

Environment and Social Monitoring Report

Monthly Progress Report
January-June 2007 (1/3)

LAO PDR: GMS Nam Theun 2 Hydroelectric Project

Prepared by the Environment and Social Division of Nam Theun 2 Power Company, Ltd.

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NAM THEUN 2 POWER COMPANY LTD

**Environment & Social
Progress Report**

Period Jan 2007 to Jun 2007

This report is a compilation of the following E&S monthly progress reports produced by the E&S Unit of Nam Theun2 Power Co. Ltd.:

1. E&S Monthly Progress Report Jan 2007
2. E&S Monthly Progress Report Feb 2007
3. E&S Monthly Progress Report Mar 2007
4. E&S Monthly Progress Report Apr 2007
5. E&S Monthly Progress Report May 2007
6. E&S Monthly Progress Report Jun 2007

The reports have been edited for public release and are presented sequentially in this compilation.



Nam Theun 2 Power Company Ltd.

Nam Theun 2 Hydro-Electric Project

**Monthly Progress Report
covering activities in January 2007**

Part C : Environmental & Social Report

Table of Contents

1	GENERAL OVERVIEW	5
1.1	Staffing NTPC, GOL (EMU, RMU, DWG) and Partners.....	8
1.2	Unanticipated Project Impacts	8
1.3	Additional Plans and PIP updating	9
1.4	Grievance procedure	9
1.5	Communication	9
1.6	Procurement	9
2	SOCIAL ACTIVITIES.....	11
2.1	Physical Cultural Resources, Project Lands, Camp Followers.....	11
2.1.1	Physical and Cultural Surveys & Salvage	11
2.1.2	Project Lands	14
2.1.3	Camp Followers.....	18
2.2	Public Health Regional and Resettlement Programs.....	20
2.3	Nakai Plateau Resettlement	30
2.3.1	General	30
2.3.2	Infrastructure	34
2.3.3	Livelihood	43
2.4	Downstream Areas Development Plans	55
2.4.1	General overview	55
2.4.2	Baseline Studies, Monitoring	55
2.4.3	Reports & Meetings.....	55
2.4.4	Administration.....	56
2.4.5	GOL Coordination	56
2.4.6	Community Organization / Village Development Fund	56
2.4.7	Livelihoods.....	58
2.4.8	Infrastructure Related Activities	61
2.4.9	Fish Catch Monitoring	62
2.4.10	Photographs.....	64
3	ENVIRONMENTAL ACTIVITIES	67
3.1	General.....	67
3.2	Wildlife Programs.....	67
3.2.1	Fish Impacts in upstream and downstream river species	67
3.2.2	Wildlife Management and Monitoring Programme.....	67
3.2.3	Asian Elephant Program	67
3.2.4	Transitional Strategy for Reservoir Impoundment	68
3.2.5	Adaptive Management Programs	69
3.3	Water Quality Monitoring and Assessment Program	69
3.4	Environment Management Unit (EMU) Technical Assistance (TA)	78
3.5	EMO's activities linked to construction	79

4	INTERNAL AND EXTERNAL MONITORING.....	81
5	GOL RELATED ACTIVITIES.....	83
5.1	Watershed Management Protection Authority (WMPA).....	83
5.2	Optimization of Salvage Logging on the Nakai Plateau	83
5.3	Social issues (RMU & DWG)	83

General Overview

1 General Overview

Project lands:

- Infrastructure for frog, pig and mushroom production complete, stock provided and hands-on training of PAPs commenced.
- Negotiations regarding land development finalized with owners, approximately 20ha to be allocated to PAPs in February.
- Construction of 5 replacement houses in Oudomsouk almost complete.
- Contract awarded for 22 wooden replacement houses and one replacement bathroom in Gnommalat
- Compensation paid for removal of 36 obstacles within section 4 & 5 of the 500 kV transmission line corridor. All 36 obstacles have been removed.
- Decision to pay final compensation to all PAPs in Khamkeut District finalized.

Public Health:

- Construction work in all remaining infrastructure buildings is completed (details below).
- Half of the health facility furniture has arrived and distributed
- Number of training courses were held during the month:
 - Refresher training course on "MCH Program and Obstetric Register" for HC and district levels in four districts.
 - Refresher training course on "MCH Program" for VHCs, VHVs and TBAs
 - Peer education training for the youth group in Nakai
 - Training course on "Obstetric Register" for HC and district levels in the Nam Theun 2 Project areas and non-project areas (all HCs and DHs of KMN Province): Khamkeut, Hinboun, Thakhek, Xe Bangfai and Nongbok.
 - Training course on the use of "Hematology Analyzer" for DH and PH staff
- Conducting health checks and survey in SopMa and Khone Kaen Villages on 15-18 January 2007
- Entering the health checks and survey data of SopMa and Khone Kaen Villages
- Data of the six villages (Nongboua, So On, Bouama, Phonsavang, SopMa and Khone Kaen) is being clean and analyzed
- Prepare the population data of Done Village prior to conducting health checks and survey mid-February 2007.
- Continue and expand monthly Maternal and Child Health clinics in four districts and prepare the family health files at the same time. Currently, 126 clinics were held in 50 villages.
- Monthly meetings were held in the four districts
- Routine visits to the resettlement villages continued and population health monitored

Nakai Plateau resettlement

Infrastructure:

- Extra topographic survey and mapping: No activity during the month. However the setting out of house and agricultural plots is an ongoing activity by Resettlement Office personnel.
- UXO search and clearance: The contractor has maintained good progress during the month and completed the extra areas identified at Areas 1 and 2. From November 2005 to date the contractor and the Khammouane Military have found and destroyed, in the resettlement areas, 1,824 UXO items, including 1,041 bomblets. There is an ongoing contract for UXO community awareness and on-call roving response teams with the contractor. By the end of

December the roving unit have found and disposed of a further 1,878 UXO items including 1,698 bomblets. The communications channels between villagers and the response team continue to work very well, with any finds of suspicious items in community areas being quickly reported.

- Timber houses: The construction of timber houses in Area 16 (Pilot Village) for 8 families resettling from Ban Keng Gnao is completed. The contractors awarded the timber houses construction contracts at areas 17 Bouama, 18 Phonsavang and 19 Sop On have continued with the construction works and 364 houses are under construction (9 are fully completed). The contractor for the northern villages of Sop Phene was given notice to start work on 10 January and foundation work has commenced. The remaining contract for the northern villages of Nong Boua Kham have not yet started due to necessary additional preparation works on the site (site clearance, access etc.) and VFA timber supply problems. Contracts for the VG2 houses were awarded and contract signature is underway.
- Roads and tracks: There are now four road construction contracts underway. The three southern VG1 road and track contract is about 98% complete. The Southern Resettlement Road contract is about 95% complete. Three of the four northern resettlement village access roads and tracks are about 95% complete and the additional Area 13 is about 74% complete. The two southern VG2 contract is about 20% complete.
- Irrigation: Progress with the construction of the irrigation area extension at the Pilot Village for the Keng Gnao resettlers is satisfactory. Design of a pilot groundwater irrigation area at Sop On is nearly complete and bidding procedures will begin in February.
- Villages Layout: The preparation of preliminary resettlement village and agricultural layouts for the VG2 villages is continuing by NTPC personnel in consultation with villagers.
- Community Buildings: The bidding procedures for the construction of community buildings are underway and bid opening will be 9 February.

Domestic Water Supply and Sanitation : The boreholes drilling program has continued as per schedule and a total of 12 new productive wells were completed in 7 villages of Gnommalat District (Project land) and in the villages of Ban Nongbouakham (area 9) and Ban Sop Hia (area 7). In Nongbouakham, 3 boreholes were abandoned due to insufficient yield.

To date, 139 deep productive boreholes have been successfully drilled and developed on a total of 157 tentatives. All included, the total failure rate is of about 11.5%. However still sixty six (66) wells only are equipped with water lifting devices, due to further delay in the hand pumps procurement.

- Electricity: The design of the resettlement village electrification systems is underway and bidding procedures for the electrification of three villages will begin in February.

Livelihood Plans:

Forestry:

- first ordinary VFA Supervisory Management Board Meeting

Agriculture / Livestock:

The surface of permanent agricultural land for the "max of 3 ha" has been mapped for the south and center parts of the plateau (Khone Kaen, Ban Done, Sop On, Phonsavang, Boua Ma, Nong Boua). For all these villages, it is possible to allocate a surface of maximum 3 ha/family. During the two next months, the mapping will be made for the remaining villages.

Fisheries:

- No changes from previous report.

Community Development:

- Census of all resettlement villages completed, except Sop Hia/ Nam Nian (under revision), Oudomsouk.
- Warm clothes were distributed to Ka Oy villagers.

- Non-farm incomes supports were concentrated on strengthening village resettlement committees, establishing income activities groups. Vulnerable households identified and endorsed by the District Governor. Suitable income support for this group of people and individual vulnerable people is under implemented.
- Education support is ongoing. Non-formal and Nursery teacher training were organized.

Downstream Program:

- Additional staff joined the Downstream Program and a new office opened.
- Preliminary field investigations to assess the feasibility of mini-polders in 5 villages were conducted.
- Field visits were made to each of the pilot villages to assess water supply & sanitation facilities.
- Livelihood development activities continued.
- 59 piglets were distributed to pilot villages.
- A 10 day training course in handicraft production was held.

Environment:

- Water Quality sampling (22-27 January 2007) and analysis.
- Ongoing Interim Human Elephant Conflict (HEC) Monitoring and continued contractual activities for Elephant Program Phase II.
- Review and revision of the Inception Report for the Wildlife Management and Monitoring Program.
- Ongoing contractual activities for the environmental education component of the Transitional Strategy.

Monitoring:

- POE mission from 6 to 28 January 2007

1.1 Staffing NTPC, GOL (EMU, RMU, DWG) and Partners

NTPC E&SD Staffing

Legend:

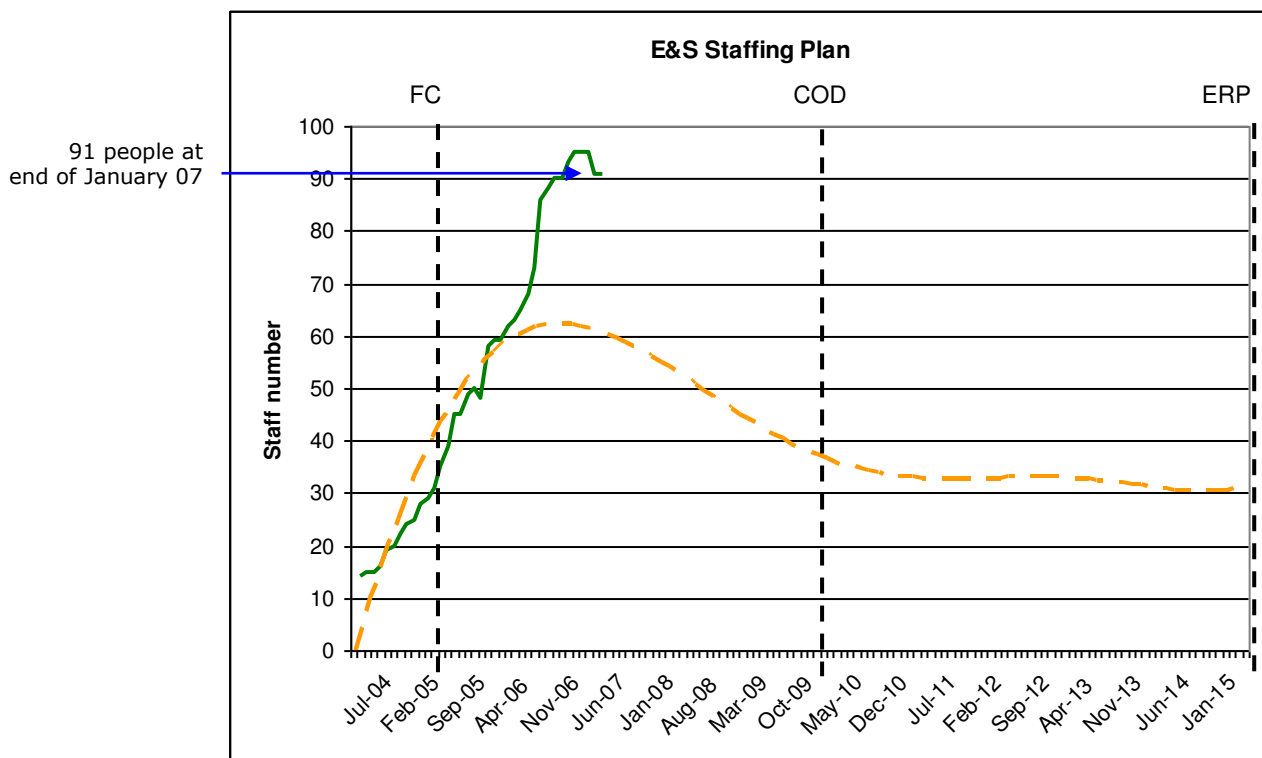
Scheduled staffing plan

Actual staff recruitment

FC = Financial Close

COD = Commercial Operation Date

ERP = End of Resettlement Period



In addition to NTPC staff, individual consultants are working full/part time with NTPC teams

The construction of the Nakai Residential Complex in Oudomsouk for use by the NTPC E&S team is on-going (complex of 54 rooms/studios/apartments and 6 villas).

EMU Staffing

ESL's Deputy Project Manager resumed management of TA.

RMU and DWG Staffing

No change from previous report.

Partners

No change from previous report.

1.2 Unanticipated Project Impacts

No change from previous report.

1.3 Additional Plans and PIP updating

PIP / AIP

No change from previous report.

Additional Plans

No change from previous report.

1.4 Grievance procedure

No new claims were received during the month of December on the Nakai Plateau. However, work was done to follow up on claims received prior to December.

The nine claims were received in Gnommalat District last month were reviewed. Three claims have already been resolved, with others pending further investigation.
Eight new claims were received in Gnommalat District during November.

1.5 Communication

No change from previous report.

1.6 Procurement

No change from previous report.

Social Activities

**Physical Cultural Resources, Project Lands,
Camp Followers**

2 Social Activities

2.1 Physical Cultural Resources, Project Lands, Camp Followers

2.1.1 Physical and Cultural Surveys & Salvage

Based on the findings of the baseline PCR survey and the impact assessment advice provided by the HC, PCR were separated into four PCR plans: (i) movable PCR; (ii) PCR within construction areas; (iii) PCR within the Reservoir; and (iv) PCR along the Xe Bangfai.

Movable PCR Plan

To date, the Institute of Cultural Research (IoCR) has implemented this plan which consisted of a series of consultations and management measures. Management measures included (i) securing PCR (Buddha images) in situ; (ii) relocating PCR to the security of the temple; and (iii) improving security and awareness at the temples to help prevent theft.

No special remarks for this reporting period.

PCR within Construction Areas Plan

To date, the Department of Museums and Archaeology (DMA)/IoCR has implemented this plan which consisted of a series of consultations and management measures. Management measures included (i) appeasement ceremonies; (ii) relocation of PCR (cemeteries and stupas); and (iii) redesign of the Project to avoid impacts from construction.

Activities during January 2007 include:

- The HC requested NTPC to confirm whether the bamboo bridge over the Nam Phit represented a site of PCR significance. On 27 January 2007 the IoCR conducted consultations in Ban Mahaxai and Ban Nakio located either side of the Nam Phit bamboo bridge. The villagers of Ban Mahaxai and Ban Nakio have confirmed the findings of our original PCR Baseline Survey in 2004, the Nam Phit bamboo bridge does not represent a site of PCR significance, and construction activities can continue on the Downstream Channel confluence without the need for an appeasement ceremony.

PCR within the Reservoir Plan

To date, IoCR has completed consultation for all resettlement villages and completed management measures for almost all VG1 PCR sites.

Activities during January 2007 include:

- With the exception of two temple sites, the IoCR have conducted consultations and the requested management measures for the remaining PCR sites of VG2. Consultation and management measures were conducted for PCR sites of (i) Thalang; (ii) Nakai Tai; (iii) Nakai Neua; and (iv) Ka Oy. Activities included (i) appeasement ceremonies for spirit sites; (ii) appeasement ceremonies for cemetery sites; and (iii) identification of new cemetery sites (see table below).
- A Buddhist ceremony will be conducted for the remaining two temple sites of VG2 (plus the temple site for Ban Done VG1) prior to their relocation.

Custodian	PCR Site	PCR Type	Management Measures
Ka Oy	PCR/IN/100/33	Spirit Site	Appeasement ceremony
	PCR/IN/100/30	Cemetery	Appeasement ceremony
Nakai Neua	PCR/IN/100/55	Spirit Site	Appeasement ceremony
	PCR/IN/100/53	Cemetery	Appeasement ceremony
	PCR/IN/100/56	Temple	To be scheduled with resettlement activities
Nakai Tai	PCR/IN/100/57	Cemetery	Appeasement ceremony
	PCR/IN/100/57	Cemetery	Appeasement ceremony
Thalang	PCR/IN/100/6	Cemetery	Appeasement ceremony
	PCR/IN/100/12	Temple	To be scheduled with resettlement activities

PCR along the Xe Bangfai Plan

The plan for PCR along the Xe Bangfai will be implemented in coordination with the Downstream Program. One historic site, five spirit sites and twelve temples are located on the banks. The temple sites were surveyed to prioritize monitoring effort and to identify any requirement for pre-operations management measures (relocation of infrastructure or bank protection).

Activities during January 2007 include:

- NTPC have reviewed and submitted their comments on the draft report which documents the archaeological salvage activities for the historic kiln site located on the banks of the Xe Bangfai. DMA are incorporating the comments into the report which is under its second revision.

Chance Find PCR

Activities during January 2007 include:

- On 18 January 2007 the HC notified NTPC of a chance find PCR stupa that had been identified within the Spoil Disposal Area DT 112 E along the Downstream Channel. During the period of 25-27 January 2007, the IoCR conducted the necessary consultation and appeasement ceremony to relocate the stupa outside the spoil area. The custodians of the stupa are now satisfied with the compensation measures and agree to the commencement of spoil disposal activities.

PCR Monitoring

On 11 January 2007, the monthly PCR monitoring was undertaken by the EMO. The following table presents the villages and their PCR included in the PCR monitoring.

Village	PCR ID	PCR Type	Issue
Phonsa-at	PCR/IN/49a/1	Cemetery	No issue
Nong Khene	PCR/IN/49b/1	Cemetery	No issue
	PCR/IN/49b/1	Cemetery	No issue





Examples of PCR activities undertaken during January 2007: Consultation at Ban Thalang (top left); appeasement ceremony for the spirit site at Ban Ka Oy (top right), appeasement ceremony at the cemetery of Nakai Neua (bottom left); appeasement ceremony at Ban Thalang cemetery (bottom right)

2.1.2 Project Lands

Main events in January:

- Infrastructure for frog, pig and mushroom production complete, stock provided and hands-on training of PAPs commenced.
- Negotiations regarding land development finalized with owners, approximately 20ha to be allocated to PAPs in February.
- Construction of 5 replacement houses in Oudomsouk almost complete.
- Contract awarded for 22 wooden replacement houses and one replacement bathroom in Gnommalat
- Compensation paid for removal of 36 obstacles within section 4 & 5 of the 500 kV transmission line corridor. All 36 obstacles have been removed.
- Decision to pay final compensation to all PAPs in Khamkeut District finalized.

2.1.2.1 Baseline Studies

The collection of baseline study data is complete.

2.1.2.2 Meetings & Consultations

Coordination meetings with the DCWG and RMU continued during the month of January 2007.

2.1.2.3 Compensation

A summary of compensation payments which were completed during the month of January 2007 is included in the following tables:

Final Compensation

LPA	Description	Amount (Kip)
18	Move house	7,950,000
18	Land acquisitions ODS	52,629,565
18	Move DAFO nursery ODS	12,089,000
30	less 10% PAPs	3,774,900
33	less 10% PAPs	12,180,400
34	less 10% PAPs	247,585,627
35	less 10% PAPs	181,998,975
36	less 10% PAPs	49,536,047
40	less 10% PAPs	144,388,224
42	less 10% PAPs	77,140,000
54	TL land payments - Kaysone	44,904,500
54	TL land payments – XBF	9,423,020
54	TL land payments – XBL	86,243,000
54	TL obstacles removed	528,107,860
26a	Dok Pek factory move PPP	30,000,000
38a	New house (build own)	40,027,500
38b	Move house	9,405,000
6b	Move house	4,000,000

1-year Compensation

LPA	Description	Amount (Kip)
1a	interim compensation PAP<10% (land value not available yet)	13,683,000
6b	interim compensation PAP<10% (land value not available yet)	5,613,000

Other Compensation

LPA	Description	Amount (Kip)
RAP3	Transitional Assistance	9,287,500
51	Disturbance allowance	900,000
38b	Business Disruption 2 months	30,000,000

TOTAL PAID, January 2007

1,604,244,118

PAPs receiving cash compensation are provided with family financial management training. Special attention is given to PAPs receiving large sums of money for final compensation to ensure they understand the concept of using the money to invest in ways to generate income. During January 178 PAPs (including 97 women) were involved in the training, which include PAPs who are less than and greater than <10% affected. The training consists of family level financial planning and management, basic accounting, information on using the services of the local banks and how to perform family level small business.

In addition to the required presence of RMU, DWG and NTPC at the time of cash compensation payment, representatives from local banks were present to encourage PAPs to save a portion of their money in either a savings account or term deposit (up to 10% p.a. interest) as a means of heightening the security of their cash.

The next payment through RMU will commence in early February 2007 when the payment for RMU invoice #4 is transferred to the RMU bank account. The amount of this invoice is around 2.7 billion kip.

- Infrastructure

RAP 2 - Oudomsouk

The contractor has substantially completed the 5 replacement houses. Most of the PAPs have chosen to move into their new homes as the construction is completed. Some minor work with the installation of electricity is required to be carried out by EDL to complete the construction.

RAP3 – Gnommalat

Evaluation of bids for 20 houses in Gnommalat was completed and the contract C817 was awarded. The contractor for C817 is now preparing quotations for two additional houses, some changes to bathroom design and site preparation work so that these activities can be included in VO#1 for C817. The contractor have inspected all the house construction sites and will be able to commence construction in early February as they have already begun sourcing the construction materials from local suppliers.

Borehole drilling has commenced for the following locations: Gnommalat horticulture, Gnommalat Neua (post office), Gnommalat Tai (Sibounheuang Temple), Thong Mang, Phone Lad Khouay, Lao Na Ngam, Sangkeo. Five of the seven locations have been completed during January.

Contract C971 for construction of 45 dug wells in the Gnommalat area was prepared during January. Bidding has not commenced yet.

Repairs to the Ban Sangkeo school and construction of a village meeting hall are nearly complete. Materials for construction of a temporary crossing over the downstream channel at km1+025 have been made available for Head Contractor to undertake construction.

RAP5 – Transmission Lines

The obstacles in the 30m each side of the 500KV TL corridor have been removed successfully prior to the dates required for stringing. 36 obstacles were compensated for and removed from the corridor, which involved 25 PAPs.

Evacuation of residents from four houses adjacent to transmission towers T4/3, 4/15, 4/23 and 5/27 during their erection. The Head Contractor required evacuation between 6am and 6pm to secure against the possibility of falling objects. The residents were cooperative and received 500,000 kip per family for their inconvenience.

- Livelihood restoration

Livelihood restoration programs continued during January for PAPs whose livelihood is more than 10% affected by project activities. Planning for expansion of activities in 2007 is ongoing to enable funding to be available at the right time to take full advantage of the upcoming wet season. Specific activities implemented are as follows:

Rice Improvement: Preparations for the 2007 wet season rice program are now under way. All PAPs and non-PAPs (around 200 families) who own land in the Thathod Irrigation scheme command area are being encouraged to become involved. The improvement in yields able to be achieved through this program is hoped to eventually make available more land for redistribution to PAPs.

Fish cultivation: Fish raising involving 9 PAPs continued. Where irrigation water isn't available, water is pumped to keep the ponds filled. The cold weather reduces the feeding activity of the fish and growth is slower. Fish up to 700g are being consumed although the majority of them are about 200g. Quantities of fish harvested are recorded by PAPs as well as the food provided (concentrate, rice bran and broken rice mixed) to evaluate the fishpond productivity.

Non-Timber Forest Products: Medicinal plant cultivation continued with water and fertilizer applied to the 180m² plot. Plants are 3 types: Lao, Vietnamese and Chinese. Jatropha planting for 2007 is being planned with 463 households now interested in participating bringing the total area to 316 hectares in Gnommalat and Mahaxai. The 17 households growing rattan remain interested. 3,620 vines were planted in 2006 and most have remained alive without any support during the dry season.

Orchid cultivation: Orchid production requires additional materials and technical support to continue propagation. However, the consultant is not available to provide these inputs until April 2007.

Vocational training: No activity currently.

Forage and Livestock: Construction of livestock pens is almost complete. Forage production is slow because of lack of water, only small areas have been irrigated in January since financial support to the 5 PAPs watering their plots stopped this month and many wells have become dry. 28 additional PAPs have suitable land and have declared their interest in participating in 2007. Preparation of materials requirements is ongoing and land preparation will be implemented before the start of the wet season. The irrigated dry season forage and soil improvement program has established 3500m² of fields with mixed forage species. These will be harvested for stall feeding ruminants and swine then ploughed into the soil as mulch prior to the wet season rice crop being planted.

Frog & pig raising: Construction of 18 pig pens and 5 frog tanks has been completed. 63 new PAPs have declared interest in participating in pig production in 2007 and 41 new PAPs wish to participate in frog production. Piglets and frog starting stock have been provided to the 2006 participants who are undergoing hands-on training on how to manage these income generating assets.

Mushroom cultivation: Construction of the 10 mushroom houses and 2 preparation areas is complete. Spore production is proceeding but is slow due to the cold weather experienced during January. Early February will have the first batches of mushrooms installed.

Horticulture: MHX horticulture site is producing vegetables grown from seedlings produced in a temporary nursery, this produce is now being sold at local markets. Gnommalat horticulture site has been cleared, ploughed and fenced. The borehole has been completed and delivery of a solar-powered pump awaits construction of a secure pump house. Materials for greenhouse will arrive in early February and construction will proceed with technical support from the supplier. After Gnommalat greenhouse establishment, the Gnommalat and Nakai horticulture sites can be supplied with seedlings and planting in these areas can begin.

Replacement land: The 45 hectare area has been divided in half between the Project (PAP land) and the original owners of this land. Community consensus has been reached on where to demarcate the boundaries and which owners' are entitled to what area and in which place. The next task is to distribute the PAP land to individual families and prepare the PAPs and their land for planting of arable and tree crops in the early stages of the wet season.

Project Lands Photographs for the month of January 2007



Mushroom activities



500kV Transmission Line consultations



Frogs supplied to PAPs



Consultations in Khamkeut District

2.1.3 Camp Followers

2.1.3.1 Population Management: Monitoring of labor and population movement:

This activity is placed under direct control of RMU since January 2006.

2.1.3.2 Human Trafficking Control

This activity is placed under direct control of RMU since January 2006.

2.1.3.3 Infrastructure Development

No changes from previous report.

2.1.3.4 Public Health

STIs and its control:

No changes from previous report.

2.1.3.5 Traffic Safety and Regulations

Development of regulations / Review and strengthening of regulations: No changes from previous report.

Road Safety: No changes from previous report.

2.1.3.6 Social Security and capacity building for local agencies

Support and technical assistance for District Police Offices:

Establish inter-sectoral Task Force on Population management and security: No changes from previous report

.

Social Activities

Health Programs

2.2 Public Health Regional and Resettlement Programs

Following major activities were undertaken during January 2007:

- Construction work in all remaining infrastructure buildings is completed (details below).
- About half of the health facility furniture has arrived and distributed
- Hematology machine arrived during the month and was used for health checks at DH Nakai.
- Number of training courses were held during the month:
 - Refresher training course on "MCH Program and Obstetric Register" for HC and districts completed in four districts.
 - Refresher training course on "MCH Program" for VHCs, VHVs and TBAs
 - Peer education training for the youth group in Nakai
 - Training course on "Obstetric Register" for HC and district levels in the Nam Theun 2 Project areas and non-project areas (all HCs and DHs of KMN Province): Khamkeut, Hinboun, Thakhek, Xe Bangfai and Nongbok.
 - Training course on the use of "Hematology Analyzer" for DH and PH staff
- Health checks and survey was conducted in SopMa and Khone Kaen Villages on 15-18 January 2007
- Data Entry in progress for health checks and survey data of SopMa and Khone Kaen Villages
- Data of the six villages (Nongboua, So On, Bouama, Phonsavang, SopMa and Khone Kaen) is being cleaned and analyzed
- Preparation of the population data is in progress for Done Village prior to conducting health checks and survey in mid-February 2007.
- Continue and expand monthly Maternal and Child Health clinics in four districts and prepare the family health files at the same time. So far we have held 126 clinics in 50 villages.
- Monthly meetings were held in the four districts
- Routine visits to the resettlement villages continued and population health monitored

Abbreviations used in this section:

DCD	District Community Development
DH	District Hospital
DHO	District Health Office
HC	Health Center
HPMD	Health Properties Management Division
HPMU	Health Program Management Unit
ICHC	Integrated Community Health Center
IFMT	Institut Francophone pour la Medecine Tropicale
IP	Institut Pasteur
MCH	Maternal and Child Health
MOH	Ministry of Health
NCCAB	National Committee for Control of AIDS Bureau
ORPP	Outbreak Response Preparedness Plan
PH	Provincial Hospital
PHO	Provincial Health Office
TMRC	Traditional Medicine Research Center
UNPFA	United Nations Population Fund
VHC	Village Health Committee
VHV	Village Health Volunteers
WHO	World Health Organization

Public Health Infrastructure & Equipment, vehicles			
Buildings	Progress during the month	Progress to date	
Consultancy services for preparation of bidding document		100%	Delayed consultancy with Ministry of Health leading to delayed start infrastructure programs
Khammouane Provincial Hospital		100%	Only refurbishment of emergency ward. The balance according to hospital needs is transferred to medical equipment and ambulance
District Hospital	45%	95%	Refurbishment works in Nakai, Mahaxai and Khamkeut hospitals completed in July 2006. Second half of renovation works of the roof for the Khamkeut District Hospital completed in Dec. 2006. GMLT District Hospital new construction was completed in Jan. 2007. Proper land levelling is being planned. Water pump awaited
Health Center	20%	100%	Refurbishment work for Nadou and Kengdaeng Health Centers completed in July 2006. Construction for Khetphid and Nasok HCs are completed in Jan. 2007. Water pumps awaited Contract for Nongbouakham Integrated Community Health Center (IHC) - in Resettlement Health Program - new construction has been delayed. (Note: Two additional IHCs belonging to health program are under Infrastructure budget)
Infrastructure maintenance			Most of the infrastructure maintenance will only be required after 2008 onwards.

Medical & Other Equipment	Progress during the month	Progress to date	
Medical and Lab Equipment			
Consultancy for preparation of bidding document		100%	Delayed consultancy with Ministry of Health leading to delayed procurement program
Medical Equipment (KMN Provincial Hospital, 4 District Hospitals and 6 Health Centers)	10%	95%	<p>Lot II items have been distributed to 4 district hospitals (DHs)</p> <p>Lot I, III and IV arrived and distributed to all health facilities. X-Ray machine expected to arrive in January 2007 - delays</p> <p>Installation of medical equipment and training program has had problems and suppliers have failed to arrange for the same according to the contract. Discussions will be held with the suppliers to remedy this without delay.</p> <p>In addition, some biochemistry and laboratory equipment is on order as well. Further supply of medical equipment will be assessed according to need after completion of the construction work.</p> <p>The new hematology unit has arrived and was used for the health check samples in Nakai. The machine will be used exclusively for Health Checks until all the health checks are completed.</p>
Ambulance Equipment and other sur-charges		90%	All ambulances have been installed with the emergency equipment.
STIs Program	4%	25%	Develop STI services at provincial and district levels, including introductory workshops and drug revolving funds for STI Program. (This item originally was budgeted under medical equipment hence in this section)
Non-Medical Equipment			
Photocopier	0%	100%	One for each DHO and the Khammouane PHO
Computers & printers			Two sets to each district health office and two sets to Khammouane Provincial Health Office. One printer for PHO in September 2006
Audio-visual equipment (television and DVD player)			Internet cards for e-mail and internet services were provided to all four districts and the province
Fridge, water cooler, LCD projector, fax and other items			One set of television and DVD player to district health offices and health centers for health education program. Additional BCC equipment will be provided in 2006-07
Hospital beds (Khamkeut)			One set to each district health office and district hospital and a fridge to Khammouane Provincial Health Office. Two fax machines for Nakai and Mahaxai DHOs in September 2006
Hospital furniture (KMN Provincial Hospital, 4 District Hospitals and 6 HCs)	50%	50%	30 steel beds with mattresses to Khamkeut District Hospital
Bed Nets, including impregnation	0%	30%	<p>Half of the health facility furniture has arrived and distributed.</p> <p>2,875 nets for 21 villages of Mahaxai, 3,011 nets for 35 villages of Gnommalat, 3,234 nets for 15 villages of Nakai and 2,364 nets for 15 villages of Khamkeut. Nets will be supplied regularly during the life of the project. Vector control measures/equipment will be provided according to need.</p> <p>Total: 11,500 bednets and 22,710 tablets of Supatab</p>
Other package non-medical equipment			Other package of non-medical equipment will be provided according to the need after completion of refurbishment and new construction work
Road safety communication			This money will be spent in conjunction with overall road safety program in NTPC project areas.

Medical & Other Equipment	Progress during the month	Progress to date	
Vehicles			
Motorbikes	0%	70%	12 motorbikes (6 from project and 6 donated by NTPC) distributed to DHOs and HCs. Plans of replacement mid project. Remaining 30% of funds are for replacement of bikes during the life of the project.
4WD Pickups	0%	80%	Four 4WD pickups procured and distributed one each to Nakai, Mahaxai, Gnommalat Districts and one to Khammouane Provincial Health Office. Vehicle use policy has been developed in conjunction with the GOL for exclusive use of health work.
Ambulances	25%	-19%	All four ambulances have been handed over.

