the completion of Route 8. Some groups have returned but others have stayed on, partly because of the increase in logging in the Focal Zone by Vietnamese contractors who are customers for the various stalls and restaurants. Population influx has occurred mostly in Ban Thabak by the bridge and at Ban Khoun Kham where there are markets that service the surrounding areas and a school. Another tendency is that villages from the Nam Ngoung area seem to have moved towards the Route 8 and the dam site even after the completion of the project. Newly established village sites along the road have had considerable growth during and after the construction phase. In particular, the combined village of Thabak and Sopkat have doubled in terms of the number of households during the last 10 years.

Taken into account that the population growth in Lao PDR is 2,2 % (*Human development Indicators, UNDP 2003*) for this period, the growth in the Theun Hinboun area is significant. The average population increase over the eleven years of available data (1993-2003) in the areas has been between 5.5-6%, approximately three times the average population growth in the country.

Another development is the tendency for villages to be consolidated, either through spontaneous movement to roads and service centers or as part of the government's focal zone strategy. The number of villages in the project area has decreased from 25 in 1993 to 16 in 2000. There are three examples of two villages or parts of villages moving to new sites, two examples of smaller, more isolated villages merging with larger villages as well as two new administrative units that combine existing villages with the District intending to relocate one of them at a later date, merging them physically.

Some recent development to note in the project area are the devastating December 2002 flooding which virtually destroyed Phabang, extensively damaged Vanxousay and other villages in the vicinity. As a result, Kapap and Sop Nguang villages relocated to higher ground or joined other villages where planned water supply, housing plots and tree crops were organised for them by the project as part of its development strategy.

In contrast to the successes in livelihood development and reduction of swidden practices along the Nam Theun, poor results have been recorded in Nam Ngoung catchment.

Another detail is that gold panning at Kengbit may be part of the explanation why population levels continue to rise after project construction has been completed. Population at Nahin did not decrease after construction either, and this is due in part to the new school that is subsidised by the company. People are moving there for the school and other facilities as well as the road, and local government is encourage this relocation.

Theun Hinboun Project Site Area

| Villages | No.H 1993 | No. H 1995 | Ethnic Groups | No HH 1999 | Pop/HH 2003 | Ethnic Groups |
|-------------------|------------|-------------|-------------------------------|---------------------------------------|------------------|---|
| Nam Theun | | | | | | |
| Kengbit | 24 | 30 | Tai Khang (formally 'Kha') | 72 (new site) | 633/118 | Meoy, Men, Pao and 'Kha'/Lao Loum |
| Kapap | 46 | 39 | Tai Men | 40 | 416/86 | Tai Men |
| Sop Ngaung | 46 | 47 | Tai Men | 34 (with Vangsao) | | |
| Keng Kouang | 16 | 8 | Tai Men, Meoy and Pao | Abandoned | | Abandoned |
| Thabak | 83 | 97+ | Tai Men and Tai Pao | 141(combined new village site) | 1112/201 | Tai Men, Moey and Pao |
| Sopkat | 9 | 9 | Tai Khang | | | |
| Kagna | 19 | 20 | Tai Men and Tai Pao | 55 (combined new village site) | 834/161 | Tai Men, Tai Moey and Tai Kouane (Lao) |
| Nong Kok | ca.20 | ca. 25 | Tai Kouane, Men, Lao | | | |
| Lath Muang | ca.45 | ca. 55 | Tai Kouane, Men, Lao | 67 | | |
| Katok | 26 | 20 | Tai Men | 34 (combined new village site) | 389/64 | Nyung, Kouane, Men, Phou Thay Pune (<i>Lao Theung</i> ?) |
| Phonlom | 16 | 16 | Nyung, Senkap and Oh | | | |
| Nam Ngoung | | | | | | |
| Vangxao | 38 | 10 | Tai Men and Tai Pao | To Sop Nguang | 376/61 | Moey, Pao, Men, Kaleung, Bo, Phou Thay, Pune (<i>Lao Theung</i> ?) |
| Thasala | 24 | 31 | Tai Pao (Men/Moey) | 41 | | |
| Vang xouay | 28 | 27 | Tai Moey | 105 (new Admin Unit - Nonesonboun) | 442/69 | Pao, Hmong Kao, <i>Lao Theung</i> Lao Loum |
| Phiangdone | 24 | 20 | Hmong Khao (3 Tai Men) | | | |
| Phabang | ca.20 | ca. 30 | Mixed - mostly Tai originally | | 367/60 | Kouane, Hmong, Pao, Lao, Tai Phong, Phou Thay, Men |
| Nam Hai | | | | | | |
| Khounkham (Nahin) | 60 | 114 | Lao Kaleung? (Tai groups) | 231 | 1475/236 | Tai Pao, Men and Moey |
| Namsanam | 81 | 75 | Tai Men, Meoy and Pao* | 115 | 838/134 | Pao, Moey, Men, Phong, Lao and Phou Thay |
| Nakhom | 52 | 59 | Lao Kaleung (Tai groups) | 81 (combined new village site) | 960/134 | Pao, Kaleung, Bo, Oh, Moey, Men, Khmu, Nyung, Theng, Yao, Phou Thay, Tai Sô(Brou) |
| Phonngam | 7 | 17 | Tai Moey | | | |
| Thamtem | 26 | 35 | Lao Kaleung | 56 (combined new administrative unit) | 328/62 | Kaleung, Phou Thay, Bo, Tai Khang |
| Vangtakhong | ca.35 | ca. 40 | Tai Khang | | | |
| Tha (Kang) | 54 | 57 | Lao Kaleung | 79 | 582/89 | Bo, Kaleung |
| Khongphat | ca.25 | ca. 33 | Lao Kaleung | 43 | 238/38 | Kaleung, Men |
| Vangdao | 34 | 40 | Tai Khang | 68 | 216/34 | Bo Men |
| Done | 35 | 39 | Tai Khang | 43 | 307/49 | Kaleung |
| Phakonko | 35 | 39 | Tai Khang | 38 | 250/40 | Bo, Men |
| TOTAL | 907 | 1002 | | 1343 | 9763/1636 | |

* Several Phou Thay households moved in from Lak Xao Area