Public Health Program - including awareness programmes			
Supplies - Drugs, kits, forms and manuals.	Progress during the month	Progress to date	
Drug and Medical Supply			
KMN Provincial Hospital		38%	Drug revolving fund for emergency is ongoing and is supervised regularly.
District Hospital		83%	Drug revolving fund for four districts is ongoing and is supervised regularly
Health Center		79%	Drug revolving fund for four health centers is ongoing and is supervised regularly
Community level (Village Drug Revolving Fund)		41%	Drug revolving fund for 68 villages is ongoing and is supervised regularly.
Community level (TBA kits)		67%	Traditional Birth Attendant kits to 96 trained TBAs is ongoing and is supervised regularly
Office and Vehicle Operating cost			Operating costs have been transferred to 4 DHs/DHOs and KMN PH/PHO 2 time per year, including health centers.
KMN PH/PHO			Progress in percentage will be more realistically calculated at quarterly intervals
DHs/DHOs			Progress in percentage will be more realistically calculated at quarterly intervals
HCS			Progress in percentage will be more realistically calculated at quarterly intervals
Others (training materials, printing forms, etc. ...)			Including BCC materials Obstetric registers in print 2007 calendar as health education materials – was distributed to villagers, HCs, DHs/DHOs, PHs/PHOs, NTPC and International Agencies related to health working in Laos. Health checks and survey forms
Health Education and Awareness Program	Progress during the month	Progress to date	
STIs including HIV/AIDS	5%		<p>Apart from regular health education program in health facilities, special health education and awareness activities are organized on special events such as World AIDS Day and boat racing festival.</p> <p>Substantial numbers of people from the community attend these public events - 43 public event sessions were held in four districts and in Thakhek until October 2006.</p> <p>Preparation for World AIDS Day for NTPC and related staff is in progress</p>

Public Health Program - including awareness programmes			
			<p>PCCA is organizing secondary school awareness program in Thakhek for the forthcoming World AIDS Day (WAD). They will also organize awareness and education program on STIs for service women in Thakhek.</p> <p>DCCAs are organizing special WAD programs in their respective districts.</p> <p>Introductory Workshop; Orientation Workshop; Preliminary interview and medical checks up of service women and setting up STI services in four districts</p> <p>Peer education training program – youth group in GMLT District on 7-10/11/06 and in Nakai on 16-19/01/2007 and STI treatment for private pharmacies in Mahaxai on 2-3/11/06.</p> <p>Peer education training program for High School students conducted in Khamkeut on 19-22/12/2006.</p> <p>Conducted World AIDS Day program in five districts and staff of NTPC and partners.</p> <p><u>To date: 117 sessions and 27,436 participants</u></p>
Operating cost for PCCA/DCCA	0%		<p>PCCA and DCCAs are responsible for carrying out education and awareness activities in the area of STIs including HIV/AIDS. Their capacity is limited but slowly improving. It is important to support them in this program for sustainability.</p>
Relocation/medicinal plants			<p>Initial work was carried out. Further studies will be carried out in conjunction with National Traditional Medicinal Research Center after resettle population move into their permanent housing.</p> <p>Traditional Medical Research team visited GMLT and Nakai Districts for experimentally growing Artemisinin annua and identifying other medicinal plants for livelihood purposes. Project jointly conducted under the supervision of Agriculture, VFA and Project lands and coordinated by HPMU.</p> <p>Preparation for training of traditional healers is in progress with Traditional Medical Research team, postponed on request from TMRC from Dec. 2006 to early 2007 - awaited</p>
Consultancy fees (Road safety, PHC, psychosocial, etc.)			<p>This money will be spent in conjunction with overall road safety program in NTPC project areas.</p>

Strengthening Human Resource in Public Health			
Supervision and Monitoring	Progress during the month	Progress to date	
Incentive	100%		Incentive were distributed two times to provincial, district and health center in all project target areas, while only one time were provided to village health workers since they were trained in the past few months. Discussions are being held to find ways to link these incentives in future to performance. The third incentive program - T-shirts and briefcases arrived and has been distributed to provincial, district, health center staff and village workers in the HPMU project areas
Field visits for supervision and support			Resettlement Health Program - bi-weekly visits to all resettlement sites for review of environmental and health situations, including emergency care for any patients. Regional Health Program - through integrated outreach program consisting of health center, district health and HPMU staff visiting health centers and villages.
Integrated Outreach Program			Integrated outreach work consist of more comprehensive health education and awareness on a number of health topics such as maternal and child health, STIs including HIV/AIDS, malaria, diarrhea, respiratory infections, hygiene and sanitation, road safety To date: 350 sessions and 19,317 participants
Strengthening Health Service Delivery	15%		Regular review of service delivery to district hospitals and health centers by district health staff. Emergency medical care/referral system training program organized through Provincial Hospital for the four District Hospital staff Emergency obstetric care referral system is also developed and will be reviewed quarterly Supervision was carried out in all health facilities including Provincial Hospital for EOC and new obstetric register use Maternal and Child Health service is being organized at monthly intervals for resettled populations. This will be followed by all health centers in their respective villages. HPMU staff provided variable levels of supervision and training to health center staff in different locations in conducting monthly Maternal and Child Health clinics in 50 villages (cumulative number of monthly MCH clinics held = 126)

Training	Progress during the month	Progress to date	
Community level	20%		<p>Seven TBA training sessions (96 participants), seven VHV training sessions (101 participants) and seven VHC training sessions (66 participants). Periodical training and refresher program will continue throughout the life of the project.</p> <p>Refresher training program</p> <p>Soya milk production training</p> <p>STIs training program for private pharmacies and peer educator program</p> <p>To date: 40 sessions and 769 participants</p>
Health Center, District and Provincial levels	20%		<p>Five training sessions including three TOT (MCH, STI, TBA and peer educator) (102 participants)</p> <p>Training sessions for all level of health workers will be repeated at periodical intervals depending on the subject matter.</p> <p>Laboratory services training</p> <p>STI Program - Peer educator training in 4 districts</p> <p>Emergency medical care/referral system training program organized through Provincial Hospital for the four District Hospital staff.</p> <p>Training course on the use of "Obstetric/Birth Register" for HC and DH staff in Khammouane Province</p> <p>To date: 18 sessions and 229 participants</p>
Long Term	%		<p>Two long term training session, namely emergency medicine and ICHC of three months (9 participants) and one month (two participants) respectively. Another 3-month course for Khamkeut District</p> <p>Long term training for X-Ray and Ultrasound in Vientiane for Gnommalat and Khamkeut District Hospitals during July to September 2006 is completed.</p> <p>One-month training on Maternal and Child Health in Vientiane for Kengdaeng Health Center staff will be completed on 5th October 2006.</p> <p>Emergency medicine training continue for Khamkeut in Vientiane – completion December 2006</p> <p>To date: Six sessions and 17 participants</p>
Study Tours		90%	<p>All district hospital and health center staff were taken for study tours to Integrated Community Health Center (ICHC) in Vangvieng and Taleo (59 participants)</p> <p>To date: Three trips and 59 participants</p>
Workshop on how to identify psychosocial/drug abuse problems			<p>It requires different methodology to assess the situation. The focus group discussions in future will reflect on this social problem if it exists in the communities</p>
On the job training			<p>This activity is incorporated with on the job training during supervision and support.</p> <p>TOT course on peer education in Thalad</p> <p>STI training program – treatment and lab for KK, GMLT and MHX DH staff</p> <p>Biochemistry training for Khamkeut and Khammouane PH</p> <p>Refresher training courses on "Obstetric register and Maternal and Child Health" for HC, DH and DHO staff conducted in four districts.</p> <p>To date: 13 sessions and 89 participants</p>

Meetings	Progress during the month	Progress to date	Monthly meetings are held in each district and Khammouane Provincial Health Office. These meetings provide an opportunity for educational updates on conceptual and methodological aspect of health service delivery along with the achievements and future plan
Create Outbreak Detection and Response Preparedness Unit		100%	Implementation of the National Avian Influenza awareness program in conjunction with the provinces (Khammouane, Bolikhamxay and Savannakhet) To date: Two meetings and 35 participants
Meetings at provincial and district levels			Regular meetings at provincial and district levels To date: 81 meetings and 1,317 participants
Quarterly meeting at HC (VHVs, HCs)	30 %		The first quarterly meeting at HC was held in four districts: Khamkeut (1), Nakai (2) and MHX (2) The second quarterly meetings were conducted in combination with the refresher training courses for VHCs, VHVs and TBAs in four districts To date: 12 meetings and 380 participants.
Health education materials and activities - design and production	10%		Support under health education program for all health facilities in the project areas. Number of IEC materials have been developed/ copied and distributed to district, health center and villages like posters, VCDs and DVDs. 2007 calendar as an educational material was distributed to the project villages, districts, provinces, the international agencies related to health working in Laos and all division of NTPC and its partners
Develop the procedures for the referral system			Referral system methodology being followed up
Zonal Health Committee Meeting (4 x per year for each ICHC; and for DH)			Same as quarterly meeting
Adapt ICHC accounting and management system			New system will not be introduced. Instead, GOL system similar to other areas in the province will be implemented

Public Health Monitoring and Surveillance	Progress during the month	Progress to date	
Task force meeting			To be redefined as the present definition is difficult to define.
Routine data collection/HIS			Routine data collection and collation. (Note: considerable backlog to be completed)
Outbreak Response Preparedness		100%	Report published and distributed in English. Lao version with the Ministry of Health for adoption and translation
Outbreak Response Operational		10%	Translation of English report and distribution, followed by training workshops.
Scientific support			Scientific support and areas of support are being redefined. Possibility of getting assistance from additional sources.
Existing data analysis 2004		100%	Completed
Midterm survey	0%		Will be carried out in 2008-09, with planning starting in mid-2008
Special surveys	15%	40%	Health checks and survey in Nongboua and Sop On Villages completed. Health checks and survey conducted in Bouama and Phonsavang Villages on 13-18 November 2006. Health checks and survey conducted in SopMa and Khone Kaen Villages on 15-18 January 2007 Data for Nongboua, Sop On, Bouama, Phonsavang, SopMa and Khone Kaen is being cleaned and analyzed.
Monthly MCH clinics		50%	Monthly MCH clinic for Nongboua and Sop On villages are regularized now. The monthly MCH clinics will be extended to the regional health program. Health center staff are being trained to conduct this activity at monthly interval in all villages. HPMU staff provided variable levels of supervision and training to health center staff in different locations in conducting monthly Maternal and Child Health clinics. Currently, 126 clinics were held in 50 villages.

Equity Fund	Progress during the month	Progress to date	
5% of total budget			With the fast track resettlement program in operation, there has been an increasing need for emergency provision for individuals. To date 15 individuals have been referred and paid for treatment in Provincial hospital Thakhek.

Social Activities

Nakai Plateau Resettlement

2.3 Nakai Plateau Resettlement

2.3.1 General

January was another month of consolidation of the villages in transition – the eight villages that were established prior to and during the previous wet season. Access roads to all the villages were maintained in good condition for work to proceed smoothly

Excellent progress was again made in both the northern and southern resettlement area access roads as well as the Southern Resettlement Road to Area 22, on the southernmost tip of the plateau. Significant numbers of small traders can be seen traveling to and from the villages to engage in commercial activities, and many villagers can be seen traveling to and from Oudomsouk – for example students traveling in to high school.

The relocation of Ka Oy village to Transition resettlement was carried out during January 2007. It was conducted over a period of 2-3 weeks and involved 30 households moving to Sop On, and 3 households to Ban Done. These resettlers have now all moved in to their temporary houses on their permanent housing plots, and have commenced to receive the benefits of transition resettlement.



A family leaves Ka-Oy, with everything packed into an NTPC truck.

The major technical challenge facing the physical transition villages at present remains the quantity of sawn timber provided to building contractors to enable the completion of permanent houses. Good progress has been made in addressing the issues through management/GOL consultations at Nakai as well as high level GOL consultations. Good progress has been made in the following areas, which is expected to contribute a streamlining effect to the supply of timber:

- Better cooperation from housing contractors
- Re-design of houses to accommodate timber already delivered as much as possible
- Better quality control at saw mills through more coordinated supervision
- Better communication with and cooperation from villagers regarding acceptance of timber
- Efforts to further develop VFA operations to be able to do some re-processing

Rice and protein distribution programmes as described in previous reports is continuing, as are bi-weekly health checks. Consultations with transition villagers were commenced in January 2007 in

order to jointly agree on an appropriate plan for ramping down of transition support as villagers settle in and livelihood opportunities are provided.

Efforts are now being focused on clearing of agricultural plots (0.66 Ha plots) in time for villagers to make use of these plots during the upcoming wet season. Before access to the plots can be granted to the resettlers for preparation, the following steps need to be completed:

- VFA to remove hardwood (done in all areas except some agricultural areas near Thalang which are not yet accessible)
- DAFO to remove other commercially viable timber
- Remaining large trees to be cut into small pieces for villagers to handle, with a certain number of trees remaining, according to the requirements of the agricultural program.

It is important to keep the transition resettlers busy during the current phase of resettlement by continuing to provide a variety of livelihood opportunities and other activities that facilitate the development of a sense of ownership of the new villages among the Resettlers. These activities include the building of fences, establishment of home gardens, mushroom houses, animal pens, flowers and shrubs etc. As such, it is sometimes necessary, while encouraging the resettlers to act in accordance with appropriate technical principles, to accept that villagers will often engage in familiar practices during the stressful period following relocation. This has been acknowledged by the Panel of Experts.

At the end of January 2007, the new villages of Sop On, Phonsavang, Boua Ma, Sop Ma, Sop Hia/Nam Nian (first group), Sop Phene and Sop Ma have been established with all villagers living in their new locations. 33 households from Ka Oy have joined Sop On and Ban Done.

Continued consultations with the Vietic (Ahoie) families in old Sop Hia have resulted in the area of Phuong Phai being investigated as a potential option as a resettlement site. This will be further reported next month.



Prof Ted Scudder of the Panel of Experts interviews the matriarch of the Ahoie families in old Sop Hia

Transitional Livelihoods:

Currently 100% of agricultural plots have been cleared at new Sop On, 100% at new Phonsavang, and more than 70% at new Boua Ma. All the agricultural plots of the 8 Keng Yao families that moved to the Pilot Village have been cleared. These plots were planted with upland rice during the previous wet season, however the irrigation system extension will be completed during the coming months so that these villagers will soon be fully integrated within the pilot village.

Training and assistance in home gardens is on-going and most transition resettlers have productive gardens for home consumption and trade.

The opportunity to supply labor for work associated with village construction is provided to all villages, in addition to food support in the case of transition resettlers.

There remains a full time presence of NTPC and District supervisors and community facilitators in each village.

Most NAKAI activity has now shifted focus from implementation of Transition Relocation to planning and implementation of sustainable livelihood models.

The chart presented on the following page shows progress of the respective tasks associated with resettlement of the Plateau villages.

				Transition																												
				Topo survey	Village layout design (Housing)	Village layout design (Agric.)	up Hill relocation	Access track	UXO temp area	Logging temp housig area	drill wells, hand pumps	Temporar y Schools	Temp. toilets	Building Temp. houses	Commencem ent of Transition Resettlement	Transition Support - food, health, household goods	Target Date - full transition	UXO whole areas	Logging whole area	Road Construct ion	Stump Removal	Clear housing area	Start House Building	Dismantle house and transport	Water Supply	Electricity	Communit y Buildings	Agric land preparatio n	Other non-farm activites	Irrigation	Target Date - Permanen t Houses Complete	
New area code	new area	village to move in this area	hh # (2006)																													
N1	8	Ban Hat Khamphane	22				NR										T2/06										Dec-07	Jun-07	Jan-07		Dec-07	T3/07
N1	8	Ban Sop Ma	23				NR										T2/06										Dec-07	Jun-07	Jan-07		Dec-07	T3/07
N1	8	Ban Keng Gnao	21				NR										T2/06										Dec-07	Jun-07	Jan-07		Dec-07	T3/07
N2	16	Ban Keng Gnao	8				NR	NR		NR		NR					T2/06		NR									Jun-07			Feb-07	
N3	19	Ban Sop On	104				NR										T2/06										Dec-07	Jun-07			Dec-07	T2/07
N3	19	Ka Oy	30				NR						Mar-07	Apr-07			T2/07					Feb-07	May-08	Apr-07			Dec-07	Jun-07	Oct-07	Apr-07	Dec-07	T2/08
N4	21	Ban Done	142				NR										T3/06						Mar-07				Jun-08	Jan-08	Apr-07		Nov-08	T4/07
N5	22	Ban Khone Khen	52				NR										T3/06						Mar-07				Jun-08	Jan-08	Apr-07		Nov-08	T4/07
N6	11	Ban Sop Phene	56				NR										T2/06						Jan-07				Dec-07	Jun-07	Apr-07		Dec-07	T4/07
N7	17	Bouama	74				NR										T2/06										Dec-07	Jun-07			Dec-07	T2/07
N8	18	Ban Phonsavang	41				NR										T2/06										Dec-07	Jun-07			Dec-07	T2/07
N15	7	Ban Sop Hia	37					Feb-07		Mar-07	Mar-07	Apr-07	Apr-07	Apr-07	Apr-07	Apr-07	T2/07		May-07	Mar-07	May-07	May-07	May-07	May-07	May-07	May-07	Dec-07	Jan-08	Oct-07	Apr-07	Dec-07	T2/08
N9	8a	Ban Sop Hia (first group)	30														T2/06										Dec-07	Jun-07	Jan-07		Dec-07	T3/07
N3	8a	Ban Nam Nian (first group)	6														T2/06										Dec-07	Jun-07	Jan-07		Dec-07	T3/07
N10	9	Ban Nong Boua Kham	57				NR	Feb-07		Mar-07	Mar-07	Apr-07	Apr-07	Apr-07	Apr-07	Apr-07	T2/07			Jan-07	Mar-07	Mar-07	Mar-07	May-07	Feb-07	Dec-07	Jun-07	Oct-07		Dec-07	T1/08	
N11	13	Ban Thalang	73				May-07	Mar-07				Oct-07	Oct-07	Oct-07	Oct-07	Nov-07	Nov-07	T1/08			Oct-07	Oct-07	Oct-07	Nov-07	Mar-08	Oct-07	May-08	Nov-08	Dec-07		Nov-08	T1/08
N12	1	Ban Nakai Neua	89				May-07	Mar-07				Oct-07	Oct-07	Oct-07	Oct-07	Nov-07	Nov-07	T1/08			Oct-07	Oct-07	Oct-07	Nov-07	Mar-08	Oct-07	May-08	Nov-08	Dec-07		Nov-08	T1/08
N15	7	Ban Nam Nian	25				NR	Feb-07		Mar-07	Mar-07	Apr-07	Apr-07	Apr-07	Apr-07	Apr-07	T2/07		May-07	Mar-07	May-07	May-07	May-07	May-07	May-07	Dec-07	Jan-08	Oct-07	Apr-07	Nov-07	T2/08	
N13	2	Ban Nakai Tai	190				May-07	Mar-07				Oct-07	Oct-07	Oct-07	Oct-07	Nov-07	Nov-07	T1/08			Oct-07	Oct-07	Oct-07	Nov-07	Mar-08	Oct-07	May-08	Nov-08	Dec-07		Nov-08	T1/08
N4	21	Ka Oy	3				NR								Mar-07		T2/07						Nov-07	May-07			Jun-08	Jan-08	Apr-07	Apr-07	Nov-08	T4 / 07.
N14		Ban Oudomsouk / Phon Phan Pek	103+56				NR	NR				Nov-07	NR	NR	NR	NR	NR				Nov-07	Nov-07	Nov-07	Nov-07	Apr-08	Nov-07	Apr-08	NR	Nov-08	May-08	Nov-08	T2/08

NR

Not Relevant

P

In procurement

C

Contract signed, mobilization phase

Implementation - On going

Task completed

2.3.2 Infrastructure

There was no rain in January and the four road construction contractors made good progress during the month. Timber house construction has continued at four villages and the resettlement area UXO search and clearance contract was completed.

2.3.2.1 Topographic survey and mapping

There is still survey and mapping required for the area which the ex-Nam Pan Sop Hia and Nam Nian households, that do not wish to move to Resettlement Areas 8A and 7, will be moved to. An area known as Pong Phai, located west of Ban Thalang, has been identified. In the expectation that the area will be approved by all concerned, basic maps for the terms of reference for the survey and mapping contract are under preparation.

The setting out of boundary markers for the resettlers' house and agricultural plots is a continuing activity. It is anticipated that the contract for the two month hire of a Senior Surveyor and a Total Station surveying instrument will be extended to include the data collection of Oudomsouk households that will be impacted by Nakai Reservoir inundation.

2.3.2.2 Finalization of village location – Village layout Design

Village Development Plans: All VG1 layouts have been completed (except for that portion of Sop Hia and Nam Nian that was previously scheduled to move to Nam Pan). The preparation of layouts for the remaining villages is underway as shown in the table below.

Name of the original villages in VG2	New village area	Village layout	Agriculture Layout
Thalang	Area 13	Complete	Complete
Nakai Tai	Area 2	Complete	Complete
Nakai Neua	Area1	Complete	Complete.
Done	Area 21	Complete	Complete
Khone Khen	Area 22	Complete	Complete
Oudomsouk and Phone Pan Peck	Oudomsouk Urban Area B and Area 15	First draft completed	Underway

2.3.2.3 UXO search and clearance

The contractor completed the search and clearance of an extension of Areas 1 and 2, 18.93 ha, and found 1 bomblet.

The contractor's resettlement area UXO contract is now complete. From November 2005 to January 2007, the contractor has UXO searched and cleared 1,318 ha of resettlement area including miscellaneous small areas such as for the VFA sawmill and log storage areas, road earthworks borrow areas, cemeteries etc. Found and destroyed have been 1,602 UXO items, including 1,041 bomblets. Including the Khammouane Military contract areas, a total of 1,516 ha have been searched with a total finds of 1,824 items of UXO.

The same contractor also has a contract for "Resettlement Area UXO Community Awareness and Emergency Response Teams." The community awareness activities continue to progress smoothly and the system of villagers preparing response forms and placing them in "drop boxes" provided continues to work.

The response team continued to visit villages to check on reported suspect items. To the end of December 2006, 1,878 UXO items, including 1,698 bomblets, have been found and destroyed by the response team.

If it is decided to develop the Pongphai area, then a new contract will be required.

2.3.2.4 Roads and drainage

The design of access roads and tracks was completed at Nakai Tai and Nakai Neua and bidding documents were prepared. The construction of the Oudomsouk Urban Area road was given to the Southern Resettlement Road Contractor as a Variation Order. Bidding procedures for the Area 7 and Thalang agricultural area roads commenced.

There are four ongoing road construction contracts and all of them made good progress during the month.

Southern VG1 Access roads to and within villages:

The works are nearly finished and completion is estimated at about 98% for the construction of access roads to and within the new villages of Bouama (area 17), Phonsavang (area 18) and Sop On (area 19). The only outstanding works are minor finishing on some of the agricultural area access tracks including the completion of reinforced concrete inlet and outlet structures for the cross-drainage culverts.

Southern Resettlement Road:

Progress was good on the contract for the construction of the Southern Resettlement Road, 11.765 km long. The construction is now about 95% complete with minor trimming and cleaning works required.

As stated above, the contractor was given the Oudomsouk Urban Area B road works as a Variation Order. The company has started clearing work and the construction of a coffer dam for a fairly large reinforced concrete box culvert that is required.

Northern Access roads to and within villages:

The contractor has continued work on the construction of access roads to and within the new villages of Sop Ma (area 8), Vietic Sop Hia (area 8a), Nong Boua Kham (area 9), Sop Phene (area 11) and Thalang (area 13) housing area. It is estimated the works are about 95% complete for areas 8, 8a, 9 and 11 and about 74% complete for area 13 housing area which was later added to the contract as a Variation Order.



Village road in Sop Phene

Southern VG2 Access roads to and within villages:

The Contractor for the construction of access roads to and within the new villages of Done (area 21) and Khone Khen (area 22) has nearly completed all the clearing and tree stump removal work on both areas and started embankment compacted fill works. It is estimated that the contract works are about 20% complete.

2.3.2.5 House Construction

Six contracts for the construction of timber houses for VG1 resettlers have been awarded and five companies have commenced construction.

In order to solve the problem of the delivery of sawn construction wood, proposals have been requested for: the transport of 22,000 m³ of logs from the NPVFA storage facility in Nakai to a sawmill: to saw the logs into 12,000 m³ of sawn timber of various dimensions; and, to transport the sawn timber back to Nakai. The bid opening will be 6 February 2007. .

Contract start dates are as follows:

<i>Areas and Villages concerned</i>	<i>Contract No.</i>		<i>Start Date</i>	<i>Number of Houses</i>
Area 17 for Bouama Area 16 for Keng Gnao	C604	Area 16	20 March 06	8
		Area 17	19 May 06	80
Area 18 for Phonsavang	C605		16 May 06	42
Area 19 for Sop On	C606		21 April 06	137
Area 8 for Sop Ma / Hat Khamphane Area 8A for Sop Hia	C607	Area 8a	30 October 06	106
		Area 8		
Area 9 for Nong Boua Kham	C608		deferred until timber supply secured	61
Area 11 for Sop Phene	C609		10 January 2007	58

Progress with the contracts is as follows:

C604: The eight houses for Keng Gnao resettlers at Area 16 are complete and eighty houses and toilet/bathrooms at Bouama are under construction. The contract is about 85% complete with the availability of wall planks the main problem.

C605: The 42 houses are under construction and the contract is about 65% complete

C606: one house is complete and 136 houses and bathrooms are under construction and the contract is about 50% complete.

C607: 106 houses and bathrooms are to be constructed and foundation work is continuing.

C608, Area 9 (Nongbouakham): 61 houses and start date deferred.

C609, Area 11 (Sop Phene): Foundation work is continuing.

Bid procedures for the VG2 house contracts are complete, the seven contracts have been awarded and contract signature is underway. Also included in the same procedures was a contract for Project Lands houses in the Gnommalat area.



New House in Pilot Village (Keng Gnao resettlers)

Houses under construction in new Sop On



2.3.2.6 Community Buildings

Each resettlement village will have a primary and nursery school, village office and meeting hall, market, warehouse and a rice mill and workshop. There will also be two clinics, four seed processing and agricultural storage facilities and four organic fertilizer facilities located at various villages. The sizes of most of the buildings will vary according to village size.

The bid documents for the VG1 and some of the VG2a (schools and health centers) buildings were given to interested companies during the month and bid opening will be 9 February 2007.

2.3.2.7 Domestic Water Supply and Sanitation

As always and previously reported, resettlement village water supply is a combination of:

- Rainwater collected from house roofs, via guttering and down-pipes to a 2,000 liters capacity tank; and
- Deep machine drilled boreholes equipped with VLOM (Village Level Oriented maintenance) hand pumps.

Toilet/bathrooms are and will be installed at every house and in some selected community buildings. The construction of the VG1 resettlers rainwater collection facilities and toilet/bathrooms is included with the housing construction contract. The construction of these toilets/bathrooms is completed for the 8 new Keng Gnao resettlers families in Ban Nong Boua Pilot Village.

The same constraints than the ones met for the houses constructions still prevail for the toilet/bathrooms construction.

Boreholes with hand pumps:

The recapitulative progression for January 2007 and the summary of the actual performance vs initial and revised 6th update plan (based on the continuous reconciliation of the data on resettlers' population) are included in the following pages along with a tentative schedule of planned interventions for the next 4 months. This following summary also includes the boreholes drilled for the benefit of Project Affected Persons (PAPs) by the construction of the Nam Theun 2 infrastructure (ref. Table 1 "Project lands") as well as those under the health infrastructure rehabilitation plan (ref. Table 3).

A total of 12 successful boreholes were completed during January 2007 as described in the following recapitulative tables. 3 wells had to be aborted in Nongbouakham area due to insufficient yield. As of the end of this reporting period, an actual total of 139 deep boreholes were successfully completed out of 157 drilled since the beginning of the operations in December 2005 with the Champasack Provincial Nam Saat drilling teams. The total number of failures is now 18 for a global rate of about 11.5%. The rate of failures has slightly increased with the activities focusing now in the villages located in northern area of the Village Group 1, where more adverse soil conditions than in the south are met.

As expected, the coverage targets for domestic water supply have been reached in January 2007 in the 7 villages finalized under the Project Lands interventions. However, due to more adverse soil condition but also availability of the rigs, the full completion in Sop Hia (area 8a), Ban Sop Phene (area 11) and Ban Nongbouakham (area 9) is to be postponed to February or even March. It is noteworthy to also mention that drilling activities have been started in the new resettlement area 7 where the large majority of the remaining population of old Sop Hia and Nam Nian are to be resettled during this dry season.

The Variation Order No 1 to the contract C675 has been finalized during January in order to reconcile the actual implementation status, the next finalized additional needs (addition of area 7 and adjustments of the coverage targets in each village according to resettlers population), the real actual and next expected costs as well as to provide time to install the hand pumps ordered through Unicef procurement Services and for which the delivery to Laos is now expected around end of February 2007.

As previously reported since at least November, the main constraint remains the hand pumps installation that will allow the utilization of all these wells. The situation has been overcome in Sop Phene area 11 and Khone Kaen area 22 by installing temporary electric pumps (4 in total) powered by generators.

It is still planned to establish another contract to cover the remaining VG2b, VG3 and VG4 with starting date delayed until March 2007 immediately after the completion of the current contract.

Nam Theun 2 Power Company Ltd

ENVIRONMENTAL AND SOCIAL DIVISION

NTPC - Construction of machine drilled boreholes for domestic water supply

CONTRACTOR:

Provincial Public Health Department

Champasack Province

Environmental and Water supply Section

RECAPITULATIVE MONITORING DRILLING PERFORMANCE

SITUATION ON MONTH OF: January 2007

RECAPITULATIVE TABLE No 1: "Project Lands"						Balance vs plan		Total Completion					Completion January 2007		
			Initial plan - Dec 2005		Temporary Revised 6th Plan	Productive	Equipped	Total BHs drilled	Productive	Equipped	Failures	Failures			
			Option average coverage 8 Houses/BH	Difference initial plan vs temporary revised 6th plan	Option average coverage 8 Houses/BH	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	% of total drilled	Productive	Equipped	Failure
No	New Area	Villages	Total Qty	Total Qty	Total Qty										
1	ODS New Urban area A (Oudomsouk May)	Oudomsouk SD12B PAPS	9	1	10	0	1	10	10	9	0	0.00			
2	ODS New Urban area C (Primary School)	Oudomsouk SD12B PAPS	1	0	1	0	0	1	1	1	0	0.00			
3		Oudomsouk SD12B PAPS - ODS old areas 8, 7 and market	5	0	5	0	0	5	5	5	0	0.00			
4		Pon Pan Pek - Intake PAPS	5	0	5	0	0	5	5	5	0	0.00			
5		NRC Oudomsouk - Reserve	0	1	1	0	1	1	1	0	0	0.00			
6	GML	New 8 Houses GML (electric pumping)	0	1	1	0	1	1	1	0	0	0.00			
7	GML	GML Horticulture Demonstration Center (electric pumping)	0	1	1	0	1	1	1	0	0	0.00	1		
8	GML	Gnommalath Tay	0	1	1	0	1	1	1	0	0	0.00	1		
9	GML	Gnommalath Neua	0	1	1	0	1	1	1	0	0	0.00	1		
10	GML	Ban Lao Naa Ngam	0	1	1	0	1	1	1	0	0	0.00	1		
11	GML	Ban Phone Lath Khouey	0	1	1	0	1	1	1	0	0	0.00	1		
12	GML	Ban Tongmang	0	1	1	0	1	1	1	0	0	0.00	1		
13	GML	Ban Sangkeo	0	1	1	0	1	1	1	0	0	0.00	1		
14	xxx	Others - ESTIMATE QUANTITY - To be finalized and adjusted during implementation period as per demand.	22	0	22	22	22	0	0	0	0				
SUB TOTAL Project lands			42	10	52	22	32	30	30	20	0	0.00	7	0	0

RECAPITULATIVE TABLE No 2: "Nakai Plateau resettlement"						Balance vs plan		Total Completion					Completion January 2007		
			Initial plan - Dec 2005		Temporary Revised 6th Plan	Productive	Equipped	Total BHs drilled	Productive	Equipped	Failure	Failures			
			Option average coverage 8 Houses/BH	Difference initial plan vs temporary revised 6th plan	Option average coverage 8 Houses/BH	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	% of total drilled	Productive	Equipped	Failure
No	New Area	Villages	Total Qty	Total Qty	Total Qty										
1	16	Ban Nongboua, Keng Nyao (PV)	7	2	9	1	4	8	8	5	0	0.00			
2	17	Ban Bouama	11	0	11	2	4	15	9	7	6	40.00			
3	18	Ban Phonsavang	8	-1	7	0	0	8	7	7	1	12.50			
4	19	Ban Sop On	17	2	19	0	8	19	19	11	0	0.00			
5	8	Ban Sop Ma, Hatkhamphan, Keng Nyao	11	0	11	0	7	11	11	4	0	0.00			
6	8a	Ban Sop Hia Vietic	7	0	7	2	4	8	5	3	3	37.50			
7	9	Ban Nong Boua Kham	10	1	11	9	11	5	2	0	3	60.00	2		3
8	11	Ban Sop Phene (incl. additional 2 BHs for temporary relocation)	9	2	11	3	10	11	8	1	3	27.27			
9	21	Ban Done	22	1	23	0	15	24	23	8	1	4.17			
10	22	Ban Khon Kaen	8	1	9	0	9	10	9	0	1	10.00			
11	1	Ban Nakai Tay	27	0	27	27	27	0	0	0	0				
12	2	Ban Nakai Neua	14	0	14	14	14	0	0	0	0				
13	13	Ban Thalang	12	0	12	12	12	0	0	0	0				
14	7	Ban Sop Hia/ Nam Nian	11	-3	8	5	8	3	3	0	0	0.00	3		
15	Other area	Ban Sop Hia/ Nam Nian	0	2	2	2	2	0	0	0	0				
16	xxx	Oudomsouk	15	-1	14	14	14	0	0	0	0				
17	PPP	Ban Pon pan Pek	0	2	2	2	2	0	0	0	0				
SUB TOTAL Resettlement villages			189	8	197	93	151	122	104	46	18	14.75	5	0	3

RECAPITULATIVE TABLE No 3: "HEALTH INFRASTRUCTURE"						Balance vs plan		Total Completion					Completion January 2007		
			Initial plan - Dec 2005		Temporary Revised 6th Plan	Productive	Equipped	Total BHs drilled	Productive	Equipped	Failure	Failures			
				Difference initial plan vs temporary revised 6th plan		Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	% of total drilled	Productive	Equipped	Failure
No	District	Buildings	Total Qty	Total Qty	Total Qty										
1	Gnommalath	Gnommalath Hospital	1	0	1	0	1	1	1	0	0	0.00			
2	Gnommalath	Khed Phit Health Center	1	0	1	0	1	1	1	0	0	0.00			
3	Gnommalath	Nadou Health Center	1	0	1	0	1	1	1	0	0	0.00			
4	Gnommalath	Nasok Health Center	1	0	1	0	1	1	1	0	0	0.00			
5	Kamkeuth	Kaeng Deng Health Center (september)	1	0	1	0	1	1	1	0	0	0.00			
SUB TOTAL Health Infrastructure			5	0	5	0	5	5	5	0	0	0.00	0	0	0
GRAND TOTAL			236	18	254	115	188	157	139	66	18	11.46	12	0	3

Construction of machine drilled boreholes for domestic water supply in:

- 1) Resettlement Villages New Areas - Nakai District, Khammouane Province
- 2) Health Centers and District Hospitals - Gnommalath Dist., Khammouane Prov. and Khamkeuth Dist., Bolikhamsay Prov.
- 3) Project Land areas - Nakai and Gnommalath Districts, Khammouane Province
- 4) Irrigation schemes - Nakai District, Khammouane Province

INDICATIVE GENERIC TENTATIVE SCHEDULE OF IMPLEMENTATION

DRILLING AND EQUIPPING BOREHOLES OF MINIMUM 30 METERS AND MAXIMUM 60 METERS DEPTH

		General Data			2007 - 4 months Tentative schedule					
New Area	Name of Village/Health Center/Hospital	Maximum Qty required (cov. 1/8HHs)	Qty already completed on date	Maximum Qty completion balance on date	Feb. C675	Mar. C675	Apr. C675	May Cxxx	Diff. perform. vs Max. Qty required on date	Remarks
1- Resettlement areas										
16	Ban Nong Boua (PV)	9	8	1	1				0	Additional BH for 5 families
17	Ban Bouama	11	9	2				2	-2	Further sites selection needed. Balance 2 BHs possibly completed under other contract.
18	Ban Phonesavang	7	7	0					0	Maximum Qtys target completed on date
19	Ban Sop On	19	19	0					0	Maximum Qtys target completed on date
8	Ban Sop Ma/ Hatkhampan/Keng Nyao	11	11	0					0	Maximum Qtys target completed on date
8a	Ban Sophia Vietic	7	5	2		2			0	
9	Ban Nong Boua Kham	11	2	9	2	7			0	Depending on land preparation completion
11	Ban Sop Phene	11	8	3	3				0	Additional 2 BHs due to temporary relocation
21	Ban Done	23	23	0					0	Maximum Qtys target completed on date
22	Ban Khon Kaen	9	9	0					0	Maximum Qtys target completed on date
	SUB TOTAL 1 PHASE 1	118	101	17	6	9	0	2	-2	
xxx	Oudomsouk	14	0	14					-14	Not before 2nd half of 07Contract not yet issued
	Pon Pan Pek	2	0	2					-2	Not before 2nd half of 07Contract not yet issued
2	Ban Nakai Tai	27	0	27				3	-27	Contract not yet issued
1	Ban Nakai Neua	14	0	14				3	-14	Contract not yet issued
13	Ban Thalang	12	0	12				2	-12	Contract not yet issued
7	Ban Sop Hia/Nam Nian	8	3	5	3	2			0	New area on VO1C675 contract
xxx	Ban Sop Hia/Nam Nian	2	0	2				2	-2	Contract not yet issued
	SUB TOTAL 2 PHASE 2	79	3	76	3	2	0	10	-71	
Total 1 resettlement areas		197	104	93	9	11	0	12	-73	Possible BH drilling from March not under C675 contract
2- Health Centers and District Hospitals										
GML	Gnommalath Hospital	1	1	0					0	Maximum Qtys target completed on date
GML	Khed Phit Health Center	1	1	0					0	Maximum Qtys target completed on date
GML	Nadou Health Center	1	1	0					0	Maximum Qtys target completed on date
GML	Nasok Health Center	1	1	0					0	Maximum Qtys target completed on date
KK	Kaeng Deng Health Center	1	1	0					0	Maximum Qtys target completed on date
Total 2 Health Infrastructure		5	5	0	0	0	0		0	

		General Data			2007 - 4 months Tentative schedule					
New Area	Name of Village/Health Center/Hospital	Maximum Qty required (cov. 1/8HHs)	Qty already completed on date	Maximum Qty completion balance on date	Feb. C675	Mar. C675	Apr. C675	May Cxxx	Diff. perform. vs Max. Qty required on date	Remarks
3- Project lands										
	Oudomsouk May - Area A - SD12B	10	10	0					0	Maximum Qtys target completed on date
	Oudomsouk Primary school - SD12B	1	1	0					0	Maximum Qtys target completed on date
	Oudomsouk old village - SD12B	5	5	0					0	Maximum Qtys target completed on date
	Pon Pan Pek intake PAPs	5	5	0					0	Maximum Qtys target completed on date
	NRC (Nakai) (total 3)	1	1	0					0	Maximum Qtys target completed on date
GML	New 8 Houses (GML)	1	1	0					0	Maximum Qtys target completed on date
GML	Gnommalath horticulture demonstration center	1	1	0					0	Maximum Qtys target completed on date
GML	Gnommalath Tay	1	1	0					0	Maximum Qtys target completed on date
GML	Gnommalath Neua	1	1	0					0	Maximum Qtys target completed on date
GML	Ban Lao NaaNgam	1	1	0					0	Maximum Qtys target completed on date
GML	Ban Phonlathkhuey	1	1	0					0	Maximum Qtys target completed on date
GML	Ban Tongmang	1	1	0					0	Maximum Qtys target completed on date
GML	Ban Sangkeo	1	1	0					0	Maximum Qtys target completed on date
	Others - ESTIMATE To be finalized and adjusted during implementation period	22	0	22					-22	Location and Quantities Not included in schedule - Locations and required quantities to be finalized on a case by case basis according to demand
Total 3 Project lands		52	30	22	0	0	0	0	-22	
GRAND TOTAL Domestic WS		254	139	115	9	11	0	12	-95	
4- Irrigation schemes										
19	Ban Sop On - Agriculture plots block No 3	8	0	8	8				0	New activity area on VO1 C675 contract
Total 4 Irrigation schemes		8	0	8	8	0	0	0	0	
GRAND TOTAL incl.irrigation		262	139	123	17	11	0	12	-95	

Update 31.01.2007

Expected maximum remaining implementation period for contract C675 - Variation order No1

Only HP installation activities are expected

2.3.2.8 Irrigation Systems

The construction of the extension area to the Pilot Village irrigation scheme for the resettlers from Ban Keng Gnao resumed in November and the Contractor has continued to make reasonable progress with completion expected in February.

The preparation of irrigated agricultural layouts is an important part of the resettlement village planning exercise and this has been reported on above.

The design of the pilot irrigation area at Sop On (area 19), using ground water for irrigation, is nearly complete and bidding procedures will commence in February.

2.3.2.9 Electricity

The installation of the transmission lines is continuing at the VFA Sawmill. Between supervising these contracts plus the contract for the NTPC Nakai Residential Complex, the Senior Electrical Engineer is continuing with the preparation of design, layouts and quantity estimates for the resettlement villages. To date designs have been completed at five villages and are ongoing at two more.

The preparation of bid documents for the installation of the village distribution systems and house connections at Bouama, Phonsavang and Sop On is underway and bid procedures will commence in February.

2.3.3 Livelihood

2.3.3.1 Communication

No change from previous report.

2.3.3.2 Staffing

No change from previous report.

2.3.3.3 Institutional strengthening

No change from previous report.

2.3.3.4 Land allocation

No change from previous report.

2.3.3.5 Nakai Plateau Forestry Development Program

2.3.3.5.1 Logging

The logging operations of Village Forestry Association was carried out by Nakai Transportation Association and Logging Unit with different villages and are ongoing around in the area of the new village settlement area, agriculture land, construction area, new road construction and other project areas.

	Description	Location	No of Logs	Volume(m3)
1	Inventory for logging	Outama over logging NamNian	41	209.383
2	Cutting, Skidding and Transportation of logs to 2 nd Landing			
3	Transport Logs from 2 nd Landing to Nakai Sawmill		885	598.161
4	Transport logs from Ban Don Yard and to 2 nd landing Houay Malai	Don-HM	201	138.528
5	Measuring Log volume in 2 nd Landing	-Ban Don (DAFI) -Nakai Neua -NamNian Mai -Road 8b	104 85 173 106	72 138.528 103.800 63.600
6	Selection Logs from Salvage Logging areas.		9,078	10,130
7	Contract signed with different contractors			
8	Stumps cutting for furniture manufacturing	Resettlement Area	204 (D=50-70cm)	
9	Cutting Mai Dou for sawmill column	Resettlement Area	156 columns (15x15x120)	

2.3.3.5.2 Sawn timber

The provision of timber to the supply of wood for housing construction for new resettlement NT2 project of 3 villages Ban Phonsavang, Ban Sop On, Ban Bouama are summarized :

Total volume timber delivery in January at construction site: 182 m3 (see table below).

	Receive(m3)	Delivery(m3)	Remained in VFA Storage (m3)
Sawmill Lak 20	203.521		
Sawmill Nakai	137.557		
Sawmill Xio	90.335		
Total delivery to contractors		28.198	
		29.299	
		49.297	
		76.031	
Total	431.413	182.825	248.588

2.3.3.5.3 Charcoal & Brick making

October-November: VFA support bricks to make 3 new Charcoal kilns for SopMa and Sop on Village:

	Location	kiln	No of brick (pieces)	Cost/piece (kip)	Amount (kip)
1	Ban Bouama				
2	Sop Phene				
3	SopMa	3	5,650	150	847,500
4	Sophia				
5	Sop On	1	770	150	115,500
					963,000

January: Villagers income from selling charcoals (1,300,000 kips)

	Location	kiln	Production (bags)	Cost/bag (kip)	Amount (kip)
1	Ban Bouama	1			
2	Sop Phene	2	70	10,000	700,000
3	SopMa	2			
4	Sophia	3			
5	Sop On	2	60	10,000	600,000
		10			1,300,000

Brick making 7,888 pieces

Delivery bricks for making charcoal for Ban SopOn 770 pieces, Ban Sop Ma 5,650 pieces

2.3.3.5.4 Furniture Making

<i>Description</i>	<i>Quantities</i>
Roofing Decoration	70
Photo Frame	13
Shoes racks	5
Room numbering panel	36
Small table	2
Total	

2.3.3.5.5 Silviculture (Plantation, Nursery, Enrichment)

Grass seed harvesting: -Stylo weeds: 80 kg

Maintenance fencing for Plantation and Enrichment Areas: 1,100meter

Grass cutting: 7.8 ha

Monitoring patrolling and fire guard

Seedling production (mulberry cutting): 3,754 bags

Preparation by filling bags for seedlings: 10,070 bags

Changing ornament small seedling bags to medium size bags: 574 bags

Fertilizer: 2 times

Compost production: 8,500 kg

BE production: 17 liter

Mulberry tea production: 5 kg

2.3.3.5.6 Strengthening of VFA

- ❖ Organizing the first ordinary VFA Supervisory Management Board Meeting
- ❖ Updating presentations presented to the Board and endorsed by the VFA Board.

2.3.3.6 Nakai Plateau Agricultural and Livestock Development Program

During the last quarter of 2006, the two Technical Assistants have been integrated inside the direction team of the Agriculture and Livestock program. Since they arrived on site in the middle of August, they have made a global evaluation and review of all components of the program.

During this period, a big work of reorganization of the entire component of the program has been made by the direction Team. The objective is to be able to implement sustainable farming systems in the new villages. For this, it has been proposed to set up an agroecology system and to continue some current activities (the one having been analyzed as possible to continue).

Since the end of December, the new office of Agriculture and Livestock is inside the new residential complex. This new office has permitted to concentrate the staff around the new direction Team, and to have a better adaptation for all the persons in front the entire remove of the program.

2.3.3.6.1 Definition and validation of the program

The global program (technical and methodological), has been prepared by the Technical Assistant during the month of November, December. This program is built following the preliminary works done by 2 subject matter experts. The program, with all components, has been validated in January 2007. The main points of the new program are organized for all the period (2007/2009 and 2009/2014) around:

- ❖ The technical aspects for the culture and livestock,
- ❖ The methodology of work,
- ❖ The budget in relation with the 2 next points.

2.3.3.6.2 Definition and validation of the budget

The budget has been defined in details, the cost code systems has been reviewed and changed. The budget is now defined following this repartition:

- ❖ 2007/2009 for the intensive period of assistance from NTPC,
- ❖ 2009/2014 period after COD

The 2007 budget has been divided in 4 quarter. The first and second quarter had been partitioned in monthly budget, this with a repartition for all the provisional expenditures, between the need of cash, the transfers and the requisitions.

2.3.3.6.3 Purchases orders

During December and January, purchase orders have been made at different level:

- ❖ Buying all the inputs for the wet season (seeds, tools, equipment's)
- ❖ Equipment of the staff with some adequate field tools (office supplies, meter, balance, ...)
- ❖ Buying of vehicles (car, motorbikes, bicycles)
- ❖ Accommodation for the staff inside the villages
- ❖ Equipment for the office (printer, computer, copy machine, etc.

2.3.3.6.4 Staff management

A new organization chart has been defined last November and is organized around 4 groups of staff:

- ❖ The Direction Team, with the Team Leader and the 2 Technical Assistants, who have in charge the global management of the program,
- ❖ The Field Unit, with 61 persons, is composed by all the staff who works on the field. There is a partition in 3 areas (North, Center, and South). For each area, a supervisor follows the activities under his responsibility (5 villages and 1 Center of Creation and Multiplication). The extension technicians in Agroecology are based inside each village (1 technician follow 40 farmers in average). For each CCM, there are only 6 persons working inside,
- ❖ The support Unit, with 8 persons, as advisers in the mains technical points (agriculture, livestock, marketing, supplying, support and evaluation).
- ❖ The Administrative Unit, with 8 persons, as secretary, drivers, storekeeper, mechanical.

In total, under the new organization chart, 80 people will be working on the Agriculture and Livestock Program (with the old organization, there were 96 people). At the end of March, the new organization will be complete, with the departure of some temporary staff, and the recruitment of some new staff. The recruitment is especially for the key functions: support unit, secretary, supervisors of areas.

The objective is to professionalize the entire team, with a good technical level in Agroecology, with a strong level of follow up of the activities on the field. The extension technicians in Agroecology are now based inside each village. To success the implementation of sustainable agricultural system in a long term, with a permanent staff to advice the farmers, the staff of field are composed by a mix with DAFO and NTPC staff. So, after 2009, the DAFO staff will be able to continue to follow up and to advice the farmers in this way.

Now, each person inside the program has a clear function, with a definition of his mission and responsibilities (job description and TORs).

A training program for the Field Unit staff has started end of December. This program build around some theory and practice points, will run during 3 years (about 5 days of training per month).

2.3.3.6.5 Definition of the new scheme of compensation

With the implementation of the Agroecology, it was necessary to review the old scheme of compensation. For example, in the old compensation, NTPC paid the farmer to clear the land (i.e. to make some slash and burn, and to destroy very fast the agronomic potential), though with the new approach, it is an obligation to keep all time the soil cover (i.e. to keep the forest mulch on the soil). So, a new scheme of compensation has been build, negotiated between NTPC, DAFO and RMU, and accepted by all the parties at the end of February.

2.3.3.6.6 Preparation of the meeting of information

During the month, the first meeting has been prepared. The objective is to inform the farmers about the new approach, in the main points:

- ❖ The new land allocation :
 - ❖ 0.66 ha per family more an additional agriculture permanent land of maximum 3 ha/family.
 - ❖ A common area of pasture under the forestry in the land of the VFA (maximum 5 ha per family)
 - ❖ The drawdown area
- ❖ The implementation of the Agroecology for each farmers : new techniques (DMC techniques)
- ❖ The new scheme of compensation
- ❖ The organization of the Agriculture and Livestock team for the follow up and the advices in the villages

To make this meeting, some drawings and specifics pictures have been prepared. The preoccupation of the Direction Team was to explain in a simple way (drawings and pictures) a high quantity of

information. This meeting was at first planned for the end of December and the beginning of January, but we had must wait for the agreement of the new compensation scheme, so, these meeting will start on 5th February.

2.3.3.6.7 Content of work for the technicians/extensions

The field staff has followed some training on the Agroecology techniques and methods:

- ❖ The method to prepare the field after the forest. For this, 2 fields of training had been made in the village of Boua Ma, on the 0.6 farmer's fields.
- ❖ The technique to cultivate the vegetable under Direct Mulching Cropping (DMC), this with different methods of weeding and fertilization (herbicide, hand weeding, manure, compost, mineral and organic fertilizers). Two plots of training had been made in the CCM of Nong Boua.
- ❖ The method to collect the data on the technical and economic activities of the farmers.

In each village, the extension technicians have started some individual interviews for each farmer. The objective is that the technician will know the strategy of each of his 40 farmers (interest in technical points in livestock and crop production, NTFP, possibility of labor, etc.). This collection of data must be finished before the start of the raining season.

The technicians have so started to implement some little demonstration plots in each village, essentially in the garden houses. These demonstration plots are aimed to show a new agro-technique and also to train directly the villager in the field practice in terms of sustainable agriculture that the farmers will used in their owner field. The establishment of demonstration plot of DMC is now step by step proceeding in every village. The farmers (and the technicians) start with more simple technique as the culture on dead mulch. This will permit for the farmers to see in a short time the good results, and for the staff to improve step by step their abilities.

The work of the technicians/extensions for this dry season will be essentially to follow up and to advice for the preparation of the fields before the raining season.

A demonstration of a large ruminants' shed was built at Sop On and Sop Hia with the dimension of 7m x 10m. In comparison with the old sheds (developed by NTPC before), this new design will permit to the farmers to have some individual sheds and to produce some high quantity of manure to be used in theirs fields. These sheds use a very simple technique by using local material that there area available in the village and the villager could find out it around their village.

2.3.3.6.8 The Centers of Creation and Multiplication (CCM)

Based on the new approach of Agriculture and Livestock Program, the objective of the old agricultural extension center has been changed. So now, the principle activities are at two levels:

- ❖ To make some trials on the level of fertilization, the date of sowing, the species suitable for the Nakai plateau... These trials are made before to implement some new scheme on the farmers' fields.
- ❖ To produce some vegetal material as seeds, cuttings... This is especially for the new species and variety to introduce in the area.

The activities of livestock inside the CCM aren't useful, because it's better to conduct directly inside the farm the improved activities. The introduction of new species won't be very important. So, the animals have been selling during this month.

Each Center has been fully inventoried (Nong Boua, Theun Douan, and Nakai Neua), with change s in term of affectation of the storages and various buildings. All the seeds have been reviewed for the quality and the quantity.

The entire fields of each CCM has been reviewed and prepared to implement DMC activities. In the Nong Boua CCM two plots of training have been prepared (cabbage and chili). In the Theun Douan CCM we had since December a plot of test for the Artemisia (medicinal plant). The plot of trials will start really in February.



Demonstration plot on DMC technique with Cabbage cultivation

2.3.3.6.9 The land allocation

During the month of December and January, the surface of permanent agricultural land for the “max of 3 ha” has been mapped for the south and center parts of the plateau (Khone Kaen, Ban Done, Sop On, Phonsavang, Boua Ma, Nong Boua). For all these villages, it’s possible to allocate a surface of maximum 3 ha/family. During the two next months, the mapping will be made for the remaining villages.

The objective in February is to survey and to define on the field with the VFA, RMU, DAFO and the responsible of the villages (chiefs and assistants) the real possibility of allocation for the south area.

The drawdown area has been mapped for all the villages. During the month of February, the team will inform the villagers of the exact possibility of culture on these zones.

For the fields of 0.6 ha, the entire maps aren’t finished by the infrastructure and CD team (Nakai Neua, Nakai Tai, Thalang and Area 7). We are waiting about these maps to inform the farmers and to prepare the field just after.

Villages	Number of house hold	Agriculture permanent field of 0.66 ha	Additional agriculture permanent land of maxi 3 ha	Common pasture of maximum 5 ha (VFA land)
Khone Kaen	52 hh	We wait the DAFO work to start the preparation of the plot	2008	2008
Ban Done + Ka Hoy	151 hh	We wait the DAFO work to start the preparation of the plot	2008	2008
Sop On	141 hh	1/3 ready to cultivate some crop and 2/3 with cover plant, for the wet season 2007	To be started in wet season 2007	2008
Phonsavang	44 hh	1/3 ready to cultivate some crop and 2/3 with cover plant, for the wet season 2007	To be started in wet season 2007	2008
Boua Ma	74 hh	1/3 ready to cultivate some crop and 2/3 with cover plant, for the wet season 2007	2008	2008
Nong Boua + Keng Gnao	38 hh	1/3 ready to cultivate some crop and 2/3 with cover plant, for the wet season 2007	To be started in wet season 2007	2008
Nakai Neua	89 hh	We wait the DAFO work to start the preparation of the	2008	2008

		plot		
Nakai Tai	201 hh	We wait the DAFO work to start the preparation of the plot	2008	2008
Area 7 + Nam Nian	41 hh	We wait the DAFO work to start the preparation of the plot	2008	2008
Sop Ma	74 hh	We wait the DAFO work to start the preparation of the plot	2008	2008
Sop Hia	36 hh	We wait the DAFO work to start the preparation of the plot	2008	2008
Nong Boua Kham	58 hh	We wait the DAFO work to start the preparation of the plot	2008	2008
Sop Phene	56 hh	We wait the DAFO work to start the preparation of the plot	2008	2008
Thalang	79 hh	We wait the DAFO work to start the preparation of the plot	2008	2008

It has been proposed to each family to cultivate in the drawdown area for the next wet season, exceptionally with the traditional techniques

2.3.3.7 Fisheries Reservoir Program

Two consultants have been recruited to formulate the Reservoir Fisheries Management Program. Both consultants will mobilize on 5 February, 2007 to Thakhek and subsequently to Nakai. The final report, approved by the Ministry of Agriculture and Fisheries is expected to be available by the end of April 2007.

2.3.3.8 Community Development Program

Census of all resettlement villages was completed, except Sop Hia/ Nam Nian (under revision), Oudomsouk (Those who will be relocated to new Oudomsouk Area B – proposal being sent for approval to go ahead with conducting survey and data collection to determine people and assets affected).

Warm clothes were distributed to Ka Oy villagers (4 families move to Don Village and 26 families move to Sop On village). Now all relocated people have received warm cloth.

Rice and protein support are still maintained although RC has agreed to phase out (especially protein), starting from the first 3 villages being relocated for just more than 9 months already. This issue is still subjected to GoL and NTPC decision what to be done.

Non-farm incomes supports were concentrated on strengthening village resettlement committees, establishing income activities groups. Vulnerable households identified and endorsed by the District Governor. Suitable income support for this group of people and individual vulnerable people is under implemented.

Education support is ongoing. Non formal and Nursery teacher training were organized.

Two villages are being relocated to new sites (Sop Hia/Nam Nian to Area 7 and Nongbouakham to be followed soon). Ka Oy has already moved to new sites as per their wish through consultations. 18 Vietic households are subject to RC final decision in conjunction with the people desire to move.

2.3.3.9 Non-farm CD

Tailoring funds at the Sop on (2 sets of sewing machine and now return 400,000 kip/fund), Bouama, Phonsavang, 2 funds for Nongboua and one for SopOn were monitored and will be starting to return on Jan 2007 (this fund was granted in the year 2003).

On 9th Jan 2007 – discussion meeting about role and duties for fund committee and agreement to establish “Pasason Fund” at 4 villages in Feb and 4 villages in March 2007.
Weaving group will get income for 2 weeks: production 2 times per month.

Census:

To survey 51 Households at Phonphanpek village (population: 339 persons, Male: 179 persons, Female: 158 persons)

Education:

Parent associations were organized in 6 villages:

- ❖ Nongboua village 5 persons (3 women)
- ❖ Bouama village 7 persons (3 women)
- ❖ Phonsavang village 5 persons (2 women)
- ❖ Sop On village 7 persons (3 women)
- ❖ Done village 7 persons (3 women)
- ❖ Khone Kaen village 5 persons (2 women)

On 23rd Jan 2007 – Non formal teacher training on adult learning, teaching (19 persons attendant – 6 women) for 15 days training.

On 15 to 26th Jan 2007 - 2 Trainer from Education office to train on job training for nursery teacher - 3 villages (Sop Ma, Sop Phene and Sop Hia area 8).

Micro-credit:

Village saving groups have been monitored in December in 9 villages (514 members) – Attachment SG table.

Rice and Food support:

Continuous Monitoring and provision of rice, protein at SopOn, Phonsavang, Bouama, SopMa, Nongboua extension, Sop Phene, SopHia- Area 8a, Done, Khone Kaen (10 villages – 2,972 persons= 45,768 kg).

Protein: once per week (fresh meat or fish 594.4 kg/per week, dry meat or dry fish 594.4 kg/per week, 56,000 eggs/ per week).

RC has agreed to cease protein support around 9 months after relocation, but due to late issuance of such agreement, protein support for 3 villages supposed to be ceased at end of January, is still supported during February.

Gender

Monthly meeting of Gender Mainstreaming Team – on 20th Jan 2007, 6 attendants (only GMT).

2.3.3.10 ICD

Activities / Locations	Dates	Participants	Outputs/ Results
Bane Sop Hia / Nam Nian village Layout consultation	20 /01/07	RMU: 1 pers. SRO: 2 pers. Villagers: 32 pers. (12 women)	All understand and agree with the village Layout consultation
Conduct training on Development concept and Management for LNFC and VRC: Ban Bouama and Nongboua Pilot village (at village level)	24/01/07	SRO: 2 pers. DWG: 1 pers. Villagers: 20pers (4 women)	All understand and adopt Development concept and Management procedures
Conduct training on Development concept and Management for LNFC and VRC: Ban Sop Hia, Sop Phene and SopMa (at village level)	25 /01/07	SRO: 2 pers. DWG: 1 pers. Villagers: 34pers (6 women)	All understand and adopt Development concept and Management procedures
Follow up relocation activities for Ban Ka Oy (Dismantling houses and transport to site)	30/01/07	SRO: 2 pers. DWG: 1 pers.	- Dismantling houses and transport to site completed 25houses for Sop One. - Dismantling houses and transport to site completed 25houses for Ban Done.
Follow up the second Bane Sop Phene Relocation Village activities (Construct the new house)	31 /01/07	SRO: 1 pers. DWG: 1 pers.	- Dismantling houses and transport to site completed 22 houses - Under construction 4houses

Grievance:

No.	Activities / locations	Date	Participants	Outputs/Result
1	Grievance organization committee and training on role and duties of grievance committee. (Oudomsouk village)	10/1/ 2007	RMU :1 person DWG: 1 person SRO: 3 persons 8 Villagers 13 attendant (4 women)	Village Grievance Committee (3 persons) Mr.Sihay Thongsavath (Deputy head of village) Mr. King Kethavong (GV) Ms. Malila Bounmima (LWU)
2	Grievance organization committee and training on role and duties of grievance committee. (Done & Khone Kaen village)	16/1/07	DWG: 2 persons SRO: 2 persons 19 Villagers 23 attendant (4 women)	<u>Done village:</u> Mr. Bouapha Ms. Pheng Mr. Inn <u>Khone Kaen village:</u> Mr. Khamma Mr. Nor Ms. Sor
3	Grievance training on job training and filling system (Bouama village)	19/1/07	DWG: 2 persons SRO: 1 person 5 Villagers 8 attendant (3 women)	Village Grievance committee understand and agreement.
4	Grievance training on job training and filling system (Phonsavang village)	20/1/07	DWG: 1 person SRO: 1 person 3 Villagers 5 attendant (1 woman)	Village Grievance committee understand and agreement.

Vulnerable Households and people

No.	Activities / locations	Date	Participants	Outputs/Result
1	District vulnerable committee meeting	11/1/07	RMU :1 person DWG: 2 persons SRO: 2 persons 5 att. (2 women)	Discussion Health plan for vulnerable families and agreement on 1 st quarter year 2007 budget plan
2	District vulnerable committee meeting – vulnerable certify	17/1/07	RMU:3 persons DWG: 4 person SRO: 3 persons 10 attendant (2 women)	Vulnerable in 8 villages are 55 families – district certify. Agreement for Agriculture and health to help.



*Village Lay Out Consultation SopHia & Nam Nian
move to Area 7*



VRC & LNFC training on Management (Bouama village)

Village Saving Groups (December 2006)

No	Village	No. member to debt	Deposit	Receive from Mngt	Interest	Total	No. Loan (person)	Saving (Month)	Interest	Admin Fees	Total Fund	Withdraw capital	Total Loan (month)	Not return on time
1	Nakai Tai	27	1,758,000	47,000	0	1,805,000	27	1,758,000	47,000		1,805,000	5,000,000	1,800,000	1,800,000
2	Nakai Neua	30	12,902,000	150,000	0	13,052,000	30	12,902,000	150,000		13,052,000	22,732,000	13,000,000	13,000,000
3	Nongboua kham	0	0	0	0	0	0	0	0			15,934,000		
4	Thalang	50	8,120,000	27,000	2,100,000	10,247,000	94	80,295,000	12,753,000	2,403,000	95,451,000	3,230,000	13,100,000	56,716,000
5	Bouama	24	170,000	0	0	170,000	49	2,523,500	0		2,523,500	0	300,000	2,518,000
6	Sop On	21	605,000	24,000	215,000	844,000	45	5,046,000	902,000	304,000	6,252,000	0	2,200,000	6,000,000
7	Phonphan pek	36	570,000	3,000	325,000	898,000	65	9,200,000	1,048,000	447,000	10,695,000	0	200,000	9,100,000
8	Nongboua	12	85,000	9,000	398,000	492,000	36	7,967,000	2,515,000	479,000	10,961,000	0	800,000	9,000,000
9	Oudom souk	0	0	0	0	0	296	559,875,000	27,993,000		587,868,000	0	225,325,000	571,144,000
	Total	200	24,210,000	260,000	3,038,000	27,508,000	642	679,566,500	45,408,000	3,633,000	728,607,500	46,896,000	256,725,000	669,278,000

Social Activities

Downstream Areas

2.4 Downstream Areas Development Plans

2.4.1 General overview

- Additional staff joined the Downstream Program and a new office opened
- Preliminary field investigations to assess the feasibility of mini-polders in 5 villages were conducted.
- Field visits were made to each of the pilot villages to assess water supply & sanitation facilities.
- Livelihood development activities continued
- 59 piglets were distributed to pilot villages
- A 10 day training course in handicraft production was held

2.4.2 Baseline Studies, Monitoring

Baseline Studies / Monitoring

The CA requires the Downstream Program to:

- *"Commission a baseline socio-economic and health survey of those villages located along the Xe Bangfai River. As part of this survey, the nutritional/livelihood importance of riverbank gardens and fisheries in the Downstream Areas shall be identified;*
- *Update the Downstream Socio-economic Baseline within one year following Financial Close and within one year prior to the Commercial Operation Date;*
- *Monitor and measure twice after the Commercial Operation Day (approximately (2) years after the COD and approximately (4) four years after commencement of the Operations Phase), the households' socio-economic/health status identified in the Downstream Socio-economic Baseline and report on its findings to the GoL.*

During the month of January, 2007 a requisition, including a draft terms of reference has been submitted to advertise and subsequently start the bidding process for the services by firms and/or NGO's to design, implement, develop database, data entry, and data analysis for updating of the baseline surveys (twice) and to undertake subsequent monitoring in a total of both riparian and hinterland villages that are included in the Downstream Program.

As this surveying exercise is proposed to be carried out by an independent agency (firm and/or NGO), the IMA (Independent Monitoring Agency) may be the same agency.

It is expected that database design and data entry will be outsourced to the NGO that is presently providing such services to NTPC and the Downstream Program.

2.4.3 Reports & Meetings

Meetings

During the reporting period, Downstream Program team members participated in the following meetings:

- A half day meeting with the Environmental & Social Panel of Experts (POE) on 10 January 2007, followed by a full day field trip with the POE to several downstream villages.
- Meeting on 11 January 2007 with consultants working on the World Bank funded project "Scoping Options for Joint Water Resources Development & Management Between Lao PDR & Thailand in the Mekong Basin"

A Downstream Program section leader meeting is held every Tuesday morning and a full Downstream Program staff meeting once per month. Minutes of meeting are prepared and distributed to enable staff to follow up on items discussed during the meeting.

Reports

The latest revision of the Downstream Livelihood Restoration Program report was submitted to IFI in November 2006. No comments have been received.

2.4.4 Administration

Personnel issues

Thirteen new full-time team members commenced work on 2 January 2007. The positions include:

- Irrigation Engineer (1 person)
- Water Supply, Sanitation & Hygiene Team Leader (1 person)
- Flood Control & Irrigation Engineer (1 person)
- Hygiene & Sanitation Specialist (1 person)
- Team Leader of Livelihood / Chief of Agriculture (1 person)
- Horticulture Specialist (1 person)
- Veterinary Specialist (1 person)
- Livestock Specialist (1 person)
- Aquaculture Specialist (1 person)
- Community Development (4 people)

Additionally, a new driver was recruited and CVs for additional administration/financial staff were collected. Interviews and recruitment will be done on February 2007.

Other administration

A new Downstream Program office was opened in Thakhek during the week of 2 January.

Proposals from NGOs interested in implementing downstream program activities in Khamkeut District (downstream of Nakai Dam) were collected.

2.4.5 GOL Coordination

During the reporting period, the Downstream Program team held two coordination meetings with the RMU to discuss coordination with district and provincial staff, weekly planning, equipment which has been provided by NTPC to the RMU and DWGs, administrative issues regarding village organization, and issues related to the recruitment of additional district staff to support implementation of WASH activities.

2.4.6 Community Organization / Village Development Fund

Village Organization - VDCC

During the VDCC 4th quarter meeting in December 2006, village authorities and VDCC members demonstrated increased involvement with management of village fund. Most of 20 pilot villages have sent monthly reports and financial statements to the relevant DWG's and RMU office. At least 5 VDCC members from each of the 20 pilot villages attended the meeting.

In accordance with GoL policy, many villages are merging in Khammouane province, including 5 villages that are also part of the 20 Downstream Program pilot villages. The reorganized village structures will have an effect on the village organization regarding management of village funds, especially in the village that NT2 had not established VDCC. NTPC and the RMU have discussed these problems and will cooperate in with district development committee "Koumban" to identify what villages have merged and will adjust the VDCC structure as required.

Village Revolving / Saving Funds

Many households are busy planting dry season crops, which has consequently reduced the number of households actively involved with the saving and credit fund during the reporting period. However, households who borrowed village funds to support wet season crop activities have repaid the loans to the VDCC completely.

To improve cash management within each village the Community Organizer Team has developed new guidelines which were introduced to the VDCC in every village. However, some difficulties remain regarding handling cash after withdrawing from the bank and distributing the cash to households within one day due to the delay of VDCC who is assigned to withdraw cash. To address this issue, it was required for the person withdrawing money from the bank to spend the

night in Thakhek and to meet with NTPC staff the day after in order to withdraw cash from bank. The cost of transport, accommodation and DSA will be reimbursed by NTPC office based on its procedures.

Villages & Participation in Village Fund January 2007

Currency: KIP

No.	Village Name	VDCC Bank Account							
		Open Account	Funds Transferred by NTPC (Kip)	Deposit by VDCC		Bank Interest	Withdrawal by VDCC (Kip)	Bank charge	Balance
				village fund	Saving Fund				
	Gnommalath District	150,000	542,000,000	-	-	1,666,306.73	94,400,000	270,999	449,145,308
1	Phathung	50,000	150,000,001			416,979.87	39,200,000	75,000	111,191,981
2	Nongping	50,000	229,999,999			748,995.16	49,200,000	114,999	181,483,995
3	Khoksavang	50,000	162,000,000			500,331.70	6,000,000	81,000	156,469,332
	Mahaxay District	200,000	1,198,056,546	17,000,000	-	4,417,407.90	447,374,500	145,000	772,154,454
4	Mahaxaitai	50,000	461,728,369	17,000,000		1,191,893.57	140,887,500	125,000	338,957,763
5	Povaneua	50,000	220,075,519			1,065,189.09	115,535,000	10,000	105,645,708
6	Povatai	50,000	278,485,338			1,430,195.24	150,952,000	10,000	129,003,533
7	Khamfeuang	50,000	237,767,320			730,130.00	40,000,000		198,547,450
	Xebangfai District	250,000	1,337,638,029	2,607,000	-	4,414,346.57	522,685,000	80,000	822,144,376
8	Kengpe	50,000	178,035,291			784,850.53	23,100,000		155,770,142
9	Veunsananh	50,000	144,379,350			524,815.62	70,000,000	35,000	74,919,166
10	Hatpek	50,000	65,999,984			440,745.73	11,000,000		55,490,730
11	Yangkham	50,000	485,997,196	2,607,000		1,559,205.97	198,585,000	10,000	291,618,402
12	Hatkhamhieng	50,000	463,226,208			1,104,728.72	220,000,000	35,000	244,345,937
	Nongbok District	100,000	250,000	-	-	1,255,573.61	267,000,000	25,000	225,214,502
13	Hatxaifong	50,000	104,999,974			543,992.90	74,500,000		31,093,967
14	Navangneua	50,000	385,883,954			711,580.71	192,500,000	25,000	194,120,535
	Xaybully District	300,000	1,063,465,164	141,430,000	5,000,000	4,913,581.08	476,241,000	50,000	738,817,745
15	Veunsivilai	50,000	227,862,395			712,300.96	96,500,000		132,124,696
16	Beungxe		217,899,326	141,430,000	5,000,000	860,639.80	127,038,000	50,000	238,101,966
	Beung Xe (AC SVK)	50,000	90,703,574				90,703,000		50,574
17	Beungbouathong	50,000	131,999,967			791,629.91	25,000,000		107,841,597
18	Nasang	50,000	195,999,951			1,246,817.99	77,000,000		120,296,769
19	Thaphoxai	50,000	108,999,973			735,190.65	26,000,000		83,785,164
20	Nonenakhom	50,000	89,999,978			567,001.77	34,000,000		56,616,980
		1,000,000	4,141,409,739	161,037,000	5,000,000	16,667,215.89	1,807,700,500	570,999	3,007,476,384

Final 31/01/2007

Monthly Cash Flows January 2007

No.	Village Name	Saving by HH				NTPC Village Production Fund VDCC Withdrawn From Bank Account	Cash Flow			
		Members (HH)	Balance Forward	Deposited This Month	Balance Deposit		Total Amount Repaid by HH to VDCC	Total Interest Paid by HH	Total Amount Disbursed by VDCC to HH	Total Loans Outstanding but Not Yet Due
	Gnommalath District	133	17,938,000	3,170,000	21,108,000	55,300,000	4,794,000	214,000	58,900,000	44,355,000
1	Phathung	79	8,081,000	1,730,000	9,811,000	15,400,000	2,770,000	40,000	17,600,000	25,730,000
2	Nongping	54	6,478,000	1,440,000	7,918,000	33,900,000	2,024,000	174,000	35,300,000	18,125,000
3	Khoksavang		3,379,000		3,379,000	6,000,000			6,000,000	500,000
	Mahaxay District	267	110,420,000	26,761,000	137,181,000	-	22,300,000	6,046,000	38,930,000	509,130,000
4	Mahaxaitai	90	35,045,000	3,568,000	38,613,000		11,500,000	2,134,000	1,880,000	147,742,500
5	Povaneua	91	19,001,000	1,620,000	20,621,000		6,050,000	2,976,000	8,050,000	126,035,000
6	Povatai	86	52,134,000	20,725,000	72,859,000		4,000,000	86,000	26,500,000	190,602,500
7	Khamfeuang		4,240,000	848,000	5,088,000		750,000	850,000	2,500,000	44,750,000
	Xebangfai District	360	72,125,000	15,704,000	87,829,000	34,100,000	9,273,000	1,856,000	62,000,000	538,842,000
8	Kengpe	60	2,446,000	10,625,000	13,071,000	23,100,000	600,000	657,000	34,900,000	1,040,000
9	Veunsananh	44	2,498,000	274,000	2,772,000					72,390,000
10	Hatpek	25	740,000	155,000	895,000	11,000,000				
11	Yangkham	120	34,201,000	2,390,000	36,591,000		8,673,000	1,199,000	15,600,000	239,357,000
12	Hatkhamhieng	111	32,240,000	2,260,000	34,500,000					226,055,000
	Nongbok District	175	403,709,000	5,511,000	409,220,000	-	13,000,000	3,040,500	12,643,000	299,569,500
13	Hatxaifong	64	3,604,000	636,000	4,240,000			16,500	260,000	75,250,000
14	Navangneua	111	400,105,000	4,875,000	404,980,000		13,000,000	3,024,000	12,383,000	224,319,500
	Xaybully District	386	68,336,500	10,447,000	78,783,500	80,000,000	9,601,000	2,515,000	106,122,500	426,146,500
15	Veunsivilai	85	14,280,000	2,730,000	17,010,000		2,347,000	327,500	5,404,500	106,025,000
16	Beungxe	58	28,631,000	2,450,000	31,081,000		3,300,000	1,664,000	10,817,000	214,863,000
17	Beungbouathong	74	11,309,000	1,120,000	12,429,000			74,500	3,315,500	37,294,500
18	Nasang	82	5,320,000	2,550,000	7,870,000	20,000,000	2,188,500	169,000	24,907,000	60,424,000
19	Thaphoxai	60	5,130,500	900,000	6,030,500	26,000,000	1,110,000	164,000	26,210,000	4,324,500
20	Nonenakhom	27	3,666,000	697,000	4,363,000	34,000,000	655,500	116,000	35,468,500	3,215,500
	Grand Total	1,321	672,528,500	61,593,000	734,121,500	169,400,000	58,968,000	13,671,500	278,595,500	1,818,043,000

Final 31/01/2007

2.4.7 Livelihoods

General

Livelihood development activities in the pilot villages continued during the reporting period. New Downstream Program staff were introduced to the villages and briefed about ongoing activities and past experiences.

Agriculture / Horticulture

During the reporting period the following activities were undertaken:

- Visits/meetings with village fund committees and key farmers to check business plans for the dry season rice and cash crop production
- Regular field visits to provide advice on specific technical issues to improve the field activities being done. Special emphasis was made on existing farm practices by farmer
- Monitoring and evaluation of demonstration activities, e.g. sweet corn, chili, water melon and mushroom culture

Some of the more notable finds during the reporting period are as follows:

- Some farmers in Ban Khoksavang indicated that results from mushroom production have been disappointing due to low profitability.
- Sweet corn, watermelon, and chili demonstration fields are generally successful (currently being tried in 11 villages)
- Sweet corn in particular appears to be quite promising based on results from Ban Nasang, Xaibouli District, which has 20 farmers participating. Most of the farmers interviewed were satisfied with results and indicated that the sweet corn yields were quite high and overall the activity quite profitable.

District	District target village	No of target village	Name of target vill	Crop production/Cash crops																Demonstration plot				Remark
				Dry season Rice		Water melon		Jatropha curcas		Sweet corn		Vegetables		Chillis		Corn		Chilis						
				No. HH	Area/ Ha	No. HH	Area /Ha	No. HH	Area /Ha	No. HH	Area/ Ha	No. HH	Area/ Ha	No. HH	Area / Ha	No. HH	Area/ Ha	No. HH	Area/ Ha					
Ngommalat	3	1	Phathoung									6	3	0						Vegetables				
		2	Nongping									6	3					1	0.5	Vegetables				
		3	Khoksavang																					
Mahaxai	4	4	Mahaxaitai																					
		5	Phovaneua	20	25			3							1	0.5	1	0.2						
		6	Phovatai	10	12										1	0.5	1	0.2						
		7	Khafeuang																					
Xebang fai	6	8	Kengpe					14																
		9	Veunsananh					3																
		10	Hatpek					10																
		11	Sang																					
		12	Yangkham	105	123										1	1								
		13	Hatkhathieng	75	108			8																
Nongbok	2	14	Hatxayfong																					
		15	Navangneua																					
Xaibouli	6	16	Veunsivilai	60	65	3	2									1	1	1	0.2					
		17	Beungxe					8								8	4	1	0.5					
		18	Beunbouathong					24								1	1	1	0.2					
		19	Nasang	14	16					15	20	14												
		20	Thaphoxai	26	30					39										Sweet corn				
		21	Nongnakham	34	45	2	0.4																	
Total:				344	424	5	2.4	124		20	14	12	6			13	8	6	1.8					

Aquaculture

To date, Downstream Program fish culture activities have mainly concentrated on:

1. Fish seed production
2. Establishing community fishponds
3. Fish culture in irrigated areas
4. Village consultations

During the reporting period,

- 38 manuals for basic fish culturing has been provided to 6 target villages
- Aquaculture consultants and engineering staff visited the Lak 4 fish seed center in Thakhek to assess hatchery facilities and obtain ideas for future improvement.
- Aquaculture consultant and RMU staff met with the head of agriculture and extension unit and discussed possible future use of the Lak 4 hatchery to produce and provide fish seed to fish farmer in the target area of NTPC Downstream Programme.
- Aquaculture consultant participated in livelihood needs assessment held at Kengpe village.
- A proposal for providing fingerlings to 39 fish farmer who want to raise fish in rice field and in ponds was approved by the downstream team leader. Fingerlings will be provided to fish farmers in early February 2007.

Number of farmers who plan to do fish culturing in dry season of the year 2007

Village Name	No. Of HH	Pond size (m ²)	Rice fish area(m ²)	No. of fingerling (head)	Rice fish (head)	Costs (kips)
Navangneua	17	3,026	10,000	9,000	3,000	2,400,000
Hatxaifong	4	1,210		3,900		780,000
Hadkhamhieng	10	800		4,000		800,000
Yangkham	5	3,080		9,400		1,880,000
Mahaxai-Pova	3				7,000	1,400,000
Total	39			32,900	10,000	8,580,000

An additional 120 farmers would like to dig new fishpond in the year 2007.

Livestock / Poultry

At the present time, one of very important income sources of farmer is from livestock activities. Farmers mainly raise pigs, buffaloes, cattle, poultry and some goats in the villages. In spite of having experience raising animals in the village, villagers still have to face with many problems from feeding and breeding. These problems have led to very low incomes from livestock activities.

One of most important animals for villagers is the pig. According to villagers, pig husbandry can contribute up to 40% of livestock income for the family. At the moment, most of the pigs have low growing capacity due to closed blood breeding in the same village and due to limit of biological race of local pigs. Besides that, the pigs are free ranging in the all target villages; therefore, it has made a lot of problems for the development of pigs and piglets in the villages such as slow growing rate, parasite infection, disease spreading and high rate of mortality etc.

During the reporting period, staff visited all of the pilot villages to advise on appropriate livestock development activities.

During the reporting period, the Downstream Program distributed 59 piglets to villagers of new breed (Mong Cai from National University -Nabong Campus).

On 29/1/2007 the livestock team received veterinary equipment from Department of Livestock and Fishery. The equipment is:

Material and equipment for Village Veterinary Workers

No	Description	Quantity
A	Manual and hand book	
1	A manual for Lao Village Veterinary Worker (Lao version)	26
2	A manual on improved Rural pigs Production (Lao version)	5
3	A manual on Primary animal health care (Lao version)	26
4	Use of Veterinary vaccines (Lao version)	26
B	Village Veterinary worker kit	
1	Cloth poster Module 1,2,3 (set)	1
2	Leather veterinary carry bags	26
3	Ice cooler box 4 liter	26
4	Ice pack	52
5	Sterilizers box	26
6	Syringe metal dosing disc 10 ml	26
7	Needle 16G/1/2" (box of 12 needles)	26
8	Needle 16G/1" (box of 12 needles)	26
9	Needle 18G/1/2" (box of 12 needles)	26
10	Needle 18G/1" (box of 12 needles)	26
11	Needle 20G/1" (box of 12 needles)	26
12	Operating Instrument small set	5
13	Normal forceps	26

Handicrafts

During the reporting period, the weaving training was held in Ban Beungxe from 11 to 20 December 2006 to

- set up women weaving groups for different cotton and silk handicraft products in 9 pilot villages;
- Train on natural dying opportunities using local growing vegetation;
- Adjust the existing handicrafts products
- Provide knowledge to weaving and handicraft groups on investment calculation and realistic pricing of products;
- Train handicraft and weaving groups to formulate their household business plans, including investment costs, market, logistics, and trade opportunities;

24 participants attended the training: 7 from Beungxe, 4 from Veunsivilai, 3 from Beungbouathong, 3 from Mahaxai, 3 from Gnommalat and 4 from Nongbok.

Based on the training session:

- Participants are very interested in receiving handicraft training
- Many participants have basic knowledge in handicraft production. However some have very limited, or no knowledge, making training difficult
- Some participants do not have enough time to work on handicraft production due to many other tasks

2.4.8 Infrastructure Related Activities*Mini-polder construction*

Field visits were made to five villages (*Yangkham, Hatkhamhieng, Hatxaifong, Kengpe, Hatpek*) to assess the feasibility of implementing mini-polders. Following the initial field visits, it was decided to focus further investigations this year on the three villages within the lower Xe Bangfai region

(Yangkham, Hatkhamhieng, Hatxaifong). Preliminary alignments have been identified using data collected from field visits and topographical maps.

Arrangements have been made to commence topographic survey of the identified preliminary alignment with survey equipment suppliers and district staff to assist with undertaking the topographic survey. It is expected that the survey will commence in early February. Following topographic surveys, more detailed plans will be developed, together with cost estimates and schedules.

Water Supply / Sanitation / Hygiene (WASH)

Downstream WASH staff visited all 20 pilot villages to verify and update pre-consensus findings as identified in the Downstream Report. Preparation of detailed implementation proposals for the 20 pilot villages began during the reporting period.

Water Gate rehabilitation

No activity for water gate rehabilitation during the reporting period.

Asset Restoration

No activity for asset restoration / relocation was undertaken during the reporting period.

Irrigation activities, including Operation & Maintenance

No irrigation (including O&M) activities were undertaken during the reporting period.

UXO Activities

During the reporting period Downstream Program staff interview villagers in 14 of the 20 pilot villages to collect local knowledge regarding historical and present UXO conditions. The data will be used in conjunction with additional information sources to prepare a UXO risk assessment paper for the downstream area.

2.4.9 Fish Catch Monitoring

General

Presently, fisheries monitoring is ongoing in 39 villages. See following table.

Province	District	Villages	District Monitors	Participating Households
Bolikhamxay	Khamkeut	11	1	55
Khammouane	Gnommalat	6	1	30
	Mahaxai	6	1	30
	Xe Bangfai	6	1	30
	Nongbok	3	1	15
Savannakhet	Xaibouli	7		35
3	6	39	5	195

The following 39 villages are included in the daily fish catch monitoring of 5 selected households.

	Village	District
1	Phathoung	Gnommalat
2	Nongping	Gnommalat
3	Khoksavang	Gnommalat
4	Nalatkhuy	Gnommalat
5	That	Gnommalat
6	Naxok	Gnommalat
7	Povatai	Mahaxai
8	Nakio	Mahaxai
9	Khamfeuag	Mahaxai
10	Mahaxaitai	Mahaxai
11	Povaneua	Mahaxai
12	Dangkang	Mahaxai
13	Hatkhamhieng	Xe Bangfai
14	Yangkham	Xe Bangfai
15	Veunsananh	Xe Bangfai
16	Kasee	Xe Bangfai
17	Kengpe	Xe Bangfai
18	Sang	Xe Bangfai
19	Hatxaifong	Nongbok
20	Navangneua	Nongbok

	Village	District
21	Hatxiengdee	Nongbok
22	Beungxe	Xaibouli
23	Nasang	Xaibouli
24	Nonenakham	Xaibouli
25	Dongmakfai	Xaibouli
26	Veunsivilai	Xaibouli
27	Beungbouathong	Xaibouli
28	Thaphoxai	Xaibouli
29	Khammouane	Khamkeut
30	Vangpha	Khamkeut
31	Phonthong	Khamkeut
32	Chengsavang	Khamkeut
33	Oudom	Khamkeut
34	Sopphouan	Khamkeut
35	Phonthob	Khamkeut
36	Phonpheng	Khamkeut
37	Nakham	Khamkeut
38	Vangkor	Khamkeut
39	Nongxong	Khamkeut

At each of these 39 villages, household fish catch is monitored on a daily basis by 5 households. Forms are filled in by in total 195 households and collected by 5 fish catch monitors. Subsequently these forms will be brought to the data entry service provider in Vientiane where the collected data are entered into a database. These activities are ongoing. Presently 34,055 individual forms are included in the database.

In addition to the monitoring of household fish catch, in each of the 39 villages, fish catch information is collected through (i) village profile meetings and household interviews (20 households per village), (ii) interviews with fish traders, and (iii) monitoring of large scale fisheries, and community fishing activities.

Activity	Completed	Remaining to be completed	Estimated total
Daily HH Monitoring	34,055	109,945	144,000
Profile meetings	64	0	64
Individual HH interviews (Phase 1+2)	829	513	1,342
Fish trader interviews	21	39	60
Traditional community fishing interviews	155	145	300
Large scale fishery assessments	27	0	27

Downstream of Nakai Dam

Downstream of Nakai Dam (Bolikhamxay Province, Khamkeut District) fish catch monitoring is active in 11 villages. During village profile meetings held in Khamkeut District in 2006 a definitive list has been made of the villages which may *potentially* be impacted by the NT2 Project. These villages include:

- 12 villages along Nam Phao;
- 9 villages along Nam Katha;
- 4 villages along Nam Phouan/Nam Phiat;
- 2 villages along Theun-Hinboun headpond;
- 3 villages along Nam Kheo;
- 6 villages along Nam Ngoy;
- 4 villages that fish in Nam Xot in the NBCA.

Presently, the total count of number of villages potentially impacted by NT2 stands at 40 villages. The livelihood restoration activities will need to compensate the actual impacts of NT2 on fisheries.

The potential impacts from NT2 on this region include:

- Villagers may catch less fish in Nam Theun as a result of reduce in Nam Theun discharges;
- Villagers may catch less fish in the tributaries as less fish will migrate from Nam Theun up into the tributaries;
- Villagers may catch less or more fish in Nam Xot as a result of disappearance of migrating fish from Nam Theun when the Nakai reservoir will be inundated.

For the 40 villages in Khamkeut District a specific fisheries impact report is in preparation that includes the outcome of the village profile meeting and the actual fish catch monitoring that was carried from May 2006 up till October 2006. This report will be made available in March 2007.

A critical issue regarding fish catch monitoring in Khamkeut District is the low capacity of Khamkeut District staff in training and supervision of monitoring by participating households. In the coming months NTPC will assess whether an additional fish catch monitoring supervisor should be recruited to strengthen the fish catch monitoring team.

Upstream of the Nakai Reservoir

In the NBCA (National Biodiversity Conservation Area), upstream of the future Nakai Reservoir, potential impacts by NT2 project may occur, specifically on fish migrating from Nam Theun River up into the tributaries within the NBCA. During a meeting with WMPA (Water Management Protection Authority) we have identified an additional 10 villages where additional fish catch monitoring will be necessary (these 10 villages are not yet accounted for in the above table) to monitor potential impacts. During a planned field trip from 16 to 22 February, 2007, participating households will be selected and material and equipment will be distributed to 4 of the 10 villages.

A critical issue is access to the villages in the NBCA. Collecting the forms filled in by 5 households at each village may take a supervisor about 20 to 30 days traveling by foot and by boat. By assigning at each of the 10 villages a separate supervisor who can read, write, and supervise 5 households, a solution may be found. The 10 supervisors can submit the forms to a WMPA official who can bring the forms back to Nakai on a regularly basis.

Downstream of NT2 Regulating Dam

The fish catch monitoring downstream of the regulating pond at 28 villages in Khammouane and Savannakhet Provinces is proceeding according to planning schedule.

2.4.10 Photographs



POE and GOL representatives during a field visit to fish ponds in Navangneua Village on 11 January, 2007



POE and GOL representatives during a field visit to water melon gardens in Beungxe Village on 11 January, 2007



Moving equipment to the new Downstream Program office (Thakhek)

Environmental Activities

3 Environmental activities

3.1 General

In addition to the monitoring of the HC's construction activities reported in the Construction section of the report, Camp Followers water quality monitoring reported in section 2.1.3, and the PCR activities reported in section 2.1.1, activities and involvement of the Environmental Management Office in December 06 have included the following:

- Water Quality sampling (22-27 January 2007) and analysis.
- Ongoing Interim Human Elephant Conflict (HEC) Monitoring and continued contractual activities for Elephant Program Phase II.
- Ongoing baseline wildlife survey and planning activities.

Ongoing contractual activities for the environmental education component of the Transitional Strategy.

3.2 Wildlife Programs

The description of the various elements of the wildlife program is included for reference.

3.2.1 Fish Impacts in upstream and downstream river species

The baseline fish/aquatic species and habitat inventory report was finalized in September 2006.

No special remarks for this reporting period.

3.2.2 Wildlife Management and Monitoring Programme

Given overlaps in baseline survey and management activities, the Terrestrial and Wetland Programs, which are presented separately in the CA, have been combined into one Wildlife Management and Monitoring Program.

The program will be conducted in two phases:

1. Phase I includes (i) the pre-impoundment species and habitat inventories, (ii) development of a post-impoundment species management program, and
2. Phase II includes training the appropriate GOL agency to implement the management plan.

Activities commenced on 30 September 2006 on Phase 1 by the contractor and the baseline survey and wildlife management plan are scheduled to be submitted on 31 July 2007.

Activities during January 2007 include:

- Ongoing baseline survey and management planning activities.
- Initial feedback is positive about habitat quality and populations of some wildlife species.
- During January 2007, survey activities focused on small mammals. Approximately 36 species of shrew, rodents, and squirrels have been collected. Identification will be confirmed through anatomical and genetic analysis. The small mammal specialist has confirmed contractor's earlier recommendations that an extensive wildlife rescue program is not required.

3.2.3 Asian Elephant Program

1. Pre-impoundment inventory and survey of habitats, distribution, movements.
2. Implementation of a pre-Reservoir impoundment elephant management program.
3. Post-Reservoir impoundment monitoring of movements and distribution.
4. Training of local authorities in conflict response and emergency response.
5. Establishment and implementation of an elephant conflict response team.
6. Development of a transitional strategy for reservoir impoundment.
7. Implementation of a reservoir impoundment elephant strategy.
8. Implementation of post impoundment elephant program.

Phase I of the Elephant Program was conducted by Wildlife Conservation Society (WCS) and includes items 1, 4 and 5 above. The draft Final Report for Phase I was submitted on 31 May 2006. A population of 142 (95% CI=97,207) individuals has been estimated based on the line transect and dung decay data. Given delays in the DNA analysis, the Final Report will not be finalized until January 2007.

WCS is the likely consultant to conduct Phase II. Objectives of Phase II include development and implementation of a pre- and post-inundation elephant management plan. Management activities will include the continuation of HEC monitoring and training villagers in passive and active crop protection measures.

Activities during January 2007 include:

- Ongoing contractual activities for Phase II.
- Between the end of Phase I and commencement of Phase II, HEC monitoring is continuing to assess the spatial and temporal distribution of HEC on the Nakai Plateau and surrounding areas. HEC incidents were recorded and tabulated below. Similarly to the previous year there has been a sharp increase in the number of HEC in the period following the wet season when crops are ripening.

Month	HEC Incidents
Jul 06	3
Aug 06	10
Sep 06	18
Oct 06	6
Nov 06	51
Dec 06	9
Jan 07	¹

¹WCS still analyzing the data

3.2.4 Transitional Strategy for Reservoir Impoundment

This program includes the following activities:

1. Development of a transitional strategy for reservoir impoundment.
2. Training of local authorities in wildlife emergency response.
3. Establishment and implementation of an emergency response team.
4. Public awareness program.
5. Prevention and prohibition of wildlife trade.

The requirement to provide recommendations on the transitional strategy has been included in the Wildlife Management and Monitoring Program.

Activities during January 2007 include:

- The Wildlife Management and Monitoring Program Inception Report provided recommendations on wildlife rescue activities, and concluded that an extensive wildlife rescue program is not required. A wildlife rescue plan will be developed by the contractor, with planning activities scheduled to commence in April 2007. A boat has been reviewed by the wildlife rescue specialist for use during rescue, and patrolling. The wildlife rescue specialist developing the plan has also been identified as the likely person to conduct implementation.
- To instill environmental awareness in the Nakai Plateau population, including Resettlers, and reduce the exploitative approaches to wildlife, especially during the transitional phase when animals may be more vulnerable, an environmental education program will be implemented. A service provider has been identified to conduct the program. The service provider has successfully conducted an environmental awareness program for HC/CC with positive feedback from LE. The scope of the environmental education program has been expanded to include (i) general environmental awareness (waste management, hygiene,

etc.); and (ii) target audience of Resettlers, school children and resettlement construction workforce. Contractual activities are still ongoing.

- Consistent with the CA, the EMU has identified in its Environmental Management Manual the need for GOL to be responsible for control and enforcement of wildlife protection and prevention of wildlife trade. EMU activities will include (i) assessment of the capacity of GOL enforcement agencies; (ii) assistance to GOL with capacity building; (iii) spot checks to confirm effectiveness of GOL enforcement programs; and (iv) identification of additional measures to improve hunting control (e.g. village level regulations).

3.2.5 Adaptive Management Programs

An Adaptive Management approach will be implemented for the following Programs:

1. Wildlife Program (all components)
2. Riparian release downstream of the Nakai Dam
3. Water release in the Nam Kathang
4. Water release from the regulating pond to the downstream channel

No special remarks for this reporting period.

3.3 Water Quality Monitoring and Assessment Program

During January 2007, the WQMAP included the following monitoring:

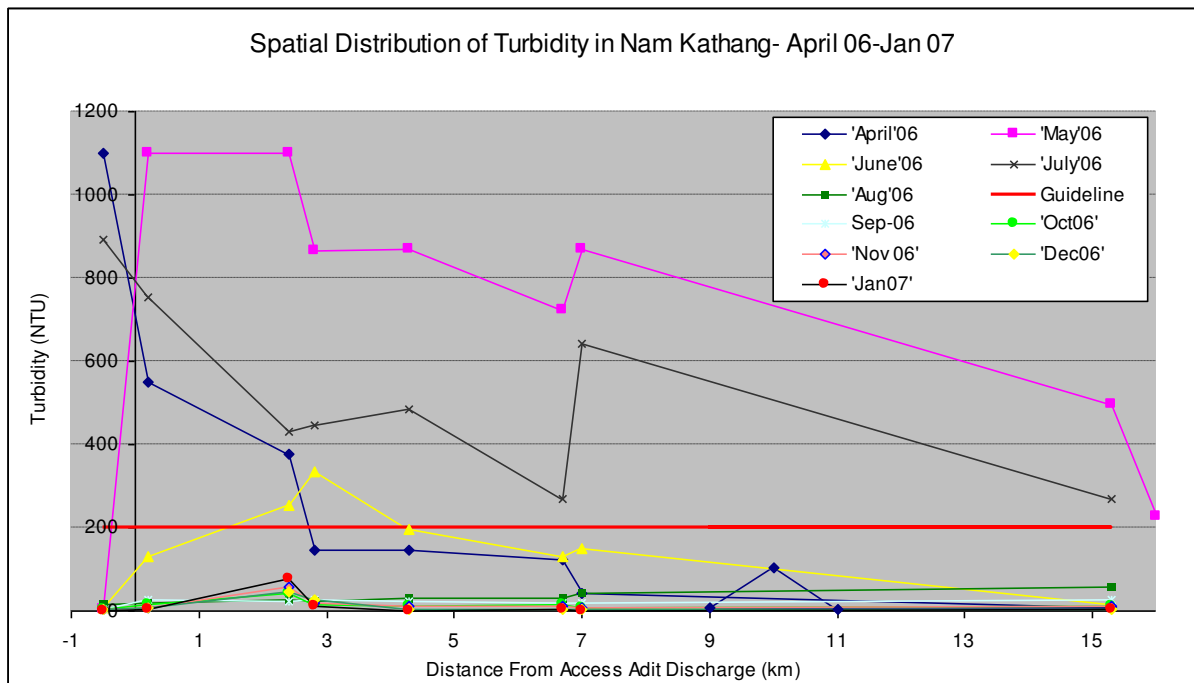
- 27 parameters at 16¹ Surface Water sampling sites. These are located upstream and downstream of construction areas on the Nam Theun, Nam Kathang, Nam Gnom, Nam Phit, and Xe Bangfai. Given the potential for Project increases in sediment load, the spatial distribution of turbidity was monitored at 7 surface water sites and at 6 construction site discharges along the Nam Kathang.
- 12 physiochemical parameters at 15 Resettlers and Project Lands Groundwater sampling site. 1 bacteriological parameter at 30 Resettlers and Project Lands Groundwater sampling sites. These are new groundwater installations located on the Nakai Plateau that have been provided by NTPC.
- 12 physiochemical parameters at 13 Community Groundwater sampling sites. These are groundwater installations already owned by the community in the Project area.
- 1 bacteriological parameter at 15 Public Health Groundwater sampling sites. These are restaurants associated with camp followers.

Field Observations - January 2007

Sample collection and field analyses were conducted during 22-27 January 2007. The major field observations and measurements are as follows:

- The turbidity in the Nam Kathang continues to remain within the Project Guideline which reflects the reduction in rainfall and surface runoff from cleared construction areas during the dry season. Improvements in sedimentation controls at the Access Adit and Power House have contributed to the improved water quality in the Nam Kathang.
- Turbidity levels are within the Project guideline for the entire length of the upper Nam Kathang from upstream of the Power House to Ban Gnommalat.
- There was no discharge from the Access Adit Platform 415 sedimentation basins during sampling.
- Discharge from the Power House was 8.23 NTU.
- During the sampling event there were no discharges down the Nakai escarpment from the Headrace Channel or Intake Structure construction areas. Discharge from Saddle Dam 12B construction site was 27.9 NTU.

¹ SW13 is located on a seasonal water body and therefore monitoring only in wet season. SW10 is located on the Nam Pan which is no longer included in the WQMAP.





Turbidity Sampling sites

January 2007 Water Quality Results

Physiochemical results for January 2007 will be presented in the February 2007 Monthly Progress Report. The fecal coliform results for January 2007 are presented in the tables below. As a screening procedure, the results have been compared with Project guidelines. Values highlighted in yellow represent exceedences.

Surface Water

Faecal coliform continues to exceed the Project Guideline downstream of the Power House (SW5). Although there was no flow in the upstream control (SW4) and therefore no analytical results with which to compare the downstream station, as with previous months, the source of this elevation is likely to be construction workers who are still observed using the surrounding areas as a toilet, although the contributions from livestock cannot be ruled out. Faecal coliform are indicators the bacteria and pathogen load in the water which could pose a risk to human health. Communities should continue with the practice of boiling surface water prior to consumption

Site	Faecal Coliform (FC/100 ml)	Project Guideline
Nam Theun		
SW1	63	150
SW2	129	150
SW3	52	150
SW18	61	150
Nam Kathang		
SW4	No flow	150
SW5	169	150
SW9	114	150
SW14	85	150
SW15	92	150
Nam Phit		
SW6	22	150
Xe Bangfai		
SW7	19	150
SW8	20	150
SW16	15	150
SW17	24	150
Nam Gnom		
SW11	126	150
SW12	118	150
Bottle blank	0	0
Field blank	0	0

Groundwater

Community Groundwater

With the exception of GW2 and GW9, faecal coliform levels exceed the Lao standard for rural drinking water. This contamination is likely a result of poor well design and management, with faecal contamination entering from the surface where animal faeces are usually present. The human health implications are discussed above.

Site	Fecal Coliform (FC/100 mL)	Project Guideline
GW1	23	0
GW2	0	0
GW3	43	0
GW4	32	0
GW5	14	0
GW6	59	0
GW7	83	0
GW8	66	0
GW9	0	0
GW10	24	0
GW11	No water	
GW12	2	0
GW13	97	0

Site	Fecal Coliform (FC/100 mL)	Project Guideline
Bottle Blank	0	0
Field Blank	0	0

Resettlers & Project Lands Groundwater

With the exception of RGW21 and RGW32, fecal coliform remains within the Lao Standard for rural drinking water. During collection the outside of the hand pump was sterilized with ethanol prior to sampling to prevent contamination from the hand pump casing entering the sample. Post sterilization faecal coliforms levels exceed the Lao standard at RGW21 and RGW32. For these sites it appears that the source of the contamination is from within the groundwater installation. There is a further problem for RGW32 with an observed increase in the level of fecal coliform during storage in the header tank. The human health implications are discussed above.

Site	Fecal Coliform (FC/100 mL)	Project Guideline
Ban Oudomsouk		
RGW1	0	0
RGW28	0	0
Ban Oudomsouk Mai		
RGW2	0	0
RGW9	0	0
RGW27	0	0
School		
RGW3	0	0
Ban Phonphanpek		
RGW4	0	0
RGW29	0	0
Ban Nongboua		
RGW5	0	0
RGW30	0	0
Ban Bouama		
RGW6	0	0
RGW22	0	0
RGW23	0	0
Ban Phonsavang		
RGW7	0	0
RGW20	0	0
RGW21	17	0
Ban Sop On		
RGW8	0	0
RGW10	0	0
RGW18	0	0
RGW19	0	0
Ban Done		
RGW11	0	0
RGW12	0	0
RGW16	0	0
RGW17	0	0
Ban Sop Phene		
RGW13	0	0
RGW32. from Pump	2	0
RGW32. from Tank	14	0
Ban Sop Hia		
RGW14	0	0

Site	Fecal Coliform (FC/100 mL)	Project Guideline
RGW24	0	0
RGW25	0	0
Ban Sop Ma		
RGW15	0	0
RGW26	0	0
Ban Khone Kaen		
RGW31. from Pump	0	0
Bottle blank	0	0
Field blank	0	0

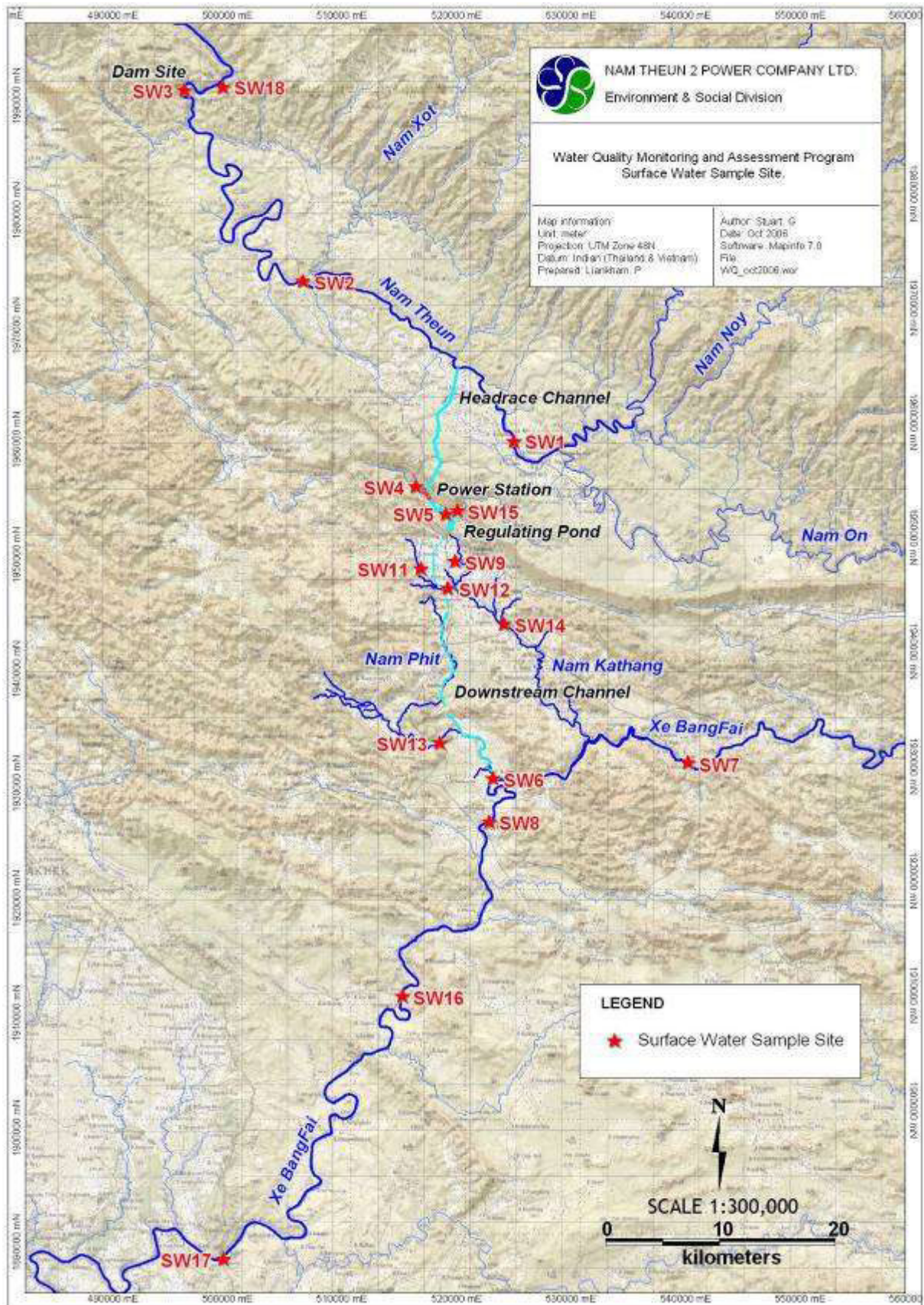
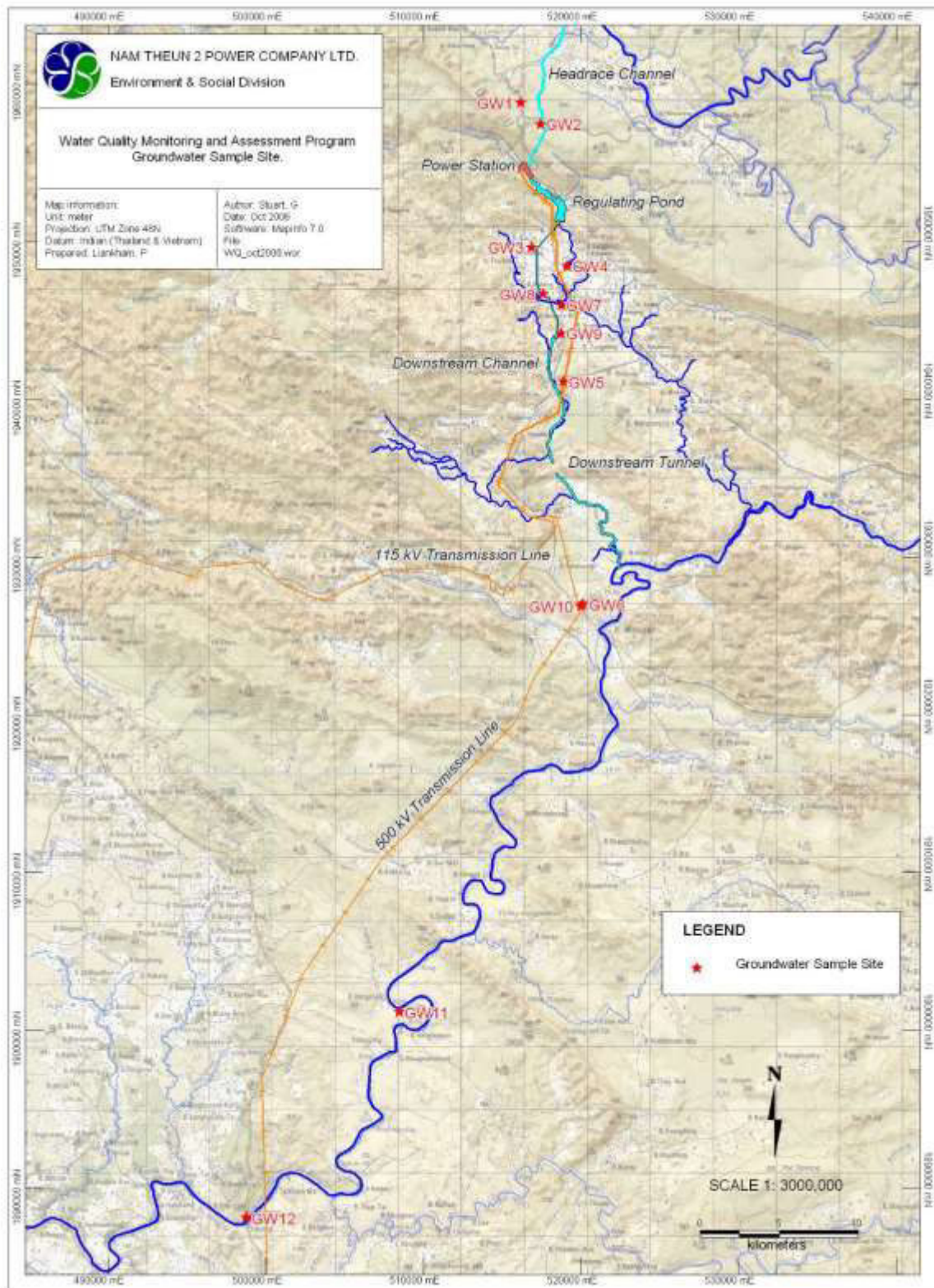


Figure: Community Groundwater sampling sites



3.4 Environment Management Unit (EMU) Technical Assistance (TA)

Activities undertaken by the EMU and EMU TA during January 2007 are presented in the Work Plan below and also include:

- EMU personnel continue to accompany EMO Inspectors on joint site inspections, alternating personnel from EMU Khammouane and EMU Bolikhamxay. Details of the construction areas inspected by the EMU are provided in Part B, Section 1.2 (*Environment Protection*) of this Report.

CA Ref No.	EMU Activity (Work Plan)
NA	Translation of the EMU Environmental Monitoring Manual
03	Commence consultation with the SLMU regarding salvage logging operations and measures to maximize biomass removal.
03	Meet with RMU and VFA to discuss roles regarding lesser value biomass removal
07	Consult with the NTPC regarding establishment of adaptive management committee for the Nam Kathang
11	Request information from NTPC regarding the design specifications of the Confluence Area to confirm that appropriate stabilization or protection measures, such as rip-rap, are provided to minimize scouring.
11	Commence infield spot checks of the Confluence Area to confirm consistency of construction activities with design specifications.
13	Conduct infield spot checks of the Downstream Channel construction to confirm provisions for localized low points
18	Consult with WMPA, RMU and district authorities to assess the capacity of the GOL enforcement agencies (technical, human, financial resources) to implement hunting controls in the Resettlement Areas. Assist the GOL enforcement agencies with the development of capacity as required.
19	Consult with the NTPC regarding establishment of adaptive management committee for wildlife program
21	Conduct a GPS survey of the extent of spoil disposal areas in Gnommalat
23	Conduct investigation of vegetation clearance with respect to design standards along new road zones D and F
24	Request the NTPC to provide the results from the PCR field surveys, as well as the recommended mitigation and management measures
25	Request the NTPC to provide a copy of the Health and Safety Program.
26	Request the NTPC to provide a copy of the EIAs for quarry areas.
26	Request the NTPC to report on the progress of quarry activities.
27	Request the NTPC to provide the results of the environmental impact assessment for the final alignment of the Transmission Line
34	Request the NTPC to provide a plan to mitigate noise exceedances as reported in the NTPC Progress Report
36	Review the Landscaping and Revegetation Management Plan (Reva)
36	Follow-up request for the NTPC to report on progress of revegetation activities
37	Request the NTPC to report on the implementation of enforcement mechanisms for controlling vehicle speeding
37	Coordinate with GOL to strengthen capacity to enforce speed limits
39	Request the NTPC to report on the implementation of environmental training of construction workforce
41	Request the NTPC to provide copies of the Village Development Plans for resettled villages
41	Clarify roles and responsibilities of the EMU with the RMU with respect to Part A, Part C and Part E
44	Request that NTPC provide a progress report for environmental grievances
44	Assess the feasibility for the EMU to provide capacity building to district staff with respect to grievance management
NA	Review the Salvage Logging Code of Conduct and Technical Guidelines, and the EMP for the Salvage Logging access road to confirm the inclusion of adequate measures to avoid and minimize impacts of pollution
NA	Prepare monitoring report including observations and non-compliances for submission to the Salvage Logging Committee

3.5 EMO's activities linked to construction

The environmental activities linked to construction works are part of the Construction Progress Report, Part B of this Monthly Progress Report.

Internal, External Monitoring

4 Internal and External Monitoring

Schedule of visits: Visits of the month in blue - Next scheduled visit in green.

ID	Task Name	Duration	Start	Finish	Jan '07							Feb '07					Mar '07				Apr '07				May '07			
					31	7	14	21	28	4	11	18	25	4	11	18	25	1	8	15	22	29	6	13	20	27		
1	Total: 79 days																											
2	Ecole Hotfret - Preparatory Mission	2 days	Sat 6/01/07	Sun 7/01/07																								
3	SCB Delegation site visit with ITD	2 days	Sat 6/01/07	Sun 7/01/07																								
4	POE Visit	17 days	Sat 6/01/07	Fri 26/01/07																								
5	LHSE site visit	1 day	Fri 12/01/07	Sat 13/01/07																								
6	Progress report	0 days	Mon 15/01/07	Mon 15/01/07																								
7	DSRP	5 days	Mon 22/01/07	Fri 26/01/07																								
8	Ministry of Health Representatives site visit	3 days	Tue 23/01/07	Thu 25/01/07																								
9	IAG Mission	12 days	Mon 5/02/07	Fri 16/02/07																								
10	WB Vice-President site visit	2 days	Sat 10/02/07	Sun 11/02/07																								
11	FI technical mission	3 days	Mon 12/02/07	Wed 14/02/07																								
12	Progress report	0 days	Thu 15/02/07	Thu 15/02/07																								
13	IRN site visit(to be confirmed)	2 days	Thu 1/03/07	Fri 2/03/07																								
14	ADB Vice President site visit	2 days	Thu 1/03/07	Fri 2/03/07																								
15	Ecole Hotfret site visit	2 days	Wed 7/03/07	Thu 8/03/07																								
16	Flis Management Review Mission	5 days	Mon 5/03/07	Fri 9/03/07																								
17	GOL Engineers	5 days	Mon 12/03/07	Sat 17/03/07																								
18	Progress report	0 days	Thu 15/03/07	Thu 15/03/07																								
19	LE mission	5 days	Mon 19/03/07	Fri 23/03/07																								
20	EGAT site visit	2 days	Thu 22/03/07	Fri 23/03/07																								
21	Progress report	0 days	Sun 15/04/07	Sun 15/04/07																								
22	French NGOs site visit (to be confirmed)	6 days	Mon 14/05/07	Mon 21/05/07																								

GOL Related Activities

5 GOL related activities

5.1 Watershed Management Protection Authority (WMPA)

WMPA spent 1 week in January with the NT2 Panel of Experts (POE) reviewing the progress and achievements of the WMPA to date relative to their workplan and overall strategies. The WMPA accompanied the POE on their visits to Ban Nakadok to review the gold mining activities in this area and its possible effects on local communities and downstream areas. The POE also flew by helicopter to Ban Maka and Ban Theung areas located in the upper part of the NBCA close to the Vietnam border. The POE report is expected to be available at the end of February or beginning March 2007.

WMPA remain active in their patrolling activities around the Watershed and peripheral zones to reprimand illegal hunters or log traders. The WMPA also commenced land use planning activities for the Ta Pai Ban Cluster of villages in the NBCA.

NTPC and the WMPA continue to coordinate on (i) NTPC's Wildlife Program, including outputs of the baseline survey and the implementation of recommended management measures; (ii) establishment of the Adaptive Management Committee for the wildlife programs; and (iii) NTPC's baseline fisheries survey in the NNT NPA.

The WMPA has submitted the Annual Report 2005-2006. The report presents major achievements for the period 2005-2006, and challenges to be addressed in 2006-2007.

5.2 Optimization of Salvage Logging on the Nakai Plateau

Salvage Logging activities continue in the reservoir area. In January there were approximately 597 workers with 115 chainsaws actively cutting trees. At the end of 2006, approximately 50,000 cubic meters of log of various species have been recorded at the Second Landing. The Salvage Logging Contractors and Transporters have been following the Decision 0288 from the Chairman of the Salvage Logging Committee regarding road use and times. There have been very few incidents of logging trucks operating outside the rules contained within Decision 0288 and there has not been any major conflict between the NT2 Construction truck traffic and the logging truck traffic.

The Monthly Progress Reports and Salvage Logging and Reservoir Sanitation Operations Plans have been updated and sent to the International Financial Institutions (IFI's) as they requested. The POE also visited different areas of the logging operations during their visit in January 2007.

5.3 Social issues (RMU & DWG)

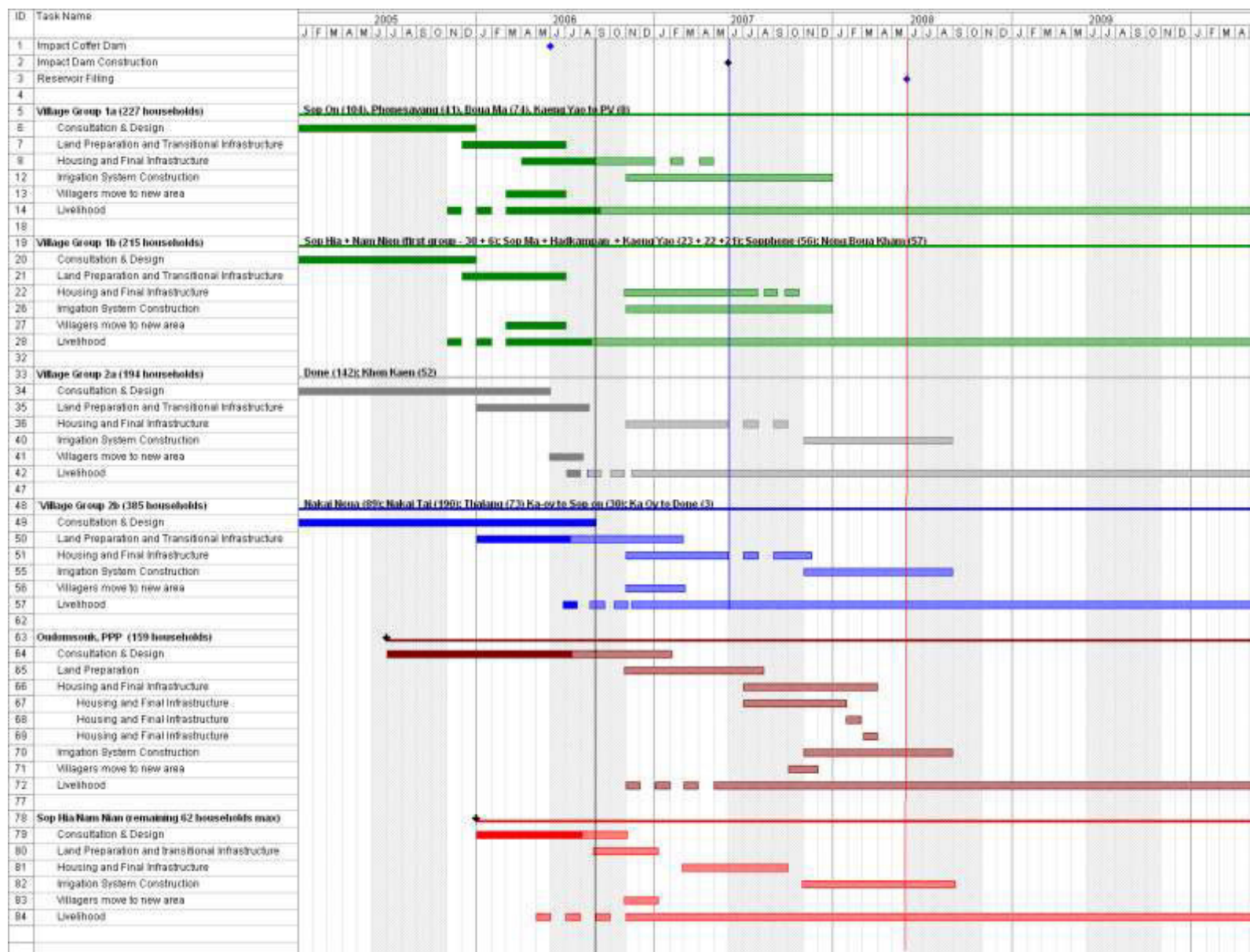
See social section.

Annexes

Proposed NT2 Reservoir Nakai Plateau Village Relocation Routes



Transition Resettlement Schedule





Nam Theun 2 Power Company Ltd.

Nam Theun 2 Hydro-Electric Project

**Monthly Progress Report
covering activities in February 2007**

Part C : Environmental & Social Report

Table of Contents

1	GENERAL OVERVIEW	5
1.1	Staffing NTPC, GOL (EMU, RMU, DWG) and Partners.....	8
1.2	Unanticipated Project Impacts	9
1.3	Additional Plans and PIP updating	9
1.4	Grievance procedure	9
1.5	Communication	9
1.6	Procurement	9
1.7	Monitoring:.....	9
1.8	WMPA:.....	9
2	SOCIAL ACTIVITIES.....	11
2.1	Physical Cultural Resources, Project Lands, Camp Followers.....	11
2.1.1	Physical and Cultural Surveys & Salvage	11
2.1.2	Project Lands	12
2.1.3	Camp Followers.....	18
2.2	Public Health Regional and Resettlement Programs.....	20
2.3	Nakai Plateau Resettlement	26
2.3.1	General	26
2.3.2	Infrastructure	30
2.3.3	Livelihood	41
2.4	Downstream Areas Development Plans	53
2.4.1	General overview	53
2.4.2	Baseline Studies, Monitoring	54
2.4.3	Reports & Meetings.....	54
2.4.4	Administration.....	54
2.4.5	GOL Coordination	54
2.4.6	Community Organization / Village Development Fund	55
2.4.7	Livelihoods.....	56
2.4.8	Infrastructure Related Activities	58
2.4.9	Fish Catch Monitoring	59
2.4.10	Photographs.....	61
2.4.11	Fisheries Reservoir Program.....	63
3	ENVIRONMENTAL ACTIVITIES	65
3.1	General.....	65
3.2	Wildlife Programs.....	65
3.2.1	Fish Impacts in upstream and downstream river species	65
3.2.2	Wildlife Management and Monitoring Program.....	65
3.2.3	Asian Elephant Program	66
3.2.4	Transitional Strategy for Reservoir Impoundment	67
3.2.5	Adaptive Management Programs	68
3.3	Water Quality Monitoring and Assessment Program	68

3.4	Environment Management Unit (EMU) Technical Assistance (TA)	84
3.5	EMO's activities linked to construction	85
4	INTERNAL AND EXTERNAL MONITORING.....	87
5	GOL RELATED ACTIVITIES.....	89
5.1	Watershed Management Protection Authority (WMPA).....	89
5.2	Optimization of Salvage Logging on the Nakai Plateau	89
5.3	Social issues (RMU & DWG)	89

General Overview

1 General Overview

Project lands:

- Planning for expansion of livelihood restoration activities 2007 continues. The programs have experienced a large increase in the number of PAPs participating.
- Construction of 5 replacement houses in Oudomsouk is now complete. A contract has been issued for installation of electrical connections.
- Work under C817 for 20 wooden replacement houses and one replacement bathroom in Gnommalat started, with the contractor mobilized to site. Quotations for VO1 prepared for site preparation and an additional four houses.
- Compensation payments for RMU invoice #4 commenced.
- The water supply program which previously planned to utilize open, dug wells has been modified to include only machine drilled boreholes. Review and revision of water supply point locations commenced.
- Additional land required for construction of drainage channels in LPA 38a, b, c identified.

Public Health:

Following major activities were undertaken during February 2007:

- Number of training courses were held during the month:
 - Training course on "Obstetric Register" for HC and districts completed in another five districts.
 - Peer education training for the High School students in GMLT and MHX on 22-25/02/07 and 27/02-02/03/07 respectively.
 - Training course on the use of Biochemistry for Khamkeut lab staff during 28/02-02/03/07
 - Practical training on surgery to Khamkeut DH during 28/02-02/03/07
- Health checks and survey was conducted in Done and Sop On (new comers from Ka Oy) Villages on 19-24 Feb and 25 Feb 2007 respectively.
- Data Entry in progress for health checks and survey data of SopMa and Khone Kaen Villages
- Data of the six villages (Nongboua, So On, Bouama, Phonsavang, SopMa and Khone Kaen) is being cleaned and analyzed
- Continue and expand monthly Maternal and Child Health clinics in four districts and prepare the family health files at the same time. So far we have held 183 clinics in 57 villages.
- Quarterly meeting was held in Khamkeut district on 28 Feb 07
- Routine visits to the resettlement villages continued and population health monitored

Nakai Plateau resettlement

Infrastructure:

- Extra topographic survey and mapping: No activity during the month. However the setting out of house and agricultural plots is an ongoing activity by Resettlement Office personnel.
- UXO search and clearance: The resettlement area UXO contract with the contractor is now closed. The ongoing contract with the same contractor, for UXO community awareness and on-call roving response team is still proving successful with 22 UXO items reported and destroyed during the month. By the end of February the roving unit have found and disposed of 1,982 UXO items including 1,788 bomblets. Additional UXO awareness training for project Staff, including managers and extension workers, scheduled for March 2007.

- Timber houses: The contractors awarded the timber houses construction contracts at areas covering 17 Bouama, 18 Phonsavang and 19 Sop On and pursued with the construction works, notices to proceed have been given in total to 719 houses (153 are fully completed). The contractor for the northern villages of Nong Boua Kham was given notice to start work on 1 February and foundation work has commenced. Seven contracts for five VG2 village houses were signed and notice to proceed given to three contractors.
- Roads and tracks: There are now four road construction contracts underway. The three southern VG1 road and track contract is now substantially complete as is the Southern Resettlement Road contract. Three of the four northern resettlement village access roads and tracks are nearly totally complete and the additional Area 13 roadworks about 80% complete. The two southern VG2 village contract is about 35 % complete.
- Irrigation: Progress with the construction of the irrigation area extension at the Pilot Village for the Keng Gnao resettlers is satisfactory. Design of a pilot groundwater irrigation area at Sop On had to be revised and it is expected that bidding procedures will begin in March.
- Villages Layout: The preparation of preliminary resettlement village and agricultural layouts for the VG2 villages is continuing by NTPC personnel in consultation with villagers.
- Community Buildings: Bid opening for the construction of community buildings was on 9 February. Ten companies bid for four contracts and evaluation is underway.

Domestic Water Supply and Sanitation :The boreholes drilling program has continued as per schedule and a total of 12 new productive wells were completed in 7 villages of Gnommalat District (Project land) and in the villages of Ban Nongbouakham (area 9) and Ban Sop Hia (area 7). In Nongbouakham, 3 boreholes were abandoned due to insufficient yield.

To date, 139 deep productive boreholes have been successfully drilled and developed on a total of 157 tentatives. All included, the total failure rate is of about 11.5%. However still sixty six (66) wells only are equipped with water lifting devices, due to further delay in the hand pumps procurement.

- Electricity: The design of the resettlement village electrification systems is continuing. Bid procedures for the electrification of three villages were delayed until March.

Livelihood Plans:

Forestry:

- Logs have been selected from Salvage Logging areas for a volume of 6,244 m³
- Total volume timber delivery in February to contractors: 311.080 m³

Agriculture / Livestock:

- Meetings have been held in 10 villages to explain the new approach.
- Farmers have started to prepare their rice field in the drawdown areas
- Preparation of 0.66 ha field in some villages.
- Survey of additional 3 ha agriculture land done in southern part of the plateau.

Recruitment process on-going with candidate's interviews.

Fisheries:

- The consultants on study of Reservoir Fisheries Management Program started on 5th February. They started with field work in each resettlement village of Nakai Plateau.

Community Development:

- Awareness raising of villagers continued on the possible flood due to main dam impact (June-August 07). Census for the remaining VG2 villages has been finalized. During the month, Sop Hia / Nam Nian and Nongbouakham villagers were consulted to plan for actual temporary relocation to new sites.
- Rice and protein being continuously provided to villagers, except protein to the first 3 villages already moved 9 months ago, which is to be stopped by end of March 07.

- Incomes activities (non-farm) were strengthened for better results and enlarged to more target groups and people, especially the vulnerable households and women members.
- Education support is continuous and new relocated villages being covered by the education program.
- Grievance system was strengthened (administratively and logistically) at both the district and village levels.

Downstream Program:

- New manager joined the Downstream Program
- Veterinary training was conducted in 9 villages
- Establishment of fish catch monitoring in 3 villages upstream of the Nakai Reservoir
- Continuation of livelihood development activities
- Preparation for a “training of trainers” course for village & saving fund
- Topographic survey for a mini-polder scheme completed
- Village Veterinary workers training conducted in 9 villages
- Preliminary WASH implementation plans for 10 villages were developed.

Environment:

- Water Quality sampling and analysis
- Ongoing Interim Human Elephant Conflict (HEC) Monitoring and continued contractual activities for Elephant Program Phase II.
- Ongoing baseline wildlife survey and wildlife management and monitoring planning activities.
- Ongoing contractual activities for the environmental education component of the Transitional Strategy.
- Procurement activities for the wildlife rescue and patrolling boat under the Transitional Strategy.

Monitoring:

- IFIs Technical Review Mission on 12 to 14 February 2007
- IAG Mission on 5 to 16 February 2007

1.1 Staffing NTPC, GOL (EMU, RMU, DWG) and Partners

NTPC E&SD Staffing

Legend:

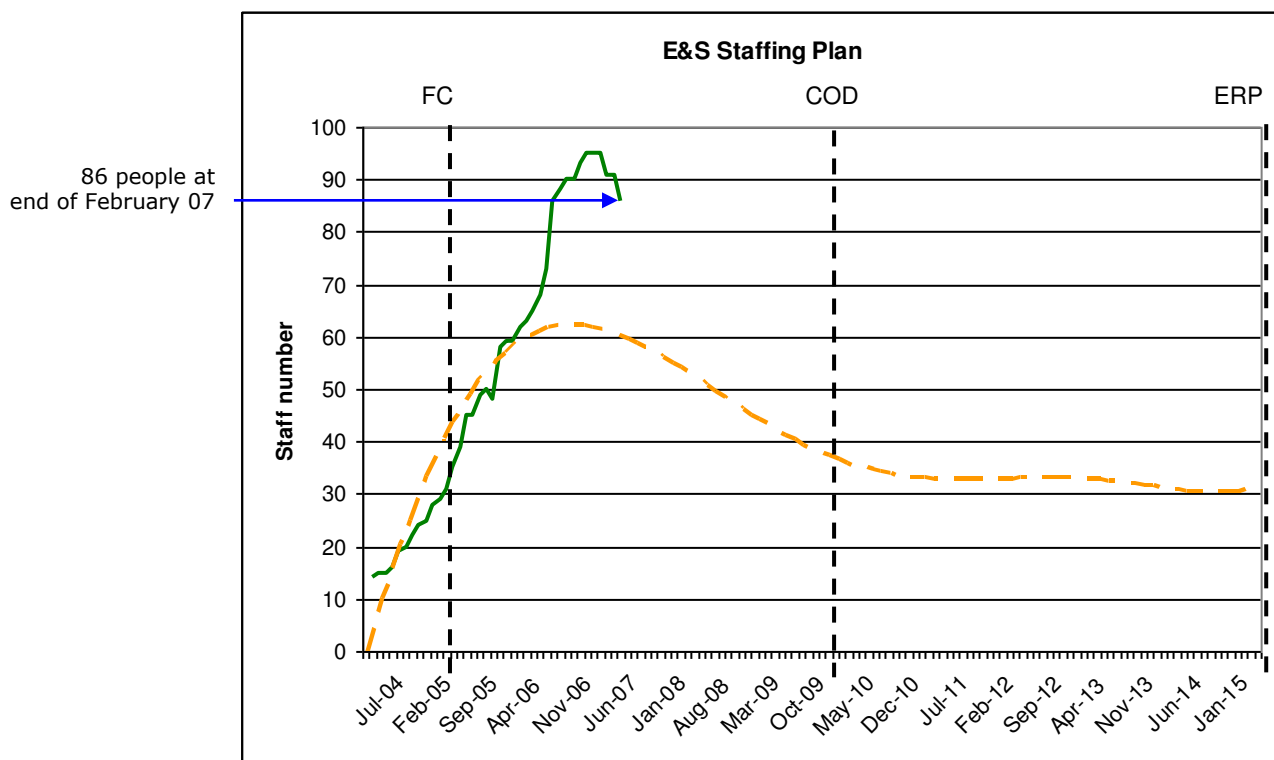
Scheduled staffing plan

Actual staff recruitment

FC = Financial Close

COD = Commercial Operation Date

ERP = End of Resettlement Period



In addition to NTPC staff, individual consultants are working full/part time with NTPC teams

Two local staffs retired during of this month.

Three local staffs moved to other division during of this month.

The Nakai Residential Complex in Oudomsouk is used by the NTPC E&S team (complex of 54 rooms/studios/apartments and 6 villas).

EMU Staffing

No change from the previous report

RMU and DWG Staffing

No change from previous report.

Partners

No change from previous report.

1.2 Unanticipated Project Impacts

No change from previous report.

1.3 Additional Plans and PIP updating

PIP / AIP

No change from previous report.

Additional Plans

No change from previous report.

1.4 Grievance procedure

No change from previous report.

1.5 Communication

No change from previous report.

1.6 Procurement

In February, procurement activities have been mainly, but not only focusing on:

- Evaluation process of the proposals received for the construction of community buildings (VG1),
- Signature of 8 contracts for the construction of timber houses (VG2). Kick off meeting was held in Nakai,
- Preparation of the contract for the IMA Nakai completed – documents transferred to the GOL for signature ,
- Bidding process for the construction of roads (areas 21-22),
- Bidding process for the construction of roads (areas 7-13),
- Cancellation of the bidding process for the supply of fertilizers due to high prices – Market analysis in progress to find out the best way to procure the items in time and budget,
- Completion of the amended bidding process for the supply, installation and commissioning of IT & TV cable networks at the Nakai Residential Complex (re-bidding necessary because of paucity of bidders),
- Evaluation of the bids for the supply and installation of submersible pumps and pipe system to the water tank for health infrastructures,
- Evaluation and award for the supply of 4WD pick up for the Downstream Team,
- Order of vehicles through IAPSO,
- Cancellation of the bidding process for the construction of concrete wells (due to a change in the design of the wells),
- Flood control (DS consultant) – Search for an individual consultant in replacement of previous person who resigned,
- Processing the Social Security registration of the 13 DS individual consultants,
- Procurement of 5 Honda Wave using NTPC frame agreement with supplier.
- Audit from the World Bank (Post review contracts only)

1.7 Monitoring:

No change from previous report.

1.8 WMPA:

No change from previous report.

Social Activities

**Physical Cultural Resources, Project Lands,
Camp Followers**

2 Social Activities

2.1 Physical Cultural Resources, Project Lands, Camp Followers

2.1.1 Physical and Cultural Surveys & Salvage

Based on the findings of the baseline PCR survey and the impact assessment advice provided by the HC, PCR were separated into four PCR plans: (i) movable PCR; (ii) PCR within construction areas; (iii) PCR within the Reservoir; and (iv) PCR along the Xe Bangfai.

Movable PCR Plan

No special remarks for this reporting period.

PCR within Construction Areas Plan

No special remarks for this reporting period.

PCR within the Reservoir Plan

To date, IoCR has completed consultation for all resettlement villages and completed management measures for almost all VG1 PCR sites.

Activities during February 2007 include:

- To help protect the site from resettlement construction and Resettlers' agricultural activities, the EMO erected a fence around the historic PCR site (NTPC/IN/105/5) at Nakai Neua.

PCR along the Xe Bangfai Plan

The plan for PCR along the Xe Bangfai will be implemented in coordination with the Downstream Program. One historic site, five spirit sites and twelve temples are located on the banks. The temple sites were surveyed to prioritize monitoring effort and to identify any requirement for pre-operations management measures (relocation of infrastructure or bank protection).

Activities during February 2007 include:

- In response to NTPC comments, the DMA continue to finalize the report on the Archaeological Salvage of the Historic Kiln Site on the Xe Bangfai.

Chance Find PCR

No special remarks for this reporting period.

PCR Monitoring

No special remarks for this reporting period.

2.1.2 Project Lands

Main events in February:

A summary of Project Land and status is given in the following table:

Project Lands
Status at end of **February 2007**

		RAPS	1	2	3	4	5
			Khamkheut / Quarry	Oudomsouk	Gnommalath / Mahaxai w/o roads & TL	roads 8 & 12	115& 500kV Transmission Lines
Infrastructures	Relocation of houses	Total number of houses to be rebuilt or relocated	90				~ 70
		Cumulative at end of the month	90				36
		Progress during the month	0				0
		comments	26 relocations done in temporary structures, corresponding permanent structures under construction				On time with the TL construction
	Water supply Boreholes + shallow wells	Total number to be drilled		73			
		Cumulative at end of the month		16			
		Progress during the month		7			
		comments					
	Compensations	impact below 10% : Final compensation (payment in cash)	Number of affected hh < 10%	315			639
			Cumulative HH compensated	253			324
			Done during the month	+ 13			180
			Cumulative amount paid to date (US\$)	150 000			30 000
			comments				Identification of PAP is still ongoing, based on the designs provided
		impact above 10% Transitional compensation	Number of affected hh > 10%	429			
			Interim compensation paid in 05	TBA			
			Interim compensation paid in 06	TBA			
			Interim compensation paid in 07	0			
			Cumulated amount paid (US\$)	140 000			
		livelihood restoration	number of hh entitled for livelihood restoration	417			
			number of hh engaged in livelihood programs	294			
			comments	25 hh prefers cash compensation (discussed and agreed with ADB) # of hh engaged in livelihood restoration program being updated.		On RAPs 4 and 5, no hh is impacted more than 10%	

2.1.2.1 Baseline Studies

The collection of baseline study data is complete.

2.1.2.2 Meetings & Consultations

Coordination meetings with the DCWG and RMU continued during the month of February 2007.

2.1.2.3 Compensation

A summary of compensation payments which are commenced during February 2007 are included in the following tables:

Final Compensation

LPA #	LPA	No. PAPs	Description	Amount Required (kip)
35	Regulating Dam	10	Housing Land + structures (final)	53,520,000
36	Residence Nam Theun	2	Housing Land + structures (final)	9,050,000
40	HC/ITD Camp	8	Housing Land + structures (final)	59,500,000
38a	Downstream channel	29	Housing Land + structures (final)	98,453,500
38a (DT1-5)	Downstream channel soil disposal	10	Housing Land + structures (final)	16,760,000
38a	Downstream Channel	10	Final Compensation, PAP <10%	215,199,500
38a (DT1-5)	Downstream channel soil disposal	20	Final Compensation, PAP <10%	256,807,500
38b	Downstream Channel	18	Final Compensation, PAP <10%	451,527,500

Interim Compensation

LPA #	LPA	No. PAPs	Description	Amount Required (kip)
33	Powerhouse	1	Supplemental to Sept. (Interim)	795,729
34	Regulating Pond	7	Supplemental to Sept. (Interim)	7,034,000
35	Regulating Dam	5	Supplemental to Sept. (interim)	1,031,000
42	PPT quarry	2	Supplemental to Sept. (Interim)	2,240,910
38a	Downstream Channel	83	Interim compensation	550,536,500
38a (DT1-5)	Downstream channel soil disposal	70	Interim compensation	206,230,000
38b	Downstream Channel	33	Interim compensation	209,185,500
46	Access to Downstream channel	10	Interim compensation	27,362,000

Other Compensation (fixed assets)

LPA #	LPA	No. PAPs	Description	Amount Required
-------	-----	----------	-------------	-----------------

				(kip)
38b	Downstream channel	1	Housing Land + structures (final)+F12	20,000,000
38a (DT4)	Downstream channel soil disposal	3	Moving allowance 3 houses	23,070,000
57	Rd12	1	Replacement house	225,500,444
38a	Downstream Channel	1	trees & replacement house	14,343,000
54	500kV Trans. Line	33	Relocation of structures out of stringing corridor	54,709,440

Financial training for PAPs receiving cash compensation is ongoing.

- Infrastructure

RAP 2 - Oudomsouk

The contractor has completed the final 5 replacement houses. C1002 has been issued to the contractor to connect electricity to these houses.

RAP3 – Gnommalat

The contractor has begun to mobilize to complete construction of 20 houses under C817. Additional work involving site clearance and 4 more houses was evaluated and preparations made for issuing VO1 to cover these activities.

A total of 7 boreholes have been completed during March. 56 additional borehole locations (replacement of open dug wells previously identified for C971) have been identified and will be finalized in early March. 15 have been chosen as urgent due to limited access in wet season and will be drilled during March under C675. The remaining 41 boreholes will be included in new contract to be issued to Champasak Nam Saat and completed between May and December 2007.

Repairs to the Ban Sangkeo school and construction of a village meeting hall are complete and have been transferred to the village. The temporary crossing over DS channel at km1+025 is now complete and in use.

RAP5 – Transmission Lines

Final calculation for land compensation has been made possible with the availability of GoL land evaluation. Gnommalat and Mahaxai 115 transmission line land compensation calculations are almost complete. Preparation for payment has commenced, and is expected to be executed through RMU invoice #5.

- Livelihood restoration

Livelihood restoration programs continued during February for PAPs whose livelihood is more than 10% affected by project activities. Planning for expansion of activities in 2007 is ongoing to enable funding to be available at the right time to take full advantage of the upcoming wet season. Specific activities implemented are as follows:

Rice Improvement: Preparations for the 2007 wet season rice program are now under way. All PAPs and non-PAPs (around 200 families) who own land in the Thathod Irrigation scheme command area are being encouraged to become involved. It is hoped that the improvements in yields envisioned through this program may eventually make available more land for redistribution to PAPs.

Fish and frog production: Preparations for starting the consultant working with the (approx.) 40 (fish) and 40 (frog) participating PAPs have been made. Field work is expected to commence in early March, starting with the identification of sites for constructing additional fish ponds.

Non-Timber Forest Products: Preparations for starting the consultant for the jatropa / NTFP plantation task have been made. Field work is expected to commence in early March, starting with the identification of participant PAPs and locations for the NTFP and jatropa seedling nurseries.

Orchid cultivation: Orchid production requires additional materials and technical support to continue propagation. However, the consultant is not available to provide these inputs until April 2007.

Vocational training: No activity currently.

Forage and Livestock: Construction of livestock pens is now complete. Training, including vaccinations and evening stall feeding with cut-and-carry dry season irrigated forage, has been undertaken. The 28 participants for 2007 have started land clearing work in anticipation of the planting of forages at the onset of the wet season. Preparations for initiating the forage and livestock consultant's contract have been made.

Pig raising: 63 new PAPs have declared interest in participating in pig production in 2007. These PAPs are under evaluation and preparations have been made to have the pig raising consultant commence work in March. A new pig pen design has been completed

Mushroom cultivation: Preparation of mushroom production substrate bags is complete and each PAP has inoculated between 500 and 2000 bags. The first mushrooms are expected to emerge in March. The end of the cold weather has allowed spore production and mycelium growth to proceed much more rapidly than in January.

Horticulture: The Mahaxai horticulture site is producing vegetables grown from seedlings produced in a temporary nursery, this produce is now being sold at local markets. Nakai and Gnommalat await water supply which is expected in late March.

Replacement land: A SSEP was produced for burning waste vegetation at the land development site. Distribution of land back to original owners is now complete and remaining land area has already been partially distributed to PAPs. 51 PAPs from 4 villages have accepted a 2500 m² parcel and will proceed to prepare the land for planting before the 2007 wet season. Preparations have begun to initiate a consultant responsible for supporting the development of diversified productive upland orchards/gardens commencing in March.

Project Lands Photographs for the month of February 2007



Livestock / forage activities, Gnommalat



Forage harvesting, Gnommalat



Operational buffalo pen, Gnommalat



Mushroom activities



New meeting hall, Ban Sangkeo



Horticulture activities, Ban Thangmang



Irrigation canal clearing, Ban Thongmang



Nursery construction, Gnommalat



Rotary Hoe, Mahaxai

2.1.3 Camp Followers

WATER SUPPLY (Camp Follower Plan)

1. Hand Washing Facilities by Districts:

No	District	Total number of restaurants	Using tapped basin for washing hands	Remarks (Under camp followers budget)
1	Mahaxai	10	10	1 in Sep 06, 5 in Oct 06 and 4 in Feb 07
2	Gnommalat	30	30	20 in a few months back and 5 in Oct 2006, 5 in November 2006, 5 in Dec 2006
3	Nakai	16	15	1 tap in Jan and 4 in Feb 07
4	Khamkeut	22	10	No contribution from the project - the owners paid on their own
Total		78	65	

2. Chlorination of Shallow Well Water by Districts:

No	District	Total number of restaurants	Chlorinating Water in Restaurants	Chlorinating Water in Households	Remarks (Under camp followers budget)
1	Mahaxai	10			Using Nam Papa system
2	Gnommalat	30	25	80	15 restaurants in the last few months
					7 restaurants in Oct 06
					2 HHs in Oct 2006
					36 HHs in Jan 07
					44 HHs in Feb
3	Nakai	16	5	0	
4	Khamkeut				Using Nam Papa system
Total		56	30	80	

3. Chlorine production machine (generator) system (3,000 US\$)

Received on 18
December 2006

Social Activities

Health Programs

2.2 Public Health Regional and Resettlement Programs

Following major activities were undertaken during February 2007:

- Construction work in all remaining infrastructure buildings is completed (details below).
- About half of the health facility furniture has arrived and distributed
- Number of training courses held during the month:
 - Training course on "Obstetric Register use" for HC and districts completed in another five districts.
 - Peer education training for the High School students in GMLT and MHX on 22-25/02/07 and 27/02-02/03/07 respectively.
 - Training course on the use of Biochemistry for Khamkeut lab staff during 28/02-02/03/07
 - Practical training on surgery to Khamkeut DH during 28/02-02/03/07
- Health checks and survey was conducted in Done and Sop On (new comers from Ka Oy) Villages on 19-24 Feb and 25 Feb 2007 respectively.
- Two IFMT students participated in the health checks program to assist in the health checks and to collect data for their research work.
- Data Entry in progress for health checks and survey data of SopMa and Khone Kaen Villages
- Data of the six villages (Nongboua, So On, Bouama, Phonsavang, SopMa and Khone Kaen) is being cleaned and preliminary analyzed carried out.
- Continue and expand monthly Maternal and Child Health clinics in four districts and prepare the family health files at the same time. So far HPMU have held 183 clinics in 57 villages.
- Quarterly meeting was held in Khamkeut district on 28 Feb 07
- Routine visits to the resettlement villages continued and population health monitored

Abbreviations used in this section:

DCD	District Community Development
DH	District Hospital
DHO	District Health Office
HC	Health Center
HPMD	Health Properties Management Division
HPMU	Health Program Management Unit
ICHC	Integrated Community Health Center
IFMT	Institut Francophone pour la Medecine Tropicale
IP	Institut Pasteur
MCH	Maternal and Child Health
MOH	Ministry of Health
NCCAB	National Committee for Control of AIDS Bureau
ORPP	Outbreak Response Preparedness Plan
PH	Provincial Hospital
PHO	Provincial Health Office
TMRC	Traditional Medicine Research Center
UNPFA	United Nations Population Fund
VHC	Village Health Committee
VHV	Village Health Volunteers
WHO	World Health Organization

Activity	Description	Extent of work	Progress during the month	Progress at end of the reporting period
Public Health Program, including Awareness Program	Supplies - Drugs, kits, forms and Manuals	Provision of drug revolving funds in KMN provincial hospital, 4 District hospitals, 6 HCs and 68 villages	Ongoing for villages	60%
		Support of office and operating costs	-	Provided every six months
		Provision of training material, forms, etc	-	100% additional ongoing, according to needs
	health Education and Awareness Programs	STIs including HIV/AIDS Regular health education program, special events	Peer education training program for High School Students in GNT and MHX	154 sessions 29 829 participants
		- Relocation of medicinal plants - Training of traditional healers	Logistic problem with Traditional Medicine Research Center (TMRC)	



Renovated Nadou Health center



Handing-over of ambulance

Activity	Description	Extent of work	Progress during the month	Progress at end of the reporting period
Strengthening Human resources in Public Health	Supervision and Monitoring	Provision of incentives		100%
		Field visits for supervision and support	Resettlement : bi-weekly visits	ongoing
		Integrated outreach program (health education and awareness on health topics)	Comprehensive Maternal and Child Health	350 sessions 19 317 participants
		Strengthening health services delivery in health centers	Ongoing	Ongoing
		Strengthening health services delivery in villages	Ongoing	183 Monthly Health Clinic delivered
	Training	Community level (villages)	Ongoing	42 sessions 809 participants
		Health Centers (village – District and Provincial levels)		22 sessions 264 participants
		Long term		6 sessions 17 participants
		Study tour	As and when required	90% All district hospital and health center staff covered
		Workshops on psychosocial problems		Under preparation
		On-the-job training	Practical training on surgery for KK District hospital Ongoing	15 sessions 102 participants
	Meetings	Create Outbreak Detection and Response Preparedness Unit		100% - includes Avian influenza
		Meetings at provincial and district levels	Ongoing	97 meetings 153 participants
		Quarterly meeting at HC (VHVs, HCs)		12 meetings 380 participants
		Health education materials and activities - design and production		ongoing
		Develop the procedures for the referral system		ongoing
		Zonal Health Committee Meeting (4 x per year for each ICHC; and for DH)	Meetings in 4 districts	

Activity	Description	Extent of work	Progress during the month	Progress at end of the reporting period
Strengthening Human resources in Public Health	Public Health Monitoring and Surveillance	Routine data collection/HIS		ongoing
		Outbreak Response Preparedness	Report completed	100%
		Outbreak Response Operational	As and when required	10%
		Scientific support	As and when required	
		Existing data analysis 2004		completed
		Midterm survey		To be carried out in 2008-9
		Special surveys (initial health checks of resettled households on Nakai)	Ban Done Sop On (with support of 2 IFMT students)	Complete in Village Group I (8 villages): Nong Boua Sop On Boua Ma Phone Savang Sop Ma Khone Khen Ban Done Ka Oy
		Monthly MCH clinics	Ongoing	183 clinics in 57 villages
Equity fund		Payment of treatment for entitled PAPs	As and when required	15 individual referred to TTK hospital and financially supported

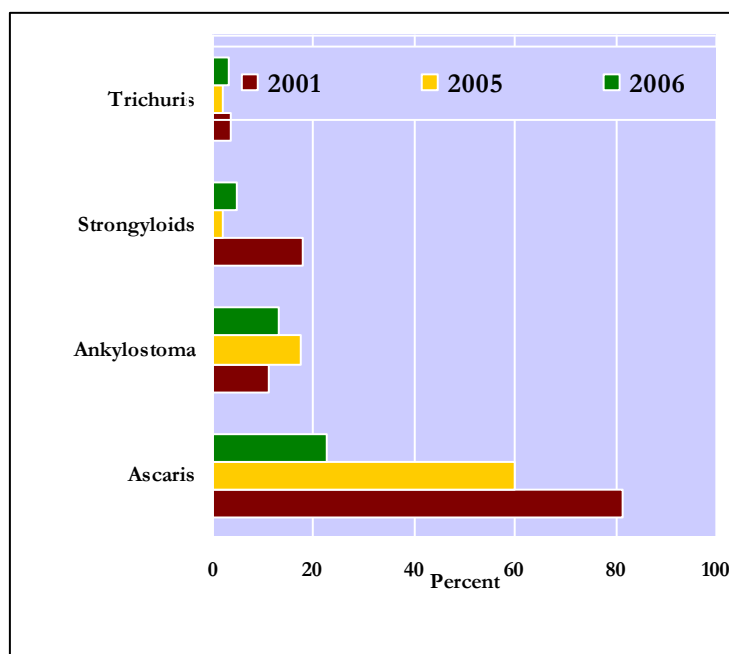
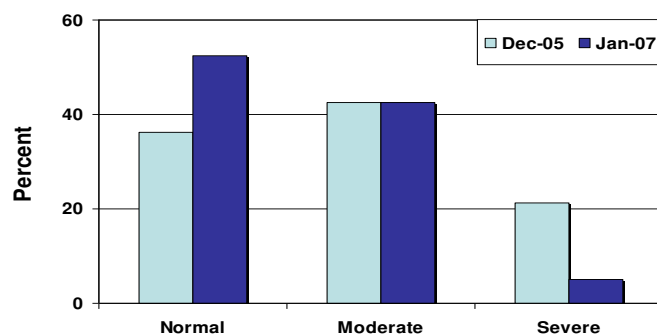
Health Checks and Survey in resettlement villages



Health Checks & surveys Results Parasitic Infestation 2001-2006 Nongboua Village

Health Checks & surveys Results (Cont'd)

Nutritional Status Among Under-Fives Nongboua Village



Available data for other villages is only for initial surveys and health work has just started. Improvements will be assessed early 2008.

Maternal and Child Health Clinic activities



Social Activities

Nakai Plateau Resettlement

2.3 Nakai Plateau Resettlement

2.3.1 General

February was another month of consolidation of the villages in transition – the eight villages that were established prior to and during the previous wet season. Access roads to all the villages were maintained in good condition for work to proceed smoothly

Reasonable progress was again made in both the northern and southern resettlement area access roads as well as the Southern Resettlement Road to Area 22, on the southernmost tip of the plateau.

Villagers from Nongbouakham, Sop Hia and Nam Nian have begun preparing their housing plots at Area 9 and Area 7, for the construction of temporary houses (on their permanent plots) and community facilities. These villagers will start their move to transition resettlement in March 2007, with the move to transition expected to be completed prior to the Lao New Year in April.



Villagers from Sop Hia and Nam Nian participate in village planning at Area 7.

As reported in the previous monthly report, the following measures have been implemented in order to improve and expedite the supply of sawn timber for houses:

- Better cooperation from housing contractors
- Re-design of houses to accommodate timber already delivered as much as possible
- Better quality control at saw mills through more coordinated supervision
- Better communication with and cooperation from villagers regarding acceptance of timber
- Efforts to further develop VFA operations to be able to do some re-processing

Good progress was made in house construction at several villages during February with many houses now nearing completion at Boua Ma, Phonsavang and Sop On. The contractors for the northern villages of Sop Phene, Sop Hia and Sop Ma have also started erecting concrete piers for houses and have also started their timber construction, with several timber frames being erected at Sop Hia and Sop Ma.

Rice and protein distribution programmes as described in previous reports is continuing, as are bi-weekly health checks. Consultations with transition villagers were commenced in January 2007 in order to jointly agree on an appropriate plan for ramping down of transition support as villagers settle in and livelihood opportunities are provided.

Efforts are now being focused on clearing of agricultural plots (0.66 Ha plots) in time for villagers to make use of these plots during the upcoming wet season. Before access to the plots can be granted to the resettlers for preparation, the following steps need to be completed:

- VFA to remove hardwood (done in all areas except some agricultural areas near Thalang which are not yet accessible)
- DAFO to remove other commercially viable timber
- Remaining large trees to be cut into small pieces for villagers to handle, with a certain number of trees remaining, according to the requirements of the agricultural program.

In consultation with the Nakai District, it was resolved that any uncut timber remaining in resettlement agricultural areas after 3rd of March 2007 will be deemed to belong to the resettlers and that after this date resettlers may begin clearing of their agricultural plots. Most of these will be cleared and prepared by the resettlers themselves, with assistance through the provision of tools, and direction given by the Agriculture teams. Some areas, notably those very densely wooded plots, and other plots with large numbers of felled trees too large for the villagers to clear themselves, will be cleared by an Army Contractor.

At the end of January 2007, the new villages of Sop On, Phonsavang, Boua Ma, Sop Ma, Sop Hia/Nam Nian (first group), Sop Phene and Sop Ma have been established with all villagers living in their new locations. 33 households from Ka Oy have joined Sop On and Ban Done.

Continued consultations with the Vietic (Aho) families in old Sop Hia have resulted in the area of Phuong Phai now being deemed as possibly unsuitable as a destination for these families. The position that NTPC has agreed to adopt with these families is summarized as follows:

- They should be allowed to remain where they are (in the original village) but affected households will be relocated uphill out of the way of the reservoir impoundment
- Full transition support will be provided to all these families – including rice, protein and basic household items
- Health will continue to be monitored weekly by Khamkeut District Health officers in communication with the NTPC Health team
- A survey of potential interventions for continued livelihood and village development will be undertaken.
- NTPC will ensure that at no point will these families be worse off than before
- The option to move to Nakai and participate fully in the resettlement programme will be kept open for these families (for a length of time to be determined)



House Contractor for northern villages of Sop Ma and Sop Hia – constructing concrete piers, and preparation of timber for house construction.

Transitional Livelihoods:

Currently 100% of agricultural plots have been cleared at new Sop On, 100% at new Phonsavang, and more than 80% at new Boua Ma. All the agricultural plots of the 8 Keng Yao families that moved to the Pilot Village have been cleared. These plots were planted with upland rice during the previous wet season; however the irrigation system extension will be completed during the coming months so that these villagers will soon be fully integrated within the pilot village.

Training and assistance in home gardens is on-going and most transition resettlers have productive gardens for home consumption and trade.

The opportunity to supply labor for work associated with village construction is provided to all villages, in addition to food support in the case of transition resettlers.

There remains a full time presence of NTPC and District supervisors and community facilitators in each village.

The chart presented on the following page shows progress of the respective tasks associated with resettlement of the Plateau villages.

				Transition																												
				Topo survey	Village layout design (Housing)	Village layout design (Agric.)	up Hill relocation	Access track	UXO temp area	Logging temp housig area	drill wells, hand pumps	Temporar y Schools	Temp. toilets	Building Temp. houses	Commencem ent of Transition Resettlement	Transition Support - food, health, household goods	Target Date - full transition	UXO whole areas	Logging whole area	Road Construct ion	Stump Removal	Clear housing area	Start House Building	Dismantle house and transport	Water Supply	Electricity	Communit y Buildings	Agric land preparatio n	Other non-farm activities	Irrigation	Target Date - Permanent Houses Complete	
New area code	new area	village to move in this area	hh # (2006)																													
N1	8	Ban Hat Khamphane	22				NR										T2/06										Dec-07	Jun-07	Jan-07		Dec-07	T3/07
N1	8	Ban Sop Ma	23				NR										T2/06										Dec-07	Jun-07	Jan-07		Dec-07	T3/07
N1	8	Ban Keng Gnao	21				NR										T2/06										Dec-07	Jun-07	Jan-07		Dec-07	T3/07
N2	16	Ban Keng Gnao	8				NR	NR		NR		NR					T2/06		NR									Jun-07			Feb-07	
N3	19	Ban Sop On	104				NR										T2/06										Dec-07	Jun-07			Dec-07	T2/07
N3	19	Ka Oy	30				NR						Mar-07	Apr-07			T2/07					Feb-07	May-08	Apr-07			Dec-07	Jun-07	Oct-07	Apr-07	Dec-07	T2/08
N4	21	Ban Done	142				NR										T3/06						Mar-07				Jun-08	Jan-08	Apr-07		Nov-08	T4/07
N5	22	Ban Khone Khen	52				NR										T3/06						Mar-07				Jun-08	Jan-08	Apr-07		Nov-08	T4/07
N6	11	Ban Sop Phene	56				NR										T2/06						Jan-07				Dec-07	Jun-07	Apr-07		Dec-07	T4/07
N7	17	Bouama	74				NR										T2/06										Dec-07	Jun-07			Dec-07	T2/07
N8	18	Ban Phonsavang	41				NR										T2/06										Dec-07	Jun-07			Dec-07	T2/07
N15	7	Ban Sop Hia	37					Feb-07		Mar-07	Mar-07	Apr-07	Apr-07	Apr-07	Apr-07	Apr-07	T2/07		May-07	Mar-07	May-07	May-07	May-07	May-07	May-07	May-07	Dec-07	Jan-08	Oct-07	Apr-07	Dec-07	T2/08
N9	8a	Ban Sop Hia (first group)	30														T2/06										Dec-07	Jun-07	Jan-07		Dec-07	T3/07
N3	8a	Ban Nam Nian (first group)	6														T2/06										Dec-07	Jun-07	Jan-07		Dec-07	T3/07
N10	9	Ban Nong Boua Kham	57				NR	Feb-07		Mar-07	Mar-07	Apr-07	Apr-07	Apr-07	Apr-07	Apr-07	T2/07			Jan-07	Mar-07	Mar-07	Mar-07	May-07	Feb-07	Dec-07	Jun-07	Oct-07		Dec-07	T1/08	
N11	13	Ban Thalang	73				May-07	Mar-07				Oct-07	Oct-07	Oct-07	Oct-07	Nov-07	Nov-07	T1/08			Oct-07	Oct-07	Oct-07	Nov-07	Mar-08	Oct-07	May-08	Nov-08	Dec-07		Nov-08	T1/08
N12	1	Ban Nakai Neua	89				May-07	Mar-07				Oct-07	Oct-07	Oct-07	Oct-07	Nov-07	Nov-07	T1/08			Oct-07	Oct-07	Oct-07	Nov-07	Mar-08	Oct-07	May-08	Nov-08	Dec-07		Nov-08	T1/08
N15	7	Ban Nam Nian	25				NR	Feb-07		Mar-07	Mar-07	Apr-07	Apr-07	Apr-07	Apr-07	Apr-07	T2/07		May-07	Mar-07	May-07	May-07	May-07	May-07	May-07	Dec-07	Jan-08	Oct-07	Apr-07	Nov-07	T2/08	
N13	2	Ban Nakai Tai	190				May-07	Mar-07				Oct-07	Oct-07	Oct-07	Oct-07	Nov-07	Nov-07	T1/08			Oct-07	Oct-07	Oct-07	Nov-07	Mar-08	Oct-07	May-08	Nov-08	Dec-07		Nov-08	T1/08
N4	21	Ka Oy	3				NR								Mar-07		T2/07						Nov-07	May-07			Jun-08	Jan-08	Apr-07	Apr-07	Nov-08	T4 / 07.
N14		Ban Oudomsouk / Phon Phan Pek	103+56				NR	NR				Nov-07	NR	NR	NR	NR	NR				Nov-07	Nov-07	Nov-07	Nov-07	Apr-08	Nov-07	Apr-08	NR	Nov-08	May-08	Nov-08	T2/08

NR

Not Relevant

P

In procurement

C

Contract signed, mobilization phase

Implementation - On going

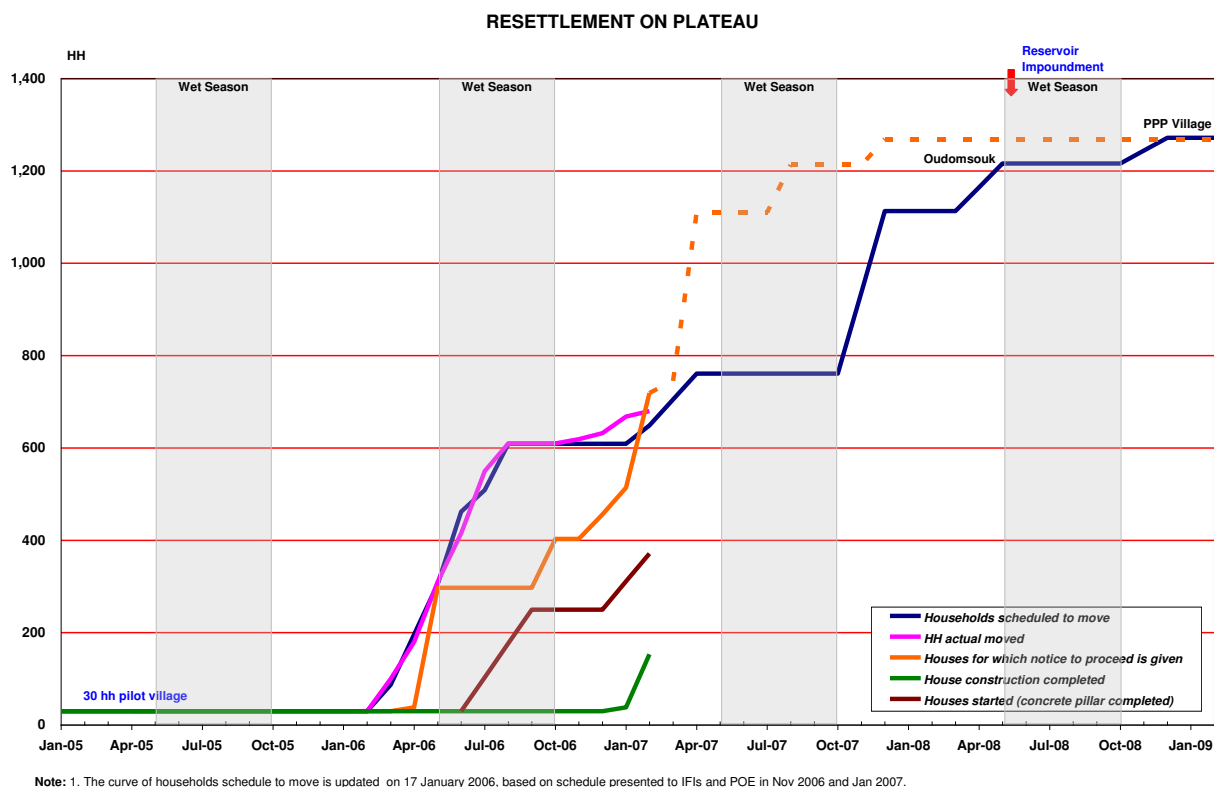
Task completed

2.3.2 Infrastructure

A summary of the progress on infrastructures is given in the table below:

		Sub Total for villages moved in 2006	Sub Total for villages moved in 2007	Sub Total for villages moved in 2008	TOTAL
Resettlement - summary	Total hh to be resettled	653	462	159	1274
	Houses to be constructed	661	465	159	1285
	<i>Resettled to date (all infrastructures complete)</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Resettled to date (transitional)</i>	<i>668</i>	<i>12</i>	<i>0</i>	<i>680</i>
Infrastructures	ha to be cleared (housing plots)	171.42	122.26	0	294
	<i>ha de-stumped</i>			<i>0</i>	<i>0</i>
	<i>ha cleared</i>	<i>171.42</i>	<i>54.66</i>	<i>0</i>	<i>226</i>
	<i>% access road</i>	<i>82%</i>	<i>28%</i>	<i>0%</i>	<i>19%</i>
	<i>% village road</i>	<i>91%</i>	<i>18%</i>	<i>0%</i>	<i>17%</i>
Wood - Timber	m3 Total required (frames, floors, walls)	5042	5033	0	10075
	<i>m3 delivered total</i>	<i>2607</i>	<i>0</i>	<i>0</i>	<i>2607</i>
Houses	<i>transitional houses built</i>	<i>604</i>	<i>17</i>	<i>0</i>	<i>621</i>
	<i>Notice to proceed given (number of houses)</i>	<i>661</i>	<i>58</i>	<i>0</i>	<i>719</i>
	<i>concrete pillars completed (number of houses)</i>	<i>371</i>	<i>0</i>	<i>0</i>	<i>371</i>
	<i>permanent houses completed (structure)</i>	<i>153</i>	<i>0</i>	<i>0</i>	<i>153</i>
	<i>permanent houses completed (including electricity)</i>	<i>38</i>	<i>0</i>	<i>0</i>	<i>38</i>
domestic water	number of tube wells to drill and equip	107	72	16	195
	<i>wells drilled</i>	<i>99</i>	<i>5</i>	<i>0</i>	<i>104</i>
	<i>pumps installed</i>	<i>50</i>	<i>0</i>	<i>0</i>	<i>50</i>

There was some rainfall in February. However the four road construction contractors made varying degrees of progress during the month. Timber house construction has continued at six villages and seven contracts were awarded and signed for a further five VG2 villages. In March it is expected that a contract will be signed for one more village. As stated in previous reports, the supply of sawn timber is the main problem. Also as stated before, it is expected that the supply will improve in March as it is expected that contracts will be signed with five sawmills for a total of 6,500 m3 of sawn timber to be delivered before the end of July.



2.3.2.1 Figure: progress of relocation and house construction

2.3.2.2 Topographic survey and mapping

In anticipation that the eighteen ex-Nam Pan Sop Hia and Nam Nian households, that previously did not wish to move to Resettlement Areas 8A, may at some time in the future decide to move to Area 7, a contract for the survey and mapping of a 35 ha potential agricultural plot area was prepared with a service provider. The contract will be signed in March. It was previously reported that these families might choose to move to an area known as Pong Phai, located west of Ban Thalang. However this did not happen.

The setting out of boundary markers for the resettlers' house and agricultural plots is a continuing activity. The contract with the contractor for the two month hire of a Senior Surveyor and a Total Station surveying instrument was extended by a further two months to include the data collection of Oudomsouk households that will be impacted by Nakai Reservoir inundation.

2.3.2.3 Finalization of village location – Village layout Design

Village Development Plans: All VG1 layouts have been completed (except for that portion of Sop Hia and Nam Nian that was previously scheduled to move to Nam Pan). The preparation of layouts for the remaining villages is underway as shown in the table below.

Name of the original villages in VG2	New village area	Village layout	Agriculture Layout
Thalang	Area 13	Complete	Complete
Nakai Tai	Area 2	Complete	Complete
Nakai Neua	Area1	Complete	Complete.
Done	Area 21	Complete	Complete
Khone Khen	Area 22	Complete	Complete
Oudomsouk and Phone Pan Peck	Oudomsouk Urban Area B and Area 15	First draft completed. No further progress until the number of households known	No further progress until the number of households is firmly known.

2.3.2.4 UXO search and clearance

There is an ongoing contract for “Resettlement Area UXO Community Awareness and Emergency Response Teams.” The community awareness activities continue to progress smoothly and the system of villagers preparing response forms and placing them in “drop boxes” provided continues to work.

The response team continued to visit villages to check on reported suspect items. To the end of February 2007, 1,982 UXO items, including 1,788 bomblets, have been found and destroyed by the response team. In February, 22 items were destroyed, mostly bomblets.

2.3.2.5 Roads and drainage

Bid and contract award procedures are underway for the construction of the access roads and tracks for Nakai Tai and Nakai Neua and Area 7 and Area 13 agricultural area.

There are four ongoing road construction contracts and they made varying degrees of progress during the month.

Southern VG1 Access roads to and within villages:

The works are substantially complete with the only outstanding works being minor finishing for the construction of access roads to and within the new villages of Bouama (area 17), Phonsavang (area 18) and Sop On (area 19).on some of the agricultural area access tracks.

Southern Resettlement Road:

Progress was good on the contract for the construction of the Southern Resettlement Road, 11.765 km long. The construction is now substantially complete with again minor trimming and cleaning works required.

As stated previously, the same contractor was given the Oudomsouk Urban Area B road works as a Variation Order. The company has made good progress with the construction of a fairly large reinforced concrete box culvert and road embankment filling.

Northern Access roads to and within villages:

The contractor has made poor progress with the construction of access roads to and within the new villages of Sop Ma (area 8), Vietic Sop Hia (area 8a), Nong Boua Kham (area 9), Sop Phene (area 11) and Thalang (area 13) housing area. This is mainly due to breakdowns with the earthmoving and compaction machinery. It is estimated the works are about 96% complete for areas 8, 8a, 9 and 11 and about 80% complete for area 13 housing area which was later added to the contract as a Variation Order.



New village
road in Ban
Done

Southern VG2 Access roads to and within villages:

With regards to the contract for the construction of access roads to and within the new villages of Done (area 21) and Khone Kaen (area 22), the Contractor has completed all the clearing and tree stump removal work on both areas and continued with embankment compacted fill works. It is estimated that the contract works are about 35% complete.

2.3.2.6 House Construction

Construction is proceeding on all six contracts for the construction of timber houses for VG1 resettlers.

Contract start dates are as follows:

<i>Areas and Villages concerned</i>	<i>Contract No.</i>	<i>Start Date</i>	<i>Number of Houses</i>
Area 17 for Bouama Area 16 for Keng Gnao	C604	Area 16 20 March 06	8
		Area 17 19 May 06	80
Area 18 for Phonsavang	C605	16 May 06	42
Area 19 for Sop On	C606	21 April 06	137
Area 8 for Sop Ma / Hat Khamphane Area 8A for Sop Hia	C607	Area 8a 30 October 06	106
		Area 8	
Area 9 for Nongbouakham	C608	1 February 07	61
Area 11 for Sop Phene	C609	10 January 2007	58

Progress with the contracts is as follows:

C604: The eight houses for Keng Gnao resettlers at Area 16 are complete and the eighty houses and toilet/bathrooms at Bouama are under construction. The contract is about 90% complete with the availability of wall planks to finish off the works the only problem.

C605: The 42 houses are under construction and the contract is about 65% complete

C606: one house is complete and 136 houses and bathrooms are under construction and the contract is about 50% complete.

C607: 106 houses and bathrooms are to be constructed and foundation work is continuing on 44 houses.

C608, Area 9 (Nong Boua Kham): Foundation work has started on about half of the 61 houses.

C609, Area 11 (Sop Phene): Foundation work is continuing.

In February seven contracts were signed for the construction of timber houses in five VG2 villages. The villages of Ban Done and Ban Nakai Tai are large and the house construction was divided into two contracts. The total number of VG2 houses to be constructed is 603. Notice to proceed was given on 15 February to the Contractors working on the houses at Areas 21, 22 and 13.

Also awarded during the same VG2 procedures was a contract for Project Lands houses in the Gnommalat area.

In order to solve the problem of the delivery of sawn construction wood a contract is to be signed in March with a Sawmill located in Savannakhet for the immediate tax-paid delivery of 503 m³ of sawn timber with wall planks as the priority. Also expected to be signed in March are contracts with four Nakai Plateau sawmills for the transport of logs from the Salvage Logging area and then the supply and delivery of 6,000 m³ of sawn timber of various dimensions. NTPC will rent a large warehouse in Oudomsouk to store the timber.



New House in Pilot Village (Keng Gnao resettlers)

Houses under construction in new Sop On



2.3.2.7 Community Buildings

Each resettlement village will have a primary and nursery school, village office and meeting hall, market, warehouse and a rice mill and workshop. There will also be two clinics, four seed processing and agricultural storage facilities and four organic fertilizer facilities located at various villages. The sizes of most of the buildings will vary according to village size.

The opening of bids for the VG1, and some of the VG2a (schools and health centers) buildings, was held 9 February 2007. Ten companies submitted bids for the four contracts and bid evaluation is underway.

2.3.2.8 Domestic Water Supply and Sanitation

Boreholes with hand pumps:

Very little physical implementation of the programme has been realized on the field in February as only one successful borehole has been drilled in Ban Nongbouakham area 9. It is noteworthy to mention that in the same area, the drilling team has faced 3 new failures due to lack of groundwater at more than 60 meters depth.

As of the end of this reporting period, an actual total of 140 deep boreholes are successfully completed out of 161 drilled since the beginning of the operations in December 2005 with the Champasack Provincial Nam Saat drilling teams. The total number of failures is now 21 for a global rate of about 13.5%. The rate of failures has now increased with the activities focusing now in the villages located in northern area of the Village Group 1, where more adverse soil conditions than in the south are met and therefore better drilling sites have to be investigated. The outcome of these constraints has been the decision to postpone the implementation in those northern areas to the phase No 2 planned from May to December 2007, but provided that sufficient installations are in place.

The 2 drilling rigs mobilized by the Champasack Water Supply Section (the contractor) have been repatriated to Pakse in order to undertake heavy periodic maintenance as well as urgent and necessary repairs on several high-tech components. This necessity implies that no new boreholes are foreseen to be drilled during the next month of March but will restart again expected full speed in early April.

The recapitulative progression for February 2007 and the summary of the actual performance vs initial and update plan (based on the continuous reconciliation of the data on resettlers' population) is included in the following pages along with a tentative schedule of planned interventions until 31 December 2007. This following summary also includes the boreholes drilled for the benefit of Project Affected Persons (PAPs) by the construction of the Nam Theun 2 infrastructure (ref. Table 1 "Project lands") as well as those under the health infrastructure rehabilitation plan (ref. Table 3) and the Pilot groundwater based irrigation scheme in Sop On area 19. This pilot scheme is pre-designed and the construction will start with the drilling of 9 boreholes in early April.

.The Variation Order No 1 to the contract C675 has been signed in February in order to reconcile the actual implementation status, the next finalized additional needs (addition of area 7 and adjustments of the coverage targets in each village according to resettlers population), the real actual and next expected costs as well as to provide time to install the hand pumps. This contract has been extended to 30 April 2007

The hand pumps ordered through UNICEF Procurement Services which will allow the utilization of all these above mentioned wells are due to Thanaleng early March. The situation has been overcome in Sop Phene area 11 and Khone Kaen area 22 by installing temporary electric pumps (4 in total) powered by generators.

The new contract C1012 to cover, as phase 2 of implementation, the remaining VG2b, VG3 and VG4 as well as to complete Project Lands needs in Gnommalat has been defined and negotiated with the Champasack Water Supply Section. This contract is planned to be signed in March with starting date established on 30 April 2007 immediately after the completion of the current C675 contract

Nam Theun 2 Power Company Ltd

ENVIRONMENTAL AND SOCIAL DIVISION

NTPC - Construction of machine drilled boreholes for domestic water supply and irrigation schemes

RECAPITULATIVE MONITORING DRILLING PERFORMANCE

SITUATION ON MONTH OF: 26 February 2007

RECAPITULATIVE TABLE No 1: "Project Lands"						Balance vs plan		Total Completion				
			Initial plan - Dec 2005		Update Plan	Productive	Equipped	Total BHS drilled	Productive	Equipped	Failures	Failures
			Option average coverage 8 Houses/BH	Difference initial plan vs update 7th plan	Option average coverage 8 Houses/BH	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	% of total drilled
No	New Area	Villages	Total Qty	Total Qty	Total Qty							
1	ODS New Urban area A (Oudomsouk May)	Oudomsouk SD12B PAPs	9	1	10	0	1	10	10	9	0	0.00
2	ODS New Urban area (Prim Sch)	Oudomsouk SD12B PAPs	1	0	1	0	0	1	1	1	0	0.00
3	ODS	Oudomsouk SD12B PAPs - ODS old areas 8, 7 and market	5	0	5	0	0	5	5	5	0	0.00
4	PPP	Pon Pan Pek - Intake PAPs	5	0	5	0	0	5	5	5	0	0.00
5	ODS	NRC Oudomsouk - Reserve	0	1	1	0	1	1	1	0	0	0.00
6	GML	New 8 Houses GML (electric pumping)	0	1	1	0	1	1	1	0	0	0.00
7	GML	GML Horticulture Demonstration Center (electric pumping)	0	1	1	0	1	1	1	0	0	0.00
8	GML	Gnommalath Tay	0	10	10	9	10	1	1	0	0	0.00
9	GML	Gnommalath Neua	0	14	14	13	14	1	1	0	0	0.00
10	GML	Ban Lao Naa Ngam	0	8	8	7	8	1	1	0	0	0.00
11	GML	Ban Phone Lath Khouey (Nalath Khouey)	0	5	5	4	5	1	1	0	0	0.00
12	GML	Ban Tongmang	0	3	3	2	3	1	1	0	0	0.00
13	GML	Ban Sangkeo	0	9	9	9	9	0	0	0	0	
14	GML	Ban Nongseng	0	4	4	3	4	1	1	0	0	0.00
16	GML	Ban Thad	0	3	3	3	3	0	0	0	0	
17	GML	Ban Koboung	0	3	3	3	3	0	0	0	0	
18	GML	Ban Koud Pha Dang	0	2	2	2	2	0	0	0	0	
19	GML	Livelihood compensation - Mr. Khen (Ban Sangkeo)	0	1	1	1	1	0	0	0	0	
SUB TOTAL Project lands			20	66	86	56	66	30	30	20	0	0.00

RECAPITULATIVE TABLE No 2: "Nakai Plateau resettlement"						Balance vs plan		Total Completion				
			Initial plan - Dec 2005		Update Plan	Productive	Equipped	Total BHs drilled	Productive	Equipped	Failure	Failures
			Option average coverage 8 Houses/BH	Difference initial plan vs update 7th plan	Option average coverage 8 Houses/BH	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	% of total drilled
No	New Area	Villages	Total Qty	Total Qty	Total Qty							
1	16	Ban Nongboua, Keng Nyao (PV)	7	2	9	1	4	8	8	5	0	0.00
2	17	Ban Bouama	11	0	11	2	4	15	9	7	6	40.00
3	18	Ban Phonsavang	8	-1	7	0	0	8	7	7	1	12.50
4	19	Ban Sop On	17	2	19	0	8	19	19	11	0	0.00
5	8	Ban Sop Ma, Hatkhamphan, Keng Nyao	11	0	11	0	7	11	11	4	0	0.00
6	8a	Ban Sop Hia Vietic	7	0	7	2	4	8	5	3	3	37.50
7	9	Ban Nong Boua Kham	10	1	11	8	11	8	3	0	5	62.50
8	11	Ban Sop Phene (incl. additional 2 BHs for temporary relocation)	9	2	11	3	10	12	8	1	4	33.33
9	21	Ban Done	22	1	23	0	15	24	23	8	1	4.17
10	22	Ban Khon Kaen	8	1	9	0	9	10	9	0	1	10.00
11	1	Ban Nakai Tay	27	0	27	27	27	0	0	0	0	
12	2	Ban Nakai Neua	14	0	14	14	14	0	0	0	0	
13	13	Ban Thalang	12	0	12	12	12	0	0	0	0	
14	7	Ban Sop Hia/ Nam Nian	11	-3	8	5	8	3	3	0	0	0.00
15	Other area	Ban Sop Hia/ Nam Nian	0	2	2	2	2	0	0	0	0	
16	xxx	Oudomsouk	15	-1	14	14	14	0	0	0	0	
17	PPP	Ban Pon pan Pek	0	2	2	2	2	0	0	0	0	
SUB TOTAL Resettlement villages			189	8	197	92	151	126	105	46	21	16.67

RECAPITULATIVE TABLE No 3: "HEALTH INFRASTRUCTURE"						Balance vs plan		Total Completion				
			Initial plan - Dec 2005		Update Plan	Productive	Equipped	Total BHs drilled	Productive	Equipped	Failure	Failures
				Difference initial plan vs update 7th plan		Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	% of total drilled
No	District	Buildings	Total Qty	Total Qty	Total Qty							
1	Gnommalath	Gnommalath Hospital	1	0	1	0	1	1	1	0	0	0.00
2	Gnommalath	Khed Phit Health Center	1	0	1	0	1	1	1	0	0	0.00
3	Gnommalath	Nadou Health Center	1	0	1	0	1	1	1	0	0	0.00
4	Gnommalath	Nasok Health Center	1	0	1	0	1	1	1	0	0	0.00
5	Kamkeuth	Kaeng Deng Health Center (september)	1	0	1	0	1	1	1	0	0	0.00
SUB TOTAL Health Infrastructure			5	0	5	0	5	5	5	0	0	0.00
GRAND TOTAL 1			214	74	288	148	222	161	140	66	21	13.04

RECAPITULATIVE TABLE No 4: "PILOT IRRIGATION SCHEME - NAKAI RESETTLEMENT"												
						Balance vs plan		Total Completion				
			Initial plan - Dec 2005		Update Plan	Productive	Equipped	Total BHs drilled	Productive	Equipped	Failure	Failures
				Difference initial plan vs update 7th plan		Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	% of total drilled
No	New Area	Villages	Total Qty	Total Qty	Total Qty							
1	19	Sop On	0	9	9	9	9	0	0	0	0	
SUB TOTAL Pilot Irrigation Nakai			0	9	9	9	9	0	0	0	0	
GRAND TOTAL 2			214	83	297	157	231	161	140	66	21	13.04

RECAPITULATIVE TABLE No 5: "DOWNSTREAM WASH PROGRAMME"												
						Balance vs plan		Total Completion				
			Initial plan - Dec 2005		Update Plan	Productive	Equipped	Total BHs drilled	Productive	Equipped	Failure	Failures
		183 villages		Difference initial plan vs update 7th plan	Estimates	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	% of total drilled
No	District	Villages	Total Qty	Total Qty	Total Qty							
		Pilot villages - Start October 2007 - 16 villages	0	40	40	40	40	0	0	0	0	
		Pilot villages + non- pilot riparian villages - 2008 - 20 villages	0	165	165	165	165	0	0	0	0	
		Non-pilot hinterland villages - 2009 - 25 villages	0	100	100	100	100	0	0	0	0	
		Non-pilot hinterland villages - 2010 - 31 villages	0	100	100	100	100	0	0	0	0	
		Non-pilot hinterland villages - 2011 - 91 villages	0	55	55	55	55	0	0	0	0	
SUB TOTAL WASH Programme			0	460	460	460	460	0	0	0	0	
GRAND TOTAL 3			214	543	757	617	691	161	140	66	21	13.04

RECAPITULATIVE TABLE No 6: "IRRIGATION SCHEMES - NAKAI RESETTLEMENT"												
						Balance vs plan		Total Completion				
			Initial plan - Dec 2005		Update Plan	Productive	Equipped	Total BHs drilled	Productive	Equipped	Failure	Failures
				Difference initial plan vs update 7th plan	Estimates	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	Cumul to date	% of total drilled
No	New Area	Villages	Total Qty	Total Qty	Total Qty							
1		To further define	0	100	100	100	100	0	0	0	0	
SUB TOTAL Irrigation schemes Nakai			0	100	100	100	100	0	0	0	0	
GRAND TOTAL 4			214	643	857	717	791	161	140	66	21	13.04

Construction of machine drilled boreholes for domestic water supply in:

- 1) Resettlement Villages New Areas - Nakai District, Khammouane Province
- 2) Health Centers and District Hospitals - Gnommalath District, Khammouane Province and Khamkeuth District, Bolikhamsay
- 3) Project Land areas - Nakai and Gnommalath Districts, Khammouane Province
- 4) Pilot irrigation scheme - Ban Sop On - Nakai District

INDICATIVE GENERIC TENTATIVE SCHEDULE OF IMPLEMENTATION UP TO DECEMBER 2007

DRILLING AND EQUIPPING BOREHOLES OF MINIMUM 30 METERS AND MAXIMUM 60 METERS DEPTH

		General Data			Year 2007									
New Area	Name of Village/Health Center/Hospital	Maximum Qty required (cov. 1/8HHs)	Qty already completed on date	Maximum Qty completion balance on date	Mar. C675 no	Apr. C675 2 rigs	May C1012	June C1012	July C1012	Aug C1012	Sept C1012	Oct C1012	Nov C1012	Dec C1012
					C675		NEW CONTRACT C1012 planned period							
1- Resettlement areas														
16	Ban Nong Boua (PV)	9	8	1			1							
17	Ban Bouama	11	9	2			2							
18	Ban Phonesavang	7	7	0										
19	Ban Sop On	19	19	0										
8	Ban Sop Ma/ Hatkhampan/Keng Nyao	11	11	0										
8a	Ban Sophia Vietic	7	5	2			2							
9	Ban Nong Boua Kham	11	3	8		5	3							
11	Ban Sop Phene (incl. additional 2 BHs for temporary relocation)	11	8	3			3							
21	Ban Done	23	23	0										
22	Ban Khon Kaen	9	9	0										
SUB TOTAL 1 PHASE 1		118	102	16	0	5	11							
xxx	Oudomsouk	14	0	14			14							
	Pon Pan Pek	2	0	2			2							
2	Ban Nakai Tai	27	0	27			27							
1	Ban Nakai Neua	14	0	14			14							
13	Ban Thalang	12	0	12			12							
7	Ban Sop Hia/Nam Nian	8	3	5			5							
xxx	Ban Sop Hia/Nam Nian	2	0	2			2							
SUB TOTAL 2 PHASE 2		79	3	76	0	0	76							
Total 1 resettlement areas		197	105	92	0	5	87							
2- Health Centers and District Hospitals														
GML	Gnommalath Hospital	1	1	0										
GML	Khed Phit Health Center	1	1	0										
GML	Nadou Health Center	1	1	0										
GML	Nasok Health Center	1	1	0										
KK	Kaeng Deng Health Center	1	1	0										
Total 2 Health Infrastructure		5	5	0	0	0	0							

		General Data			Year 2007									
New Area	Name of Village/Health Center/Hospital	Maximum Qty required (cov. 1/8HHs)	Qty already completed on date	Maximum Qty completion balance on date	Mar. C675 no	Apr. C675 2 rigs	May C1012	June C1012	July C1012	Aug C1012	Sept C1012	Oct C1012	Nov C1012	Dec C1012
					C675		NEW CONTRACT C1012 planned period							
3- Project lands														
	Oudomsouk May - Area A - SD12B	10	10	0										
	Oudomsouk Primary school - SD12B	1	1	0										
	Oudomsouk old village - SD12B	5	5	0										
	Pon Pan Pek intake PAPs	5	5	0										
	NRC (Nakai) (total 3)	1	1	0										
GML	New 8 Houses (GML)	1	1	0										
GML	Gnommalath horticulture demonstration center	1	1	0										
GML	Gnommalath Tay	10	1	9						9				
GML	Gnommalath Neua	14	1	13		2				11				
GML	Ban Lao NaaNgam	8	1	7		7								
GML	Ban Phonlathkhuey	5	1	4		4								
GML	Ban Tongmang	3	1	2						2				
GML	Ban Sangkeo	9	1	8						8				
GML	Ban Nongseng	4	0	4						4				
GML	Ban Thad	3	0	3						3				
GML	Ban Kobung	3	0	3						3				
GML	Ban Koud Pha Dang	2	0	2						2				
GML	Livelihood compensation Mr. Khen (Ban Sangkeo)	1	0	1		1								
Total 3 Project lands		86	30	56	0	14				42				
GRAND TOTAL Domestic WS		288	140	148	0	19				129				
4- Pilot Irrigation scheme														
19	Ban Sop On - Agriculture plots block No 3	9	0	9		9								
Total 4 Irrigation schemes		9	0	9	0	9				0				
GRAND TOTAL incl.irrigation		297	140	157	0	28				129				

Update 28.02.2007

Expected maximum remaining implementation period for contract C675 - Including HPs installation

2.3.2.9 Irrigation Systems

The construction of the extension area to the Pilot Village irrigation scheme for the resettlers from Ban Keng Gnao resumed in November and the Contractor has made slow progress of late with the delivery of some pipe fittings and completion is now expected in March or early April.

The preparation of irrigated agricultural layouts is an important part of the resettlement village planning exercise and this has been reported on above.

A review of the design of the pilot irrigation area at Sop On (area 19), using ground water for irrigation, was made and it was decided to revise some aspects of the layouts. It is now expected that bidding procedures will commence in March and drilling of the boreholes will take place in April.

2.3.2.10 Electricity

The installation of the transmission lines is complete and energized at the VFA Sawmill. Between supervising various contracts for non-resettlement contracts, the Senior Electrical Engineer is continuing with the preparation of design, layouts and quantity estimates for the resettlement villages. To date designs have been completed at five villages and are ongoing at two more.

The preparation of bid documents for the installation of the village distribution systems and house connections at Bouama, Phonsavang and Sop On was delayed and bid procedures will commence in March. A small contract for the construction of shelters for the generators purchased for Bouama, Phonsavang and Sop On is underway

2.3.3 Livelihood

The organization of livelihood overhead management and coordination will be set up soon.

Summary table of Livelihood activities:

		Sub Total for villages moved in 2006	Sub Total for villages moved in 2007	Sub Total for villages moved in 2008	TOTAL
Permanent agriculture land : field of 0.66 ha	Size of permanent agriculture land : field of 0.66 ha (ha)	431	305	0.0	736
	<i>Ha prepared ready to cultivate (following Ag/liv program.)</i>	<i>161</i>	<i>0</i>	<i>0.0</i>	<i>161</i>
	<i>ha equipped for irrigation</i>	<i>28</i>	<i>0</i>	<i>0</i>	<i>28</i>
	Target for cultivation (ha)	144	102	0.0	245
	<i>Ha cultivated</i>	<i>92</i>	<i>0</i>	<i>0.0</i>	<i>92</i>
	Target for cover plant (fallow improved/pasture in ha)	287	203	0.0	491
	<i>Ha with cover plants (fallow improved/pasture)</i>	<i>0</i>	<i>0</i>	<i>0.0</i>	<i>0</i>
Additional permanent agriculture land : field of 3 ha maximum per hh	Size of additional permanent agriculture land : field of maximum 3 ha (ha)	1799	964	0	2763
	<i>Ha prepared ready to cultivate (following Ag/liv program)</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	Target for cultivation (ha)	600	321	0.0	921
	<i>Ha cultivated</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	Target for cover plant (fallow improved/pasture in ha)	1199	643	0.0	1842
	<i>Ha with cover plants (fallow improved/pasture)</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Common pasture under the forest (property of VFA)	Ha to be sowed in pasture (maximum 5 ha per hh)	2865	1155	0	4020
	<i>ha prepared (following Ag/liv program.)</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ha sowed in pasture</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Draw down (seasonal land for cultivation or/and pasture)	Target seasonal land for cultivation or pasture (ha)	1428	682	0	2110
	<i>Ha prepared (following Ag/liv program.)</i>	<i>219</i>	<i>65</i>	<i>0</i>	<i>284.3</i>
	<i>Ha sowed in crop</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ha sowed in pasture</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
VFA	<i>VFA quarterly Board meeting (since Oct 2006)</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>VFA staff training (target)(man-day)</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>VFA staff trained (man-day)</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>sawmill completion progress (ongoing / completed)</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>number of furniture's produced</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

		Sub Total for villages moved in 2006	Sub Total for villages moved in 2007	Sub Total for villages moved in 2008	TOTAL
	Target registered large ruminants (%)	100%	100%	100%	
Livestock	<i>Large ruminant registered (%)</i>	63%	62%	0%	55%
	Target for training about breeding per hh (hh/day)	5224	3696	0	8920
	<i>Training about breeding for hh</i>	0	0	0	0
	Target for meeting about health animal sensitization for breeders (breeders/day)	54	30	0	84
	<i>Meeting about health animal sensitization for breeders</i>	0	0	0	0
Fisheries	target staff training	0	0	0	0
	<i>staff training</i>	0	0	0	0
	target resettlers training	0	0	0	0
	<i>training of resettlers</i>	0	0	0	0
	fishing groups to be formed	0	0	0	0
	<i>fishing groups formed</i>	0	0	0	0
	boats required				
	<i>boats built/provided</i>	0	0	0	0
	<i>off-farm activities (number of families engaged in OFA)</i>	86	4	0	90
	<i>number of vulnerable hh</i>	34	0	0	34
CD	<i>number of vulnerable hh getting additional support</i>	28	0	0	28
	<i>number of disturbance allowances paid</i>	0	0	0	0
	<i>Food security - kg of rice distributed</i>	417629	2141	0	419770
	<i>Food security - kg of meat/fish/eggs distributed</i>	0	0	0	0
	<i>education material (% of children equipped for the current year)</i>				0
	<i>saving and credit (1 committee per village)</i>	0	0	0	0
	<i>LSMS - number of survey carried out (2 / year - 1st in Aug 2006)</i>	91	108	0	199
Grievance process	<i>grievance total</i>	64	0	0	64
	<i>new grievance for this month</i>	47	0	0	47
	<i>grievances closed total</i>	14	0	0	14
	<i>grievance closed during the month</i>	1	0	0	1
	<i>total grievances still open</i>				

2.3.3.1 Communication

No change from previous report.

2.3.3.2 Staffing

No change from previous report.

2.3.3.3 Institutional strengthening

No change from previous report.

2.3.3.4 Land allocation

No change from previous report.

2.3.3.5 Nakai Plateau Forestry Development Program

The 6-monthly report (July to December 2006) has been released by VFA.

2.3.3.6 Timber supply for resettlement

Logging: The logging operation of Village Forestry Association was carried out by Nakai Neua Logging and ongoing around in the saw tooth area.

Inventory for logging: Inventory of additional 3 ha permanent agricultural land has been carried out in Phonsavang, Bouama and Phonphanpek.

Inventory of slash and burn area in the reservoir has been carried out in Nakai Tai and Nakai Neua.

Additional logs from salvage Logging: Logs have been selected from Salvage Logging areas for a volume of 6,244 m³.

Sawn timber

The provision of timber to the supply of wood for NT2 resettlement housing construction for 3 villages Ban Phonsavang, Ban Sop On, Ban Bouama as mentioned below:

		<i>Log from various sawmill</i>	<i>Receive (m³) from sawmill</i>	<i>Delivery (m³) to contractors</i>	<i>Remained in VFA Storage (m³)</i>
1	Sawmill Lak 20		177.003		
2	Sawmill Nakai		95.870		
3	Sawmill Xio		108.799		
4	VFA Sawmill		22.612		
5	Changed		90.989		
	Total		495.274		
1	Total delivery to contractors			97.620	
2				32.907	
3				85.246	
4				95.307	
5				30.337	
	Total			341.417	
	Storage				153.857

Total volume timber delivery in February to contractors: 311.080 m³

<i>Total 2006 up to now</i>	<i>Total Production (m³)</i>	<i>Total Delivery (m³)</i>	<i>Total Remaining VFA storage (m³)</i>
	4,554.635	2,787.620	1,767.015

2.3.3.7 Furniture, handicraft manufacture

Production in February 2007:

<i>Description</i>	<i>Quantity</i>	<i>Cost/Unit (kip)</i>	<i>Amount (kip)</i>
Decoration pole5x5	60	10,000	600,000
Decoration pole10x10	2	30,000	60,000
Blackboard Frame	2	50,000	100,000
Room numbering panel	36	10,000	360,000
Small table	2	120,000	240,000
Door frame	23	80,000	1,840,000
Window frame	18	64,000	1,152,000
Window	9	70,000	630,000
Total			4,982,000

2.3.3.8 Charcoal & Brick making

Production in February: VFA gave bricks to villagers to make 10 new Charcoal kilns in SopMa Village:

	<i>Location</i>	<i>kiln</i>	<i>No of brick (pieces)</i>	<i>Cost/piece (kip)</i>	<i>Amount (kip)</i>
1	Ban Bouama				0
2	Sop Phene				0
3	SopMa	10	12,000	150	1,800,000
4	Sophia				0
5	Sop On				0
	Total				1,800,000

Villager's February income from selling charcoals:

<i>Location</i>	<i>kiln</i>	<i>Production (bags)</i>	<i>Cost/bag (kip)</i>	<i>Amount (kip)</i>
Ban Bouama	1	0		0
Sop Phene	2			
SopMa	2	0		0
Sophia	3	0		0
Sop On	2	60	10,000	600,000
VFA	2	100	13,000	1,300,000
Total	10	130		1,900,000

Brick making 11,000 pieces.

2.3.3.9 Silviculture (Plantation, Nursery, Enrichment)**Nursery**

Seedling production:

<i>Description</i>	<i>Quantities</i>	<i>Cost/Unit (kip)</i>	<i>Amount (kip)</i>
Ornament Seedling production	105 medium bags		
Medicine seedling production	126		

Plantation

<i>Description</i>	<i>Quantities</i>
Grass cutting, weeding	
Fence maintenance	850 meter
Fertilizing	
Medicinal planting	252 seedlings

Forage

<i>Description</i>	<i>Quantities</i>
Harvesting seed – <i>Brachiaria ruzisiensis</i>	39 kg
Fertilizing	
Fence	48 meter

NTFP

One house for Orchids built in VFA nursery.

2.3.3.10 Nakai Plateau Agricultural and Livestock Development Program2.3.3.11 General meetings in the villages

During the month of February, the meetings in the villages were held in 10 villages (Khone Kaen, Ban Done, Sop On, Phonsavang, Boua Ma, Nakai Tai, Nakai Neua, Sop Hia, Sop Phene, Sop Ma). We had notice the main points:

- ❖ The participation was important (60 to 90% of the family)
- ❖ The farmers were interested in implementing the agro-ecology approach,
- ❖ They were interested in having a bigger land allocation (3 and 5 ha)
- ❖ The new scheme of compensation had never been discussed about the level of compensation. The farmers never said it was enough,
- ❖ There was a lot of discussions about the stop of the slash and burn (only on the drawdown, and only for this year)
- ❖ The farmers said they need to start as soon as possible,
- ❖ We had a lot of questions about the cutting of the trees by the DAFO. The farmers asked to have the authorization to use the wood of the 0.6 ha for their needs.



Animation of the meeting in a village



A high level of participation by the farmers



The supports for the meeting

2.3.3.12 Preparation of the fields

Just after the meeting, we went on the field to define the limit of the drawdown. So, after this the farmers had started to prepare their fields:

- In the drawdown area with the traditional technique of slash and burn to make some rice at the raining season. For this, the farmers do the work by themselves, without financial support of NTPC. So, in the same time, the reservoir will be cleaned, the farmer will produce some rice and some charcoal if they want.
- In the 0.6 ha with the Agroecology technique (cutting of the medium and little trees, making of the fences). This work had been started in the village where the land allocation is finished and where the DAFO had finished to cut the big trees: Boua Ma, Nakai Neua, Nakai Tai.

Villages	Number of house hold	Agriculture permanent field of 0.66 ha	Additional agriculture permanent land of maxi 3 ha	Common pasture of maximum 5 ha (VFA land)	Draw down zone Current Slash and burn (ha)
Khone Kaen	52 hh	Land preparation should start in March	2008	2008	1
Ban Done + Ka Hoy	151 hh	37 plots of 0.66 ha has been set up and then the villager proceed to conduct land preparation	2008	2008	44.8
Sop On	141 hh	30 households from Ka Oy at Sop On already started the land preparation and up to now two households are completed of their owner land preparation	To start in wet season 2007	2008	16.6

Villages	Number of house hold	Agriculture permanent field of 0.66 ha	Additional agriculture permanent land of maxi 3 ha	Common pasture of maximum 5 ha (VFA land)	Draw down zone Current Slash and burn (ha)
Phonsavang	44 hh	24 households conducted the land preparation but in their owner old land	To start in wet season 2007	2008	29.8
Boua Ma	74 hh	Land preparation is completed 15.8 ha of area	2008	2008	29.9
Nong Boua + Keng Gnao	38 hh	Few farmers still continue to grow vegetable	To start in wet season 2007	2008	
Nakai Neua	89 hh	Not yet implemented because we waiting the infrastructure team to mark the plot	2008	2008	0.7
Nakai Tai	201 hh	Not yet implemented because we waiting the infrastructure team to mark the plot	2008	2008	25
Area 7 + Nam Nian	41 hh	Not yet implemented because we waiting the infrastructure team to mark the plot	2008	2008	
Sop Ma	74 hh	54 plots of 0.66 ha has been set up and then the villager proceed to conduct land preparation	2008	2008	16.5
Sop Hia	36 hh	Completed of the setup 36 plot of agriculture land for 36 households	2008	2008	22
Nong Boua Kham	58 hh	Waiting for Army to cut the wood (big trees) and then the villager can do land preparation	2008	2008	6.4
Sop Phene	56 hh	Many big trees leave on the land, it is difficult to do land preparation	2008	2008	5.8
Thalang	79 hh	Not yet implemented	2008	2008	32.9

At the end of February, the DAFO hadn't finished the cutting of the big trees in the fields of 0.6 ha. So, NTPC will have the charge to do this work (with the farmers and private companies).



The fields of 0.6 ha in Sop Phene village

Nakai Agricultural Livelihood Program - Status as of early March 2007															
Note:		Outcomes timing to be determined following completion of survey in early 2007													
		Phon Phan Paek (not reservoir affected) timing to follow survey in early 2007													
Villages	Nong Boua + Keng Gnao	Sop On + Ka Oy	Phonsavang	Boua Ma	Sop Hia (first group)	Sop Ma	Sop Phene	Ban Done + Ka Oy	Khone Kene	Nong Boua Kham	Nakai Tai	Nakai Nua	Thalang	Sop Hia + Nam Niam remainder	TOTAL
Total hh to be resettled	43	136	41	74	36	67	57	147	52	57	194	92	79	40	1115
Resettled:	mid 06	mid 06*	mid 06	mid 06	mid 06	mid 06	mid 06	mid 06	mid 06	early 07	mid 07	mid 07	end 07	early 07	
Permanent agriculture land: field of 0.66 ha	Land allocation														
	Cutting of the trees														
	Preparation of the fields														
	Fencing														
	Wet Season Rice/vegetables on 1/3 of plot														
	Wet Season cover plant on 2/3 of plot														
	Dry Season Borehole Irrigation **														
Additional permanent agriculture land: field of maximum 3 ha per hh	Land allocation	20 % of these fields in 2007													
	Cutting of the trees														
	Preparation of the fields														
	Fencing														
	Sowing cover plant and rice														
Common pasture under the forest (property of VFA)	Land allocation														
	Cutting of the trees														
	Preparation of the fields														
	Fencing														
	Sowing cover plant														
Draw down (seasonal land for cultivation or/and pasture)	Slash and burn														
	Sowing of rice														
	Implementation of pasture														
		finished program													
		in progress													
		subject to UNO investigation													
		due by 07 - not yet started													
		due after mid 07 - not yet started													
* Sop on only - 30 Ka Oy families moved early 07															
** program to be tested in Sop On in 2007 and expanded in 2008, 2009															

2.3.3.13 The Centers of Creation and Multiplication

The CCM of Nong Boua and Theun Douan had started some test of cultivation for the culture of potatoes, peanut, soya, rice and vigna.

For the moment, we are waiting the cutting of the trees in Nong Boua Kham to implement the new CCM in this area.

2.3.3.14 The land allocation

During the month, the land allocation officer had worked in the same time to define the drawdown area in the field (for all the villages) and to make a survey of the area of 3 ha for the village of the South part (Khone Kaen, Ban Done, Sop On, Phonsavang, Boua Ma and Nong Boua). This survey is conducted by a mixed team with NTPC, DAFO and VFA.

2.3.3.15 The recruitments

After the announcement in the newspapers, we had 180 candidates, for the 11 position. 40 candidates have been invited for an interview in Nakai. The interviews have started at the end of February. The

first positive candidates will start their contract at the middle of March. The emergency is to recruit some field staff as 3 supervisors, and the secretaries' positions.

2.3.3.16 Fisheries Reservoir Program

The two consultants for the study of the Reservoir Fisheries Management Program have started on 5th February. They start with field work in each resettlement village of Nakai Plateau.

The final report, approved by the Ministry of Agriculture and Fisheries is expected to be available by the end of April 2007.

2.3.3.17 Community Development Program

Activity focused on awareness raising of villagers on the need to move away from the possible flood due to main dam impact (June-August 07). Census for the remaining VG2 villages has been finalized. During the month, Sop Hia / Nam Nian and Nongbouakham villagers were consulted to plan for actual temporary relocation to new sites.

Rice and protein being continuously provided to villagers, except protein to the first 3 villages already moved 9 months ago, which is to be stopped by end of March 07.

Incomes activities (non-farm) were strengthened for better results and enlarged to more target groups and people, especially the vulnerable households and women members.

Education support is continuous and new relocated villages being covered by the education program.

Grievance system was strengthened (administratively and logistically) at both the district and village levels.

Relocation of potential impacted villagers of Nakai Tai, Nakai Neua and Thalang will be implemented during March 07 and has to be completed by end April 07. It is almost certain that remaining Sop Hia (18 HHs who wished to go to Pong Phai) will now change their mind to come to Area 7 (now waiting for RC endorsement).

2.3.3.18 Non-farm CD Activities

Monitor tailoring funds by District Lao Women Union at the Sop on, Bouama, Phonsavang, and Nongboua.

Monitor barber funds (could not return fund on time, some of trainees could not do).

2 persons from weaving group (Sop Hia Area 8a) went to Vientiane for study tour (Somsavanh village on weaving activity and saving funds).

Select potential fund committee: the person who will get fund and fund committee members who will be agreed by head of village and VDC.

Details activities are as below table:

No.	Activities / locations	Date	Participants	Outputs/Result
1	Meeting on non-farm income (Sop Ma village)	13/2/ 07	DWG: 1 person SRO: 1 person 75 attendant (28 women)	Fishery: 11 pers., small trade:15 pers., livestock: 2pers, weaving: 3 person, tailor 12 pers., motorbike maintenance :7 pers., Carpenter:15 pers.
2	Meeting on non-farm income Phonsavang village	15/2/07	DWG: 1 person SRO: 1 person 35 attendant (12 women)	Fishery: 4 pers., small trade:3 pers., tailor 1 pers., motorbike maintenance: 3 pers.
3	Meeting on non-farm income Bouama village	16/2/07	DWG: 1 persons 52 attendant (19 women)	Fishery: 9 pers., small trade:4 pers., livestock: 4 pers., food product: 1 pers., tailor 3 pers., motorbike maintenance: 3 pers.

Lao Women's Union strengthening:

No.	Activities / locations	Date	Participants	Outputs/Result
1	LWU strengthening and gender workshop at Sop Hia Area 8	23/2/ 2007	DWG: 1 person SRO: 1 person 25 attendant (20 women)	All understand of role and duties of LWU – gender.
2	LWU strengthening and gender workshop at Sop Ma village.	24/2/07	DWG: 1 person 24 attendant (20 women)	All understand of role and duties of LWU – gender.

Education:

- ❖ Nursery in 9 villages: Monitor and provided lunch support for children on going (479 children of which 221 female).
- ❖ Basketball and rattan ball for 9 villages schools handed over (one set per village)
- ❖ Monitor of non-formal teachers: we have 12 teachers in 8 villages and number of students 241 person (180 women)

Micro-credit: Village saving groups have been monitored in December in 9 villages (514 members) – Attachment SG table.

Rice and Food support:

Continuous Monitoring and provision of rice, protein at SopOn, Phonsavang, Bouama, SopMa, Nongboua extension, Sop Phene, SopHia- Area 8a, Done, Khone Kaen (10 villages – 3168 persons= 45,768 kg).

Protein: once per week (fresh meat or fish 633.6 kg/per week, dry meat or dry fish 633.6 kg/per week, 6336 eggs/ per week).

Grievance/Revolving fund:

No.	Activities / locations	Date	Participants
1	Conduct Workshop on Grievance Committee for Ban Phonphanpek	8/02/07	RMU: 1person DWG: 2 persons SRO: 2 persons 11 attendant (4 women)
2	Follow up the Ban Sop Hia Grievance committee	28/02/07	DWG: 1 person SRO: 1 person
3	Conduct Workshop on Revolving fund at District level	19/02/07	RMU: 2 persons DWG: 6 persons SRO: 4 persons

Census:

Conduct survey of original 51 Households at Phonphanpek village (population: 339 persons, Male: 179 persons, Female: 158 persons)

2.3.3.19 ICD/VRC/CD

No	Activities / Locations	Dates	Participants	Outputs/ Results
1.	Conduct Participatory Evaluation Workshop on LNFC and VRC management : Ban Sop One, Ban Done and Ban Khone Kaen	5/02/07	RMU: 1person DWG: 2 persons SRO: 1 person 31 attendant (6 women)	Evaluation average score: Ban Sop One VCD: 57,70% Ban Done VCD: 66,70% Ban Khone Kaen VCD: 63,00%
2.	Conduct Participatory Evaluation Workshop on LNFC and VRC management : Ban Nongboua, Ban Bouama and Ban Phonsavang	6/02/07	RMU: 1person DWG: 2 persons 22 attendant (5 women)	Evaluation average score: Ban Nongboua VCD: 67,30% Ban Bouama VCD: 58,70% Ban Phonsavang VCD: 66,00%
3.	Conduct Participatory Evaluation Workshop on LNFC and VRC management : Ban Sop Hia and Ban SopMa	7/02/07	RMU: 2person DWG: 2 persons 23 attendant (3 women)	Evaluation average score: Ban Sop Hia VCD: 38,30% Below average (may need to be replaced) Ban SopMa 1 VCD: 51,30% Ban SopMa 2 VCD: 55,30%
4.	Ban Sop Hia/NamNian House and Agriculture plots Selection Consultation	13/02/07	RMU: 2person DWG: 1 person 47 attendant (4 women)	All understand and agree with the House and Agriculture plots Selection consultation
5.	Ban Nakai Neua House and Agriculture plots Selection Consultation	16-17/02/07	SRO: 4 persons DWG: 1 person 77 attendant (28 women)	All understand and agree with the House and Agriculture plots Selection consultation
6.	Study tour-Bolikhamxay and Vientiane provinces on Irrigation Management Transfer	20-22/02/07	RMU: 6 persons SRO: 4 persons DWG: 5 persons Villagers(WUG): 3persons	
7.	Follow up Relocation Planning activities for Ban Sop Hai to Area 7	23-24/02/07	SRO: 1 person DWG: 2 persons	Preparing the temporary houses for Sop Hia group 1 7 families.
8.	Follow up Relocation Planning activities for Ban NamNian to Area 7	23-28/02/07	SRO: 1 person DWG: 2 persons	Moving in to the temporary houses 6 families

Social Activities

Downstream Areas

2.4 Downstream Areas Development Plans

		RIPARIAN						
<i>Total villages Riparian : 86</i>	target end 2013 (end program)	target end 2009	target end 2008	target end 2007	<i>total achieved to date</i>	<i>in progress</i>	Unit	Comment
VDCC + Villages comitees establishment	86	86	86	46	14	0	Village	
Mini-Polders	25	5	5	5	0	3	Mini-Polders	3 mini-polders planned to be completed before 2007 WS
Flood gates rehabilitation	14	7	0	0	0	0	Gates	to be coordinated with GoL program for lower XBF (under definition by GoL)
WATER supply (tube wells)	200	200	200	40	0	0	Tubes Well	all riparian villages along the XBF must have access to safe water by COD - most of villages are already partly equiped - final desings depending on ongoing consultations with villagers
(WA)SH program (including sanitation facilities)	86	86	50	10	0	0	Village	
Agriculture, horticulture - TA + support	86	86	86	46	0	14	Village	
Livestock - TA + support	86	86	86	46	0	14	Village	
Fisheries co-management (villages component)	86	86	86	0	0	0	Village	the 15 villages US of the Nam Phit confluence (on XBF) are not concerned by this component
Irrigation - tubewells	TBA	TBA	TBA	TBA	TBA	TBA	number of TW	Program to be defined
Aquaculture	86	86	86	46	0	14	Village	
Saving and Credit	86	86	86	41	0	14	Village	
Handicraft	86	86	86	31	0	0	Village	

		HINTERLAND						
<i>Total villages Hinterland : 97</i>	target end 2013 (end program)	target end 2009	target end 2008	target end 2007	<i>total achieved to date</i>	<i>in progress</i>	Unit	Comment
VDCC + Villages comitees establishment	97	7	7	7	7	0	Village	
Mini-Polders								
Flood gates rehabilitation								
WAter supply (tube wells)	+/- 260	+/- 130	0	0	0	0	Tubes Well	Implementation scheduled post-COD
(WA)SH program (including sanitation facilities)	97	0	0	0	0	0	Village	Implementation scheduled post-COD
Agriculture, horticulture - TA + support	97	7	7	7	0	7	Village	Long term program, Technical assistance over several years
Livestock - TA + support	97	7	7	7	0	7	Village	Long term program, Technical assistance over several years
Fisheries co-management (villages component)	97	97	50	0	0	0	Village	
Irrigation - tubewells	TBA	TBA	TBA	TBA	TBA	TBA	number of TW	Program to be defined
Aquaculture	97	97	TBA	7	0	1	Village	Program to be defined for 2008
Saving and Credit	97	7	7	7	0	7	Village	
Handicraft								

		Downstream of the dam						
Total villages DS of the dam : 38	target end 2013 (end program)	target end 2009	target end 2008	target end 2007	total achieved to date	in progress	Unit	Comment
VDCC + Villages comitees establishment	38	0	0	0	0	0	Village	Implementation scheduled post-COD
Mini-Polders								
Flood gates rehabilitation								
WATER supply (tube wells)	n/a	n/a	n/a	n/a	0	0	Tubes Well	Implementation scheduled post-COD
(WA)SH program (including sanitation facilities)	n/a	n/a	n/a	n/a	0	0	Village	Implementation scheduled post-COD
Agriculture, horticulture - TA + support	n/a	n/a	n/a	n/a	0	0	Village	Implementation scheduled post-COD
Livestock - TA + support	n/a	n/a	n/a	n/a	0	0	Village	Implementation scheduled post-COD
Fisheries co-management (villages component)	38	12	6	0	0	0	Village	
Irrigation - tubewells	TBA	TBA	TBA	TBA	TBA	TBA	number of TW	Program to be defined
Aquaculture	n/a	n/a	n/a	n/a	0	0	Village	Program to be defined
Saving and Credit	38	12	6	0	0	0	Village	
Handicraft								

2.4.1 General overview

- New manager joined the Downstream Program
- Veterinary training was conducted in 9 villages
- Establishment of fish catch monitoring in 3 villages upstream of the Nakai Reservoir

- Continuation of livelihood development activities
- Preparation for a “training of trainers” course for village & saving fund
- Topographic survey for a mini-polder scheme completed
- Village Veterinary workers training conducted in 9 villages
- Preliminary WASH implementation plans for 10 villages were developed.

2.4.2 Baseline Studies, Monitoring

Baseline Studies / Monitoring

Further planning was undertaken during the reporting period regarding monitoring necessary to meet the Concession Agreement obligations.

2.4.3 Reports & Meetings

Meetings

During the reporting period, Downstream Program team members participated in the following meetings:

- One day meeting with the IFI on 5 February 2007, followed by a full day field trip with the IFI representatives to several downstream villages.
- Half day meeting with IAG to overview downstream program on 13 February 2007.

A Downstream Program section leader meeting is held every Tuesday morning and a full Downstream Program staff meeting once per month. Minutes of meeting are prepared and distributed to enable staff to follow up on items discussed during the meeting. Meeting with RMU is also held every Tuesday after section leader meeting.

Reports

The latest revision of the Downstream Livelihood Restoration Program report was submitted to IFI in October 2006. No official comments have been received.

2.4.4 Administration

Personnel issues

A new Downstream Program manager commenced employment during the reporting period and is based in the Downstream Program office in Thakhek.

The interviews and recruitment of additional administration/financial staff (1 position) are expected to be conducted in April 2007.

The requisition for 4 additional drivers was submitted for approval in January 2007 but has not been approved yet. It is expected that the new vehicles will arrive within 2 months to support the ever increasing level of field activity being undertaken by the Downstream Program.

On February 5 the Downstream Program Flood Control / Irrigation Engineer submitted his resignation. His last day of work is expected to be 5 March 2007. An advertisement was published in both the Lao and English language newspapers. It is expected that interviews and selection of a replacement engineer will be completed during the month of March.

Other administration

The Downstream office helped prepare arrangements to receiving the World Bank Vice President in Beungxe Village, which is one of the 20 pilot villages in the downstream program.

2.4.5 GOL Coordination

During the reporting period, the Downstream Program team held two coordination meetings with the RMU to discuss coordination with district and provincial staff, weekly planning, equipment which has been provided by NTPC to the RMU and DWGs, administrative issues regarding village organization, and other issues related to the Downstream Program.

2.4.6 Community Organization / Village Development Fund

Village Organization - VDCC

During the reporting period four villages completed one year of operation for the NTPC sponsored village and saving fund (three villages in Mahaxai District and one in Xe Bangfai District). Together with the DWGs NTPC has assisted villages in revising and calculating total income (interest) received from management of village and savings funds.

Results from one year of operation in those villages have provided a good example for other villages to follow, particularly for other village VDCC members and management committees. The table below indicates the total amount of interest received by household repayment within one year. According to the agreement for fund management in each village, the annual awards for the VDCC should not be higher than 15% of total income made by the village and savings funds. On average each VDCC has received annual wages at about 500,000kip/person/year. For each member's Activity Group Leader and Advisory plus Audit committee agreed on shared about 10% of total interest collected.

Name Village	Total interest received/year (Kip)	Total Amount Received by 5 VDCC members /village (Kip)	Total Amount Received by 5 Activity Group Leaders/Village (Kip)	Total Amount Received by 5 Advise. + Audit Com/village (Kip)
Mahaxai Tai	18, 439,000	2, 765,900	949,600	921,000
Pova Neua	6, 497,000	974,550	447,000	324,850
Pova Tai	24, 855,000	3, 728,250	324,000	1, 242,750
Hatkhamhieng	13,734,000	2,060,000	733,800	686,700

At the end of March 2007, the Downstream Team will organize and participate in a quarterly meeting at the provincial level. In this meeting VDCC representatives from the 20 pilot villages and 10 DWGs from five districts in the downstream working area will also be invited to participate. The purpose of this meeting is to exchange experiences on program management within the 20 villages. It will also provide an opportunity for different DWG's, RMU members and NTPC team members to discuss the results of their technical inputs for livelihood and asset restoration program in each village.

Village Revolving / Saving Funds

To improve program management at village level the NTPC Community Organizing Team, with supported by a Micro Finance Consultant, has developed new accounting procedures and revised Village Fund and Saving Fund Management Guidelines which will be introduced to the VDCC in the 20 Downstream Program pilot villages in the coming months.

To formulate village fund accounting procedures the CD Team selected at least one representative from each VDCC who will participate in a "training of trainers" course to be held in early March.

The training course should help to improve communication between VDCC and households, especially for transferring information of different sectors. Every village will formulate new Village Fund Accounting procedures to record their transaction and its movement. Therefore, the next monthly (March) progress report will include a new table showing providing an update of village funds within 20 pilot villages.

VDCC Bank account for February 2007

Currency: KIP

VDCC Bank Account									
No.	Village Name	Open Account	Funds Transferred by NTPC (Kip)	Fish Cash Monitoring	Deposit by VDCC	Bank Interest	Withdrawal by VDCC (Kip)	Bank charge	Balance
	Gnommalath District	150,000	542,000,000	3,150,000	-	1,666,306.73	113,400,000	280,999	433,285,308
1	Phathung	50,000	150,000,001	1,050,000		416,979.87	39,200,000	75,000	112,241,981
2	Nongping	50,000	229,999,999	1,050,000		748,995.16	49,200,000	114,999	182,533,995
3	Khoksavang	50,000	162,000,000	1,050,000		500,331.70	25,000,000	91,000	138,509,332
	Mahaxay District	200,000	1,198,056,546	4,200,000	-	4,417,407.90	430,374,500	145,000	776,354,454
4	Mahaxaitai	50,000	461,728,369	1,050,000		1,191,893.57	123,887,500	125,000	340,007,763
5	Povaneua	50,000	220,075,519	1,050,000		1,065,189.09	115,535,000	10,000	106,695,708
6	Povatai	50,000	278,485,338	1,050,000		1,430,195.24	150,952,000	10,000	130,053,533
7	Khamfeuang	50,000	237,767,320	1,050,000		730,130.00	40,000,000		199,597,450
	Xebangfai District	250,000	1,337,638,029	4,200,000	37,697,000	4,414,346.57	522,685,000	80,000	861,434,376
8	Kengpe	50,000	178,035,291	1,050,000		784,850.53	23,100,000		156,820,142
9	Veunsananh	50,000	144,379,350	1,050,000		524,815.62	70,000,000	35,000	75,969,166
10	Hatpek	50,000	65,999,984			440,745.73	11,000,000		55,490,730
11	Yangkham	50,000	485,997,196	1,050,000	2,607,000	1,559,205.97	198,585,000	10,000	292,668,402
12	Hatkhamheng	50,000	463,226,208	1,050,000	35,090,000	1,104,728.72	220,000,000	35,000	280,485,937
	Nongbok District	100,000	490,883,928	2,100,000	48,000,000	1,255,573.61	267,000,000	25,000	275,314,502
13	Hatxaifong	50,000	104,999,974	1,050,000		543,992.90	74,500,000		32,143,967
14	Navangneua	50,000	385,883,954	1,050,000	48,000,000	711,580.71	192,500,000	25,000	243,170,535
	Xaybuly District	300,000	1,063,465,164	6,300,000	160,930,000	4,913,581.08	587,441,000	50,000	648,417,745
15	Veunsivilai	50,000	227,862,395	1,050,000		712,300.96	111,400,000		118,274,696
16	Beungxe		217,899,326	1,050,000	160,930,000	860,639.80	189,138,000	50,000	191,551,966
17	Beung Xe (AC SVK)	50,000	90,703,574				90,703,000		50,574
18	Beungbouathong	50,000	131,999,967	1,050,000		791,629.91	25,000,000		108,891,597
19	Nasang	50,000	195,999,951	1,050,000		1,246,817.99	111,200,000		87,146,769
20	Thaphoxai	50,000	108,999,973	1,050,000		735,190.65	26,000,000		84,835,164
21	Nonenakhom	50,000	89,999,978	1,050,000		567,001.77	34,000,000		57,666,980
	TOTAL	1,000,000	4,632,043,667	19,950,000	246,627,000	16,667,215.89	1,920,900,500	580,999	2,994,806,384

Date 10/03/2008

Monthly Cash Flows February 2007

No.	Village Name	Saving by HH			NTPC Village Production Fund	Cash Flow			
		Members (HH)	Balance Forward	Deposited this Month		VDCC Withdrawn From Bank Account	Total Amount Repaid by HH to VDCC	Total Interest Paid by HH	Total Amount Disbursed by VDCC to HH
	Gnommalath District	133	14,711,000	3,656,000	18,367,000	-	5,990,000	835,000	4,700,000
1	Phathung	79	9,411,000	1,580,000	10,991,000		2,290,000	392,000	1,000,000
2	Nongping	54	1,651,000	1,645,000	3,296,000		3,300,000	398,000	3,500,000
3	Khoksavang		3,649,000	431,000	4,080,000		400,000	45,000	200,000
	Mahaxay District	267	129,412,000	101,619,000	231,031,000	-	12,747,000	5,807,000	114,700,000
4	Mahaxaitai	90	32,369,000	82,819,000	115,188,000		300,000	720,000	78,400,000
5	Povaneua	91	19,081,000	9,425,000	28,506,000		800,000	2,266,000	12,400,000
6	Povatai	86	72,909,000	8,458,000	81,367,000		5,097,000	1,911,000	15,100,000
7	Khamfeuang		5,053,000	917,000	5,970,000		6,550,000	910,000	8,800,000
	Xebangfai District	360	76,646,000	4,460,000	81,106,000	-	47,100,000	6,357,500	69,600,000
8	Kengpe	60	13,071,000	780,000	13,851,000		2,600,000	2,772,000	23,100,000
9	Veunsananh	44	2,772,000	240,000	3,012,000			220,000	300,000
10	Hatpek	25	460,000	155,000	615,000				11,500,000
11	Yangkham	120	22,837,000	1,580,000	24,417,000		3,800,000	1,567,000	13,800,000
12	Hatkhamheng	111	37,506,000	1,705,000	39,211,000		40,700,000	1,798,500	20,900,000
	Nongbok District	175	49,108,500	5,755,000	54,863,500	-	59,520,000	1,796,000	24,450,000
13	Hatxaifong	64	4,223,000	540,000	4,763,000		100,000	796,000	4,450,000
14	Navangneua	111	44,885,500	5,215,000	50,100,500		59,420,000	1,000,000	20,000,000
	Xaybuly District	386	80,983,500	7,506,000	88,489,500	19,000,000	12,645,500	2,693,500	25,787,000
15	Veunsivilai	85	17,010,000	2,403,000	19,413,000		5,117,500	482,000	8,000,000
16	Beungxe	58	33,281,000	1,000,000	34,281,000	19,000,000	1,650,000	1,213,500	10,100,000
17	Beung Xe (AC SVK)				-				
18	Beungbouathong	74	12,429,000	961,000	13,390,000		1,900,000	140,500	3,001,500
19	Nasang	82	7,870,000	1,565,000	9,435,000		1,076,000	431,000	2,802,000
20	Thaphoxai	60	6,030,500	899,000	6,929,500		2,123,000	284,500	284,500
21	Nonenakhom	27	4,363,000	678,000	5,041,000		779,000	142,000	1,599,000
	Grand Total	1,321	350,861,000	122,996,000	473,857,000	19,000,000	138,002,500	17,489,000	239,237,000

Date: 28/02/2007

2.4.7 Livelihoods

General

Livelihood development activities in the 20 pilot villages continued during the reporting period.

Agriculture / Horticulture

Downstream agriculture / horticulture staff conducted the following activities during the reporting period:

- Collection of data for Jatropha activities within the pilot villages, including visiting Jatropha nurseries
- Drafting of an annual work plan for livelihood activities
- Development of a budget for second quarter 2007 activities
- Collection of information regarding marketing, feasibility for contract farming, villager views and ideas for soy bean and Jatropha.

Jatropha plantation activity

Jatropha plantation activity is planned for next coming rainy season in 5 villages, with a total area of about 15 ha. The largest area among the 5 villages is in Ban Kengpe, with 26 participating families and an area of 11 ha. Therefore, Kengpe will be given priority in implementation of activities. The Kengpe village Jatropha nursery is already 70% complete. The nursery is approximately 10x30m and is being built through community participation. NTPC is providing seedlings, seeds, plastic bags, a water pump, electric cable, wire, nails, water pipes, fertilizer, and other miscellaneous materials.

It is expected to establish a Jatropha nursery in more 2 villages in the coming months.

Draft Annual working plan of livelihood section:

A preliminary draft for an annual working plan was completed for all livelihood section (Agriculture, Horticulture, livestock, fishery, and Animal Health Care). The idea of annual working plan is to provide a tool for year round implementation, giving general direction to implementing staff, especially to help NTPC counterparts to understand what NTPC would like to do.

A preliminary draft of the plan was given to RMU for review and comment. Subsequently, the RMU consulted with each of the relevant DWG to provide comment on how the plan can be improved.

Quarterly budget plan

A livelihood team budget plan was prepared for the second quarter which will be included in the overall Downstream quarterly budget plan.

Contract farming feasibility

During the reporting period the livelihood team worked to collect information regarding new techniques for recession rice production and worked to identify companies who already have experience with contract farming for Jatropha, Soya bean, or other crops:

- A meeting with a Soya Bean Company was held on 27/2/2007 to collect information regarding their investment in soya beans and to understand the feasibility of contract farming for soya bean in the project target villages. However, the results of these discussions were not very encouraging due to 1) the low price offered for the product and 2) NTPC was requested to subsidize heavily the investment through purchasing of the seeds.
- A field visit to Chokchai Company was conducted on 26/2/2007 in Vientiane Province to collect information about techniques and prices for Jatropha.

Aquaculture

Downstream aquaculture activities during the reporting period included:

- Provide technical assistance to Ban Khoksavang on pond management and fish feeding
- Provided 35,700 fingerlings of silver barb, common carp and tilapia to 39 farmers in Pova (1), Mahaxai (2), Hadkhamhieng(10), Yangkham(5), Navangneua(17) and Hatxaifong(4)
- Consultation with villagers at Hadkhamhieng and Yangkham village, which are interested to dig new fishpond during construction of mini-polder
- The final version of basic fish culture manual was reproduced to allow distribution as needed to villages
- The Downstream Program aquaculture consultant received an official letter from the Government of Lao that provides agreement to conduct a feasibility study of the Lak 4 hatchery in Thakhek
- A budget proposal for supporting aquaculture during the second quarter was prepared

Livestock Activities

Downstream pig activities during the reporting period included:

- Completed pig production training programs: 106/57 females, participants attended (in Gnommalat: 4 villages, Mahaxai: 2 villages, Xe Bangfai: 2 villages, Xaibouli: 2 villages and Nongbok: 1 village) to be trained on pig production

- Medicine (Mebendazol 500g) provided to pilot villages for pigs to control intestinal worms
- Introduced new legumes for pig feed (Stylosanthes guianensis)
- Conducted measurement of the live weight gain of pigs under traditional feeding and growth rate at one Gnommalat village and two Mahaxai villages.
- In February the training for Village Veterinary workers (VWV) was organized in 9 villages. The training started from 8/2/2007- 27/2/2007, it was organized 2 days per 1 village. There are 117 participants for pig raising and village committee participated in the training, including 60 women. In every village 3-4 village veterinarians were identified (27 veterinarians in 9 villages).

Table of participants who attended the training

Date Training	village	No trainees		No VWV
		Total	Fem.	
8/9/2007	Nongping	19	15	4
12/13/2007	Phathoung	15	9	4
14-15/2/07	Pova Neua / Tai	21	17	4
16-17/07	Kengpe	14	7	3
19-20 /2/07	Hadkhamhieng	14	7	3
21-22/2/07	Beungxe	10	0	3
23-24/2/ 07	Beungbouathong	11	1	3
26-27/2/07	Navang	13	4	3
Total	9 villages	117	60	27

2.4.8 Infrastructure Related Activities

Mini-polder construction

A topographic survey for one mini-polder scheme was completed. The scheme includes 5 villages: Yangkham, Hatkhamhieng, Somsat, Naphoktha, and Namphou, three of which are pilot villages. Processing of field survey data began and is expected to be completed during March.

Water Supply / Sanitation / Hygiene (WASH)

Downstream WASH staff conducted the following activities during the reporting period:

- Meeting with Khammouane Province sanitation staff to discuss sanitation and hygiene activities
- Meetings in Gnommalat, Mahaxai, and Xe Bangfai Districts with district officers to discuss coordination and identification of district staff who will assist in implementation of the WASH program
- Village level consultations in Phathoung, Khoksavang, Khamfeuang, Pova, Mahaxai and Kengpe to discuss proposed WASH activities and to identify village level coordinators within each village
- Preparation of preliminary WASH implementation plan for initial 10 villages, including preparation of preliminary budgets.

It is expected that during the following reporting period the following activities will be undertaken:

- Continuation with village level consultations in Xe Bangfai district pilot villages
- Collaboration with district WASH staff and VDCC to discuss general arrangements for construction of sanitation facilities
- Organize sanitation training

Water Gate rehabilitation

No activity for water gate rehabilitation during the reporting period.

Asset Restoration

No activity for asset restoration / relocation was undertaken during the reporting period.

Irrigation activities, including Operation & Maintenance

No irrigation (including O&M) activities were undertaken during the reporting period.

UXO Activities

Preparation of a UXO risk assessment paper for the downstream area continued.

2.4.9 Fish Catch Monitoring*General*

Presently, fisheries monitoring is ongoing in 39 villages. See following table.

Province	District	Villages	District Monitors	Participating Households
Bolikhamxay	Khamkeut	11	1	55
Khammouane	Gnommalat	6	1	30
	Mahaxai	6	1	30
	Xe Bangfai	6	1	30
	Nongbok	3	1	15
Savannakhet	Xaibouli	7		35
3	6	39	5	195

The following 39 villages are included in the daily fish catch monitoring of 5 selected households.

	Village	District
1	Phathoung	Gnommalat
2	Nongping	Gnommalat
3	Khoksavang	Gnommalat
4	Nalatkhuy	Gnommalat
5	That	Gnommalat
6	Naxok	Gnommalat
7	Povatai	Mahaxai
8	Nakio	Mahaxai
9	Khamfeuung	Mahaxai
10	Mahaxaitai	Mahaxai
11	Povaneua	Mahaxai
12	Dangkang	Mahaxai
13	Hatkhamhieng	Xe Bangfai
14	Yangkham	Xe Bangfai
15	Veunsananh	Xe Bangfai
16	Kasee	Xe Bangfai
17	Kengpe	Xe Bangfai
18	Sang	Xe Bangfai
19	Hatxaifong	Nongbok
20	Navangneua	Nongbok

	Village	District
21	Hatxiengdee	Nongbok
22	Beungxe	Xaibouli
23	Nasang	Xaibouli
24	Nonenakham	Xaibouli
25	Dongmakfai	Xaibouli
26	Veunsivilai	Xaibouli
27	Beungbouathong	Xaibouli
28	Thaphoxai	Xaibouli
29	Khammouane	Khamkeut
30	Vangpha	Khamkeut
31	Phonthong	Khamkeut
32	Chengsavang	Khamkeut
33	Oudom	Khamkeut
34	Sopphouan	Khamkeut
35	Phonthob	Khamkeut
36	Phonpheng	Khamkeut
37	Nakham	Khamkeut
38	Vangkor	Khamkeut
39	Nongxong	Khamkeut

At each of these 39 villages, household fish catch is monitored on a daily basis by 5 households. Forms are filled in by in total 195 households and collected by 5 fish catch monitors. Subsequently these forms will be sent to the data entry firm. These activities are ongoing.

In addition to the monitoring of household fish catch, in each of the 39 villages, fish catch information is collected through (i) village profile meetings and household interviews (20 households per village), (ii) interviews with fish traders, and (iii) monitoring of large scale fisheries, and community fishing activities.

Activity	Total Completed	Increase from last reporting period	Remaining to be completed	Estimated total
Daily HH Monitoring	40,660	6,605	103,340	144,000
Profile meetings	68	4	8	76
Individual HH interviews (Phase 1+2)	1,354	525	206	1,560
Fish trader interviews	35	14	25	60
Traditional community fishing interviews	291	136	9	300
Large scale fishery assessments	34	7	1	35

Downstream of Nakai Dam

Downstream of Nakai Dam (Bolikhamxay Province, Khamkeut District) fish catch monitoring is active in 11 villages. During village profile meetings held in Khamkeut District in 2006 a definitive list of 40 villages was made of the villages which may *potentially* be impacted by the NT2 Project.

This list was revised during the reporting period and now includes 38 villages. Three new villages were added to the list of villages due to results collected from fish catch monitoring program:

- Phonsaat / Phonekeo / Pakkatan
- Nathone / Phonkhoun / Huaydieng
- Nakadok

Additionally, five villages were removed from the list due to results from fish catch monitoring as these villages will not be impacted by operation of NT2:

- Donexat
- Nadeua
- Nahai
- Namuang
- Pakha

The potential impacts from NT2 on this region may be listed as following:

- Villagers may catch less fish in Nam Theun as a result of reduce in Nam Theun discharges;
- Villagers may catch less fish in the tributaries as less fish will migrate from Nam Theun up into the tributaries;
- Villagers may catch less or more fish in Nam Xot as a result of disappearance of migrating fish from Nam Theun when the Nakai reservoir will be inundated.

For the 38 villages in Khamkeut District a specific fisheries impact report is in preparation that includes the outcome of the village profile meeting and the actual fish catch monitoring that was carried from May 2006 up till October 2006. This report will be made available in March 2007.

A critical issue regarding fish catch monitoring in Khamkeut District is the low capacity of Khamkeut District staff in training and supervision of monitoring by participating households. In the coming months NTPC will assess whether an additional fish catch monitoring supervisor should be recruited to strengthen the fish catch monitoring team.

Upstream of the Nakai Reservoir

In the NBCA (National Biodiversity Conservation Area), upstream of the future Nakai Reservoir, potential impacts by NT2 project may occur, specifically on fish migrating from Nam Theun River up into the tributaries within the NBCA. During the reporting period a field trip was conducted to establish fish catch monitoring in upstream of the Nakai Reservoir. Activities conducted include:

- 4 hh in Ban Songkhone riparian Nam Xot,
- 3 hh in Ban Kaching riparian Nam Mone,
- 2 hh in Ban Navang riparian Nam Mone,

A critical issue is access to the villages in the NBCA. To collect the forms filled in by households at each village may take a supervisor an unreasonable amount of time to travel by foot and by boat. By assigning at each of the villages a separate supervisor who can read, write, and supervise participating households, a solution can possibly be found. It is expected that the supervisors can submit the forms to a WMPA official who can bring the forms back to Nakai on a regularly basis.

Downstream of NT2 Regulating Dam

The fish catch monitoring downstream of the regulating pond at 28 villages in Khammouane and Savannakhet Provinces is proceeding according to planning schedule. Specific activities undertaken during the reporting period include:

- Daily HH monitoring
- On-going traditional community fishing interviews

2.4.10 Photographs

WASH Consultations



Handicraft Training



Village Fund Training Completion Ceremony



IFI Visit to Downstream Area

2.4.11 Fisheries Reservoir Program

Two consultants have been recruited to formulate the Reservoir Fisheries Management Program. Both were mobilized in early February, 2007 to Thakhek and subsequently to Nakai. During their time in Nakai, the consultants visited villages in the impoundment area, as well as the resettlement areas for consultation. Interviews and meetings have been held with organizations, agencies, as well as government organizations and NTPC divisions that will be involved in reservoir management. The consultants have demobilized and are now preparing their report. The final report is expected to be available by the end of April 2007 and is to be submitted for approval by the Ministry of Agriculture and Fisheries.

Environmental Activities

3 Environmental activities

3.1 General

In addition to the monitoring of the HC's construction activities reported in the Construction section of the report, Camp Followers water quality monitoring reported in section 2.1.3, and the PCR activities reported in section 2.1.1, activities and involvement of the Environmental Management Office in December 06 have included the following:

- Water Quality sampling and analysis
- Ongoing Interim Human Elephant Conflict (HEC) Monitoring and continued contractual activities for Elephant Program Phase II.
- Ongoing baseline wildlife survey and wildlife management and monitoring planning activities.
- Ongoing contractual activities for the environmental education component of the Transitional Strategy.
- Procurement activities for the wildlife rescue and patrolling boat under the Transitional Strategy.

3.2 Wildlife Programs

The description of the various elements of the wildlife program is included for reference.

3.2.1 Fish Impacts in upstream and downstream river species

The baseline fish/aquatic species and habitat inventory report was finalized in September 2006.

Activities during February 2007 include:

Contractual activities for a consultant to resurvey 3 sampling sites which were surveyed during the baseline species and habitat survey in 2006. The fish specimens collected at these 3 sampling sites were destroyed in transit. Resurvey activities are scheduled for the dry season 2007 to collect resident fish species rather than migratory species.

3.2.2 Wildlife Management and Monitoring Program

Given overlaps in baseline survey and management activities, the Terrestrial and Wetland Programs, which are presented separately in the CA, have been combined into one Wildlife Management and Monitoring Program.

The program will be conducted in two phases:

1. Phase I includes (i) the pre-impoundment species and habitat inventories, (ii) development of a post-impoundment species management program, and
2. Phase II includes implementing part of the management plan and training the appropriate GOL agency to implement the remainder of the management plan.

Activities for Phase 1 commenced on 30 September 2006 and the baseline survey and wildlife management plan are scheduled to be submitted on 31 July 2007.

Activities during February 2007 include:

- Ongoing baseline survey and management planning activities.
- Initial feedback is positive about habitat quality and populations of some wildlife species.
- During February 2007, the baseline survey activities focused on birds and herptiles:
 - 40 species of frogs, lizards, snakes, and turtles collected so far, most of which are common throughout SE Asia.
 - The following turtle species collected are classified as vulnerable by IUCN but are either aquatic, so the reservoir may present a more suitable habitat, or inhabit wet forests above FSL: (i) Asiatic soft shell; (ii) Asian box turtle; (iii) Giant pond turtle; and (iv) Common leaf turtle.

- One turtle species that may require a specific management measure is the Elongated turtle. This species is found elsewhere in SE Asia but is classified as globally threatened – vulnerable by IUCN. This terrestrial turtle inhabits dry forest.
- No direct sightings of the White-winged Duck. Some unconfirmed reports during village consultation of isolated individuals and one pair.
- So far, no new or potentially new species of bird. The identity of 1 frog, 1 lizard and 1 snake species needs to be confirmed.
- So far, no site endemic birds or herptiles to the inundation area.



Herptiles identified during the baseline wildlife survey include Softshell Turtle (top left); Water Dragon (top right); Black-Striped Mountain Racer (bottom left); and tree frog (bottom right).

Phase II activities consisted of the negotiations with two companies to provide complementary consultancies for the interim wetlands creation, a management measure that was contained in consultant's Inception Report. The consultancies are expected to commence in mid-March 2007.

3.2.3 Asian Elephant Program

1. Pre-impoundment inventory and survey of habitats, distribution, movements.
2. Implementation of a pre-Reservoir impoundment elephant management program.
3. Post-Reservoir impoundment monitoring of movements and distribution.
4. Training of local authorities in conflict response and emergency response.
5. Establishment and implementation of an elephant conflict response team.
6. Development of a transitional strategy for reservoir impoundment.
7. Implementation of a reservoir impoundment elephant strategy.
8. Implementation of post impoundment elephant program.

Phase I of the Elephant Program was conducted by Wildlife Conservation Society (WCS) and includes items 1, 4 and 5 above. The draft Final Report for Phase I was submitted on 31 May 2006. A population of 142 (95% CI=97,207) individuals has been estimated based on the line transect and dung decay data. A population estimate of 146 individuals has been estimated based on the DNA analysis. Because of delays in the DNA analysis and obtaining credible yield data for crops, the Final Report will not be finalized until March 2007.

NTPC is in the final stages of contract negotiations with WCS to conduct Phase II. Phase II is expected to commence in April 2007. Objectives of Phase II include development and implementation of a pre- and post-inundation elephant management plan. Management activities will include the continuation of HEC monitoring and training villagers in passive and active crop protection measures.

Activities during February 2007 include:

- Ongoing contractual activities for Phase II.
- Between the end of Phase I and commencement of Phase II, HEC monitoring is continuing to assess the spatial and temporal distribution of HEC on the Nakai Plateau and surrounding areas. HEC incidents were recorded and tabulated below. Similarly to the previous year there was a sharp increase in the number of HEC in the period following the wet season when crops are ripening.

Month	HEC Incidents
Jul 06	3
Aug 06	10
Sep 06	18
Oct 06	6
Nov 06	51
Dec 06	9
Jan 07	5
Feb 07	[1]

[1] WCS still analyzing the data

3.2.4 Transitional Strategy for Reservoir Impoundment

This program includes the following activities:

1. Development of a transitional strategy for reservoir impoundment.
2. Training of local authorities in wildlife emergency response.
3. Establishment and implementation of an emergency response team.
4. Public awareness program.
5. Prevention and prohibition of wildlife trade.

The requirement to provide recommendations on the transitional strategy has been included in the Wildlife Management and Monitoring Program.

Activities during February 2007 include:

- The Wildlife Management and Monitoring Program Inception Report provided recommendations on wildlife rescue activities, and concluded that an extensive wildlife rescue program is not required. A wildlife rescue plan will be developed by the consultant, with planning activities scheduled to commence in April 2007. The wildlife rescue specialist developing the plan has been identified as the likely person to conduct implementation. A boat that has been reviewed by the wildlife rescue specialist for use during rescue and patrolling is under procurement.

- To instill environmental awareness in the Nakai Plateau population, including Resettlers, and reduce the exploitative approaches to wildlife, especially during the transitional phase when animals may be more vulnerable, an environmental education program will be implemented. A consulting company has been identified to conduct the program. It has successfully conducted an environmental awareness program for HC/CC with positive feedback from LE. The scope of the environmental education program has been expanded to include (i) general environmental awareness (waste management, hygiene, etc.); and (ii) target audience of Resettlers, school children, and resettlement construction workforce. Contractual activities are still ongoing.
- Consistent with the CA, the EMU has identified in its Environmental Management Manual the need for GOL to be responsible for control and enforcement of wildlife protection and prevention of wildlife trade. EMU activities will include (i) assessment of the capacity of GOL enforcement agencies; (ii) assistance to GOL with capacity building; (iii) spot checks to confirm effectiveness of GOL enforcement programs; and (iv) identification of additional measures to improve hunting control (e.g. village level regulations).

3.2.5 Adaptive Management Programs

An Adaptive Management approach will be implemented for the following Programs:

1. Wildlife Program (all components)
2. Riparian release downstream of the Nakai Dam
3. Water release in the Nam Kathang
4. Water release from the regulating pond to the downstream channel

On 12 February 2007, NTPC and WMPA meet to discuss the status of the baseline survey and management planning activities for the wildlife program. Parties agreed to take steps to formalize an Adaptive Management Committee for the wildlife programs in terms of committee members and frequency of meetings.

3.3 Water Quality Monitoring and Assessment Program

The WQMAP includes the following monitoring:

- 25 parameters on a monthly basis and 7 parameters on a weekly basis at 17¹ Surface Water sampling sites. These are located upstream and downstream of construction areas on the Nam Theun, Nam Kathang, Nam Gnom, Nam Phit, and Xe Bangfai. Given the potential for Project increases in sediment load, the spatial distribution of turbidity was monitored at 7 surface water sites and at 6 construction site discharges along the Nam Kathang.
- 17 parameters on a quarterly basis and TSS on a monthly basis for construction and construction camp discharges, 27 parameters on either a bi-annual or annual basis for leachate and landfill observation wells, and 23 parameters on an annual basis for HC/CC potable water.
- 12 physiochemical parameters at 15 Resettlers and Project Lands Groundwater sampling site on a quarterly basis. 1 bacteriological parameter at 33 Resettlers and Project Lands Groundwater sampling sites on a monthly basis. These are new groundwater installations located on the Nakai Plateau that have been provided by NTPC.
- 12 physiochemical parameters and 1 bacteriological parameter at 13 Community Groundwater sampling sites on a quarterly basis. These are groundwater installations already owned by the community in the Project area.
- 1 bacteriological parameter at 15 Public Health Groundwater sampling sites on a quarterly basis. These are restaurants associated with camp followers.

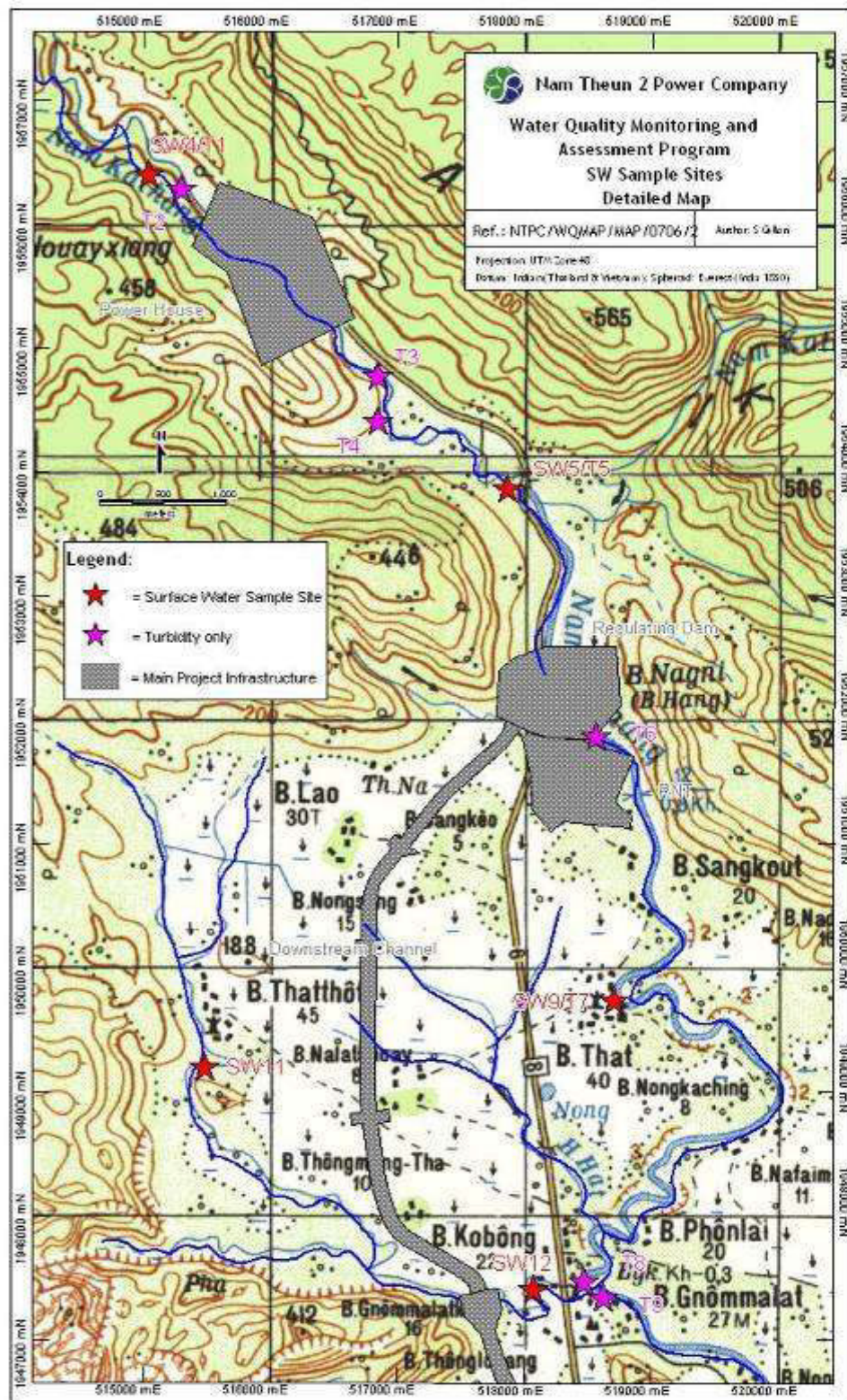
¹ SW13 is located on a seasonal water body and therefore monitoring only in wet season. SW10 is located on the Nam Pan which is no longer included in the WQMAP.

Field Observations - February 2007

The major field observations and measurements are as follows:

- The turbidity in the Nam Kathang continues to remain within the previous² guideline which reflects the reduction in rainfall and surface runoff from cleared construction areas during the dry season.
- Turbidity levels are within the guideline for the entire length of the upper Nam Kathang from upstream of the Power House to Ban Gnommalat.
- There was no discharge from the Access Adit Platform 415 sedimentation basins during sampling.
- Discharge from the Power House was 4.3 NTU.
- During the sampling event there were no discharges down the Nakai escarpment from the Headrace Channel or Intake Structure construction areas. Discharge from Saddle Dam 12B construction site was 41 NTU.
- During the sampling event the discharge from the Headrace Channel to the wetland area adjacent to Ban Phonphanpek was 69 NTU.

² NTPC monitors turbidity as a relative indicator whereas turbidity has been replaced with TSS in the Project Water Quality Guidelines for surface water quality monitoring for the HC/CC.



Turbidity Sampling sites

January 2007 Water Quality Results

The laboratory results for February 2007 will be presented in the March 2007 monthly progress report.

The laboratory analytical results for January are presented in the tables below. As a screening procedure, the results have been compared with Project guidelines. Values highlighted in yellow represent exceedences. Comparison of measured values with guidelines is intended as an initial screening step to assist in data interpretation. Exceedences are then considered on a site-specific basis to assess whether a measured value poses an environmental or human health risk. The significant project-related exceedences are discussed below and are highlighted in the tables following.

Surface Water

Nam Theun

- The water quality in the Nam Theun continues to be considered as good with no significant exceedences of the Project Guidelines.
- Potassium slightly exceeds its River-specific Guideline at SW2 and SW3 but these values are not deemed to present a risk to human or environmental health.

Nam Kathang

- No flow in the upstream control site (SW4).
- With the exception of elevated faecal coliform downstream of the Power House (SW5), the water quality in the Nam Kathang can be considered as good with only a few significant exceedences of the Project Guidelines.
- TSS, coupled with nitrogen-nutrients and iron, continue to remain within the Project Guidelines.
- Alkalinity exceeds its Project Guideline downstream of the Power House (SW5) and then again in the lower Nam Kathang (SW14). Groundwater flowing from the water conduits at the Power House may be contributing to the increase in alkalinity at SW5. Given that no construction sites or camps are located on the Nam Kathang between SW9 and SW14, the exceedence of alkalinity in the lower Nam Kathang (SW14) is not deemed to be significant or Project-related. Elevated alkalinity at SW14 is consistent with previous months and is likely a result of alkaline waters of the Nam Gnom entering the Nam Kathang at Ban Gnommalat. The measured level is not deemed to pose a risk to human health.
- Potassium exceeds the Project Guideline downstream of the Power House (SW5) with a downstream decreasing trend. It is likely that elevated potassium is being sourced from a higher proportion of groundwater in the dry season surface water flow, and mineral solution in groundwater with a mica containing catchment. The groundwater flowing out of the water conduits at the Power House is likely contributing to this. Potassium is usually readily removed from solution by plants and clays. Removal of plants and clay from the banks of the Nam Kathang during Nam Kathang Diversion excavations may be reduce the potassium sink. There is no health-based drinking water guideline for potassium and therefore the measured level is not deemed to pose a risk to human health.
- Faecal coliform exceeds the Project Guideline at the downstream of the Power House (SW5). With no flow in the upstream control site (SW4) it is difficult to determine whether the elevated value is Project-related. However, the source of this elevation is likely to be construction workers who are still observed using the surrounding areas as a toilet, although the contributions from livestock cannot be ruled out. Faecal coliforms are indicators of bacteria and pathogens in the water, which pose a risk to human health. Communities should continue with the practice of boiling surface water prior to consumption.

Nam Gnom

- The water quality in the Nam Gnom continues to be considered as good with few significant exceedences of the Project Guidelines.
- Alkalinity and calcium both exceed their respective Project Guidelines at the upstream control (SW11). Given that the exceedences are at the upstream control (SW11), high calcium and alkalinity levels are not deemed to be Project-related. High calcium and alkalinity are likely a result of an increase in the proportion of groundwater, from the limestone karsts which surround the upper Nam Gnom catchment, in surface water flow.

- Coupled with an elevated alkalinity, pH slightly exceeds the upper range of the Project Guideline at the upstream control (SW11) but is not thought to be either significant or Project related.
- Potassium slightly exceeds its River-Specific Guideline at SW12 but these values are not deemed to present a risk to human or environmental health.

Nam Phit

- No flow in the upstream control site (SW13).
- The water quality in the Nam Phit can be considered as good with only a few exceedences of the Project Guideline.
- Alkalinity and calcium both exceed the Project Guidelines at the downstream site (SW6). The source is likely to be increased groundwater inputs from the limestone karsts which surround the Nam Phit catchment rather than Project-related. Although the exposure of limestone outcrops during the excavation of the Downstream Channel may be contributing to the elevation. There is no health-based WHO drinking water guideline for alkalinity or calcium and therefore the measured level is not deemed to be significant.

Xe Bangfai

- The water quality of the Xe Bangfai can be considered as good with only a few significant exceedences of the Project guideline.
- pH and alkalinity exceed the Project Guidelines at several points along the Xe Bangfai. As discussed above, these increases are likely a result of an increase in the proportion of groundwater in surface water flows. None of the measured values are considered to pose a risk to environmental or human health.

Resettlers and Project Lands Groundwater

The Resettlers and Project Lands Groundwater monitoring is determining whether groundwater installations provided by NTPC are of an acceptable quality, and also establishing a pre-operations baseline for groundwater.

Analytical results for Resettlers & Project Lands Groundwater are presented in the tables and figure below. Although most of the parameters are within the Lao standard for rural drinking water, pH and faecal coliform values exceed the Lao standard in some instances. The implications of these exceedences are summarized below:

- pH exceeds the Lao standard at numerous groundwater sampling sites. The observed values are consistent with dissolved carbon dioxide resulting from precipitation and sub-surface run-off infiltrating through the soil and the presence of naturally occurring humic and fulvic acids. Although the WHO suggests that a pH less than 6.5 would markedly impair the potability of the water, there is no health-based WHO guideline for pH. However, extreme pH values (greater than 11 or less than 4) can cause irritation of the eyes, skin and mucous membranes, and less often gastrointestinal irritation. No adverse human health effects are likely to result of the moderately acidic values measured at the stations sampled.
- With the exception of RGW21 and RGW32, faecal coliforms comply with the Lao Standard for rural drinking water. During collection the outside of the hand pump was sterilized with ethanol prior to sampling to prevent contamination from the hand pump casing entering the sample. Post sterilization faecal coliform levels exceed the Lao standard at RGW21 and RGW32. For these sites it appears that the source of the contamination is from within the groundwater installation. There is a further problem for RGW32 with an observed increase in the level of faecal coliforms during storage in the header tank. The human health implications are discussed above.

Community Groundwater

The Community Groundwater monitoring establishes a pre-operations baseline for groundwater already established in the community (i.e., not provided by the Project).

Analytical results for Community Groundwater are presented below and, for comparison, the Lao standard for rural drinking water (Resolution No. 953/MOH (14th July 2003)) which is based on WHO guidelines. Although the majority of the parameters are within the Lao standard for rural

drinking water, pH, turbidity, iron and faecal coliform levels exceed the Lao standard in some instances. The implications of these exceedences are summarized below:

- Consistent with previous months, pH is more acidic than the Lao standard for the majority of groundwater sampling sites. The relatively acidic nature of water reflects the fact that shallow wells are typically recharged from rainwater percolating from the surface and sub-surface run-off, both of which would leach dissolved organic carbon and nutrients from soils. Although the pH of most natural waters is between 6 and 8.5, the observed values are consistent with dissolved carbon dioxide resulting from precipitation and sub-surface run-off infiltrating through the soil and the presence of naturally occurring humic and fulvic acids. In addition, the high bacterial content (see below) and therefore bacterial oxidation will increase the carbon dioxide content and lower the pH. The human health implications are discussed above.
- Turbidity exceeds the Lao standard at GW6, GW9, GW10 and GW13. Elevated turbidity indicates that the structure of the well may have been compromised and surface runoff containing suspended solids, and possibly other contaminants, have directly entered the well. Although not directly toxic, the measured turbidity may have an adverse effect on drinking water quality, impacting the appearance, color, odor, and taste. Turbidity can also have a significant effect on microbiological quality of drinking water, with increased particulate matter and nutrients stimulating bacterial growth which reflects the higher level of faecal coliform recorded at some of these sites.
- Consistent with low pH and elevated turbidity, manganese and iron exceed the Lao standard at GW1 and GW9, respectively. For GW9, the combined increase in turbidity and iron indicates that surface water containing insoluble ferric oxide has entered the groundwater. However, it is also possible that the near anaerobic conditions resulting from bacterial oxidation have reduced insoluble ferric oxide in unlined wells walls to ferrous iron which is soluble under acidic conditions. Similarly, low dissolved oxygen conditions in GW1 may stimulated bacteria to reduced insoluble manganese dioxide into an oxidation state which is soluble in the acidic conditions.
- With the exception of GW2 and GW9, faecal coliform levels exceed the Lao standard for rural drinking water. This contamination is likely a result of inadequate well construction and management, with faecal contamination entering from the surface where animal faeces are usually present. The human health implications are discussed above.

Table: January 2007 Surface Water Quality in the Nam Theun, Nam Kathang, Nam Gnom, Nam Phit and Xe Bangfai.

Parameter	Unit	WQ Guidelines	River-Specific Guideline	Nam Theun			
				SW 1	SW 2	SW3	SW 18
Sampling Date				29/01/07	29/01/07	31/01/07	31/01/07
Sampling Time				10.10 h	8.40 h	12.50 h	12.12 h
Water Depth	(m)			0.5	1.50	5.2	2.0
Sampling Method				grab	grab	grab	grab
Air Temperature	(°C)			12.5	16.4	18.7	22.3
Cloud Coverage				5	0	0	0
Water Temperature	(°C)			15.5	16.6	19.1	19.4
pH		6.0-8.0		6.69	6.55	6.82	6.72
DO	(mg/L)	> 5.0		9.30	9.15	12.48	12.42
% DO Saturation	(%)			97.1	97.9	141.6	142.1
Conductivity	(µS/cm)	< 350 or <750 *		54	48	*	*
Turbidity	(NTU)	< 200		2.12	1.98	2.04	1.61
Total suspended solids	(mg/L)	< 40 or <80*		1.5	3.8	0.4	6.9
Alkalinity	(mg/L)	- ¹¹	36.26	27.3	26.5	28.6	26.1
Ammonia-nitrogen	(mg/L)	< 0.5		0.054	0.042	0.056	0.034
Nitrate-nitrogen(NO ₃ -N)	(mg/L)	< 3.4		0.064	0.040	0.032	0.016
Nitrite-nitrogen(NO ₂ -N)	(mg/L)	< 0.2		ND ²	ND ²	ND ²	ND ²
Potassium (K)	(mg/L)	- ¹¹	1.072	1.05	1.11	1.14	0.772
Sodium (Na)	(mg/L)	300		4.14	4.12	10.8	22.2
Manganese (Mn)	(mg/L)	< 0.5		0.011	0.014	0.021	0.018
Total iron (Fe)	(mg/L)	< 1.0		0.482	0.419	0.350	0.341
Lead (Pb)	(mg/L)	< 0.05		ND ³	ND ³	ND ³	ND ³
Calcium (Ca)	(mg/L)	50		3.65	3.35	3.35	3.20
Magnesium (Mg)	(mg/L)	< 15		1.04	0.992	0.992	0.942
Sulphate (SO ₄ ⁻²)	(mg/L)	< 500		3.03	2.29	2.48	3.49
Chloride (Cl ⁻)	(mg/L)	< 250		2.68	2.87	2.30	2.30
BOD	(mg/L)	< 15		1.7	0.5	0.7	0.5
COD	(mg/L)	< 40		21.2	17.9	19.6	24.4
Total phosphorus	(mg/L)	< 0.2		0.016	0.013	0.026	0.032
Faecal Coliform	(C/100mL)	150		63	129	52	61

* Not measured due to broken meter.

* 350 µS/cm for Nam Theun; 750 µS/cm for lowlands rivers

* 40 mg/L for all rivers in all seasons with the exception of 80 mg/L for the Xe Bangfai in wet season

Table: January 2007 Surface Water Quality in the Nam Theun, Nam Kathang, Nam Gnom, Nam Phit and Xe Bangfai.

Parameter	Unit	WQ Guidelines	River-Specific Guideline	Nam Kathang					River-Specific Guideline	Nam Gnom	
				SW 4	SW5	SW 9	SW 14	SW15		SW 11	SW 12
Sampling Date					27/01/07	27/01/07	26/01/07	27/01/07		27/01/07	27/01/07
Sampling Time					10.30 h	11.50 h	9.15 h	10.00 h		11.10 h	12.10 h
Water Depth	(m)				0.2	0.4	0.4	1.0		1.0	1.0
Sampling Method				N	grab	grab	grab	grab		grab	grab
Air Temperature	(°C)			O	18.7	19.6	21.2	16.7		19.5	22.3
Cloud Coverage					5	0		00		10	0
Water Temperature	(°C)			W	20.6	21.2	20.9	18.0		21.6	23.3
pH		6.0-8.0		A	7.50	7.54	7.51	7.08		8.17	7.93
DO	(mg/L)	> 5.0		T	10.19	9.61	7.79	8.86		11.85	12.06
% DO Saturation	(%)			E	112.8	107.7	87.6	93.4		133.8	137.5
Conductivity	(µS/cm)	< 350 or <750 *		R	526	382	336	231		360	301
Turbidity	(NTU)	< 200			1.75	1.55	2.46	2.09		3.36	5.55
Total suspended solids	(mg/L)	< 40 or <80*		S	1.9	0.7	0.5	5.0		6.3	2.3
Alkalinity	(mg/L)	- ¹¹	127	A	134	127	186	101	196.4	200	171
Ammonia-nitrogen	(mg/L)	< 0.5		M	0.068	0.091	0.152	0.032		0.062	0.096
Nitrate-nitrogen(NO ₃ -N)	(mg/L)	< 3.4		P	ND ¹	ND ¹	0.016	0.032		0.240	0.112
Nitrite-nitrogen(NO ₂ -N)	(mg/L)	< 0.2		L	ND ²	ND ²	ND ²	ND ²		ND ¹	ND ¹
Potassium (K)	(mg/L)	- ¹¹	1.556	E	2.94	2.29	0.614	1.04	0.445	0.347	0.491
Sodium (Na)	(mg/L)	300			44.7	28.0	0.882	10.3		0.862	0.910
Manganese (Mn)	(mg/L)	< 0.5			0.179	0.047	0.121	0.040		0.036	0.065
Total iron (Fe)	(mg/L)	< 1.0			0.060	0.278	0.210	0.124		0.134	0.168
Lead (Pb)	(mg/L)	< 0.05			ND ³	ND ³	ND ³	ND ³		ND ²	ND ²
Calcium (Ca)	(mg/L)	50			36.4	29.1	47.8	23.2		54.6	44.8
Magnesium (Mg)	(mg/L)	< 15			7.40	5.70	2.65	2.10		2.40	2.45
Sulphate (SO ₄ ⁻²)	(mg/L)	< 500			114	45.2	5.96	2.94		2.57	2.75
Chloride (Cl ⁻)	(mg/L)	< 250			17.5	23.1	4.02	12.5		0.38	0.38
BOD	(mg/L)	< 15			1.0	1.0	1.1	0.7		0.9	0.7
COD	(mg/L)	< 40			8.21	8.21	18.0	9.85		9.85	11.5
Total phosphorus	(mg/L)	< 0.2			0.10	0.022	ND ⁴	0.019		ND ³	ND ³
Faecal Coliform	(C/100mL)	150			169	114	85	92		126	118

* 350 µS/cm for Nam Theun; 750 µS/cm for lowlands rivers

* 40 mg/L for all rivers in all seasons with the exception of 80 mg/L for the Xe Bangfai in wet season

Table: January 2007 Surface Water Quality in the Nam Theun, Nam Kathang, Nam Gnom, Nam Phit and Xe Bangfai.

Parameter	Unit	WQ Guidelines	River- Specific Guideline	Nam Phit
				SW 6
Sampling Date				26/01/07
Sampling Time				11.50 h
Water Depth	(m)			1.0
Sampling Method				grab
Air Temperature	(°C)			22.7
Cloud coverage				5
Water Temperature	(°C)			24.0
pH		6.0-8.0		7.43
DO	(mg/L)	> 5.0		9.69
% DO Saturation	(%)			114.1
Conductivity	(µS/cm)	< 350 or <750 *		431
Turbidity	(NTU)	< 200		4.11
Total suspended solids	(mg/L)	< 40 or <80*		2.1
Alkalinity	(mg/L)	- ¹¹	198.2	257
Ammonia-nitrogen (NH ₃ -N)	(mg/L)	< 0.5		0.094
Nitrate-nitrogen(NO ₃ -N)	(mg/L)	< 3.4		0.280
Nitrite-nitrogen(NO ₂ -N)	(mg/L)	< 0.2		ND ²
Potassium (K)	(mg/L)	- ¹¹	0.7288	0.147
Sodium (Na)	(mg/L)	300		0.438
Manganese (Mn)	(mg/L)	< 0.5		0.020
Total iron (Fe)	(mg/L)	< 1.0		0.131
Lead (Pb)	(mg/L)	< 0.05		ND ³
Calcium (Ca)	(mg/L)	50		60.3
Magnesium (Mg)	(mg/L)	< 15		5.60
Sulphate (SO ₄ ⁻²)	(mg/L)	< 500		3.76
Chloride (Cl ⁻)	(mg/L)	< 250		0.19
BOD	(mg/L)	< 15		0.6
COD	(mg/L)	< 40		16.4
Total phosphorus	(mg/L)	< 0.2		0.019
Faecal Coliform	(C/100mL)	150		22

River-Specific Guideline	Xe Bangfai			
	SW7	SW8	SW16	SW 17
	26/01/07	26/01/07	28/01/07	28/01/07
	10.25 h	12.50 h	10.50 h	13.00 h
	1.0	2.10	0.8	2.8
	grab	grab	grab	grab
	19.7	22.4	20.6	21.2
	10	0	0	0
	21.7	23.0	23.4	22.6
	7.91	7.93	7.76	8.22
	9.02	9.07	8.76	8.65
	101.9	115.5	100.2	99.4
	345	341	348	330
	3.91	2.04	3.88	9.04
	0.7	0.4	2.5	23.0
198.2	203	199	204	192
	0.052	0.045	0.067	0.069
	0.016	0.016	0.016	0.016
	ND ¹	ND ¹	ND ¹	ND ¹
0.7288	0.422	0.422	0.456	0.465
	1.61	1.54	1.85	2.01
	0.024	0.019	0.022	0.030
	0.094	0.107	0.070	0.332
	ND ²	ND ²	ND ²	ND ²
	50.0	48.9	49.9	47.0
	4.25	4.20	4.70	5.60
	3.49	3.76	3.21	4.22
	0.96	0.96	1.15	0.96
	1.1	0.8	0.7	0.6
	14.8	13.1	11.5	9.85
	ND ³	ND ³	0.010	ND ³
	19	20	15	24

* 350 µS/cm for Nam Theun; 750 µS/cm for lowlands rivers

* 40 mg/L for all rivers in all seasons with the exception of 80 mg/L for the Xe Bangfai in wet season

Table: Resettlers & Project Lands Analytical Results

Parameter	Unit	Lao Standard ¹	RGW1	RGW2	RGW3	RGW4	RGW5	RGW6	RGW7	RGW8
Sampling Date			27/01/07	27/01/07	31/01/07	29/01/07	30/01/07	01/02/07	01/02/07	01/02/07
Sampling Time			8.45 h	09.00 h	8.25 h	10.55 h	09.00 h	08.21 h	08.44 h	09.13 h
Water Depth	(m)		-	-	-	-	-	-	-	-
Sampling Method			grab	grab	grab	grab	grab	grab	grab	grab
Water Temperature	(°C)	-	22.2	22.7	23.6	24.4	23.4	22.4	23.1	22.9
Odor		Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
pH		6.5-8.5	6.19	6.69	6.88	6.35	5.69	5.87	5.71	6.68
DO	(mg/L)	-	2.71	2.67	4.58	3.02	3.60	2.14	2.47	2.10
% DO Saturation	(%)	-	33.8	33.5	57.7	38.9	44.6	26.5	34.3	25.5
Conductivity	(µS/cm)	1000	146	414	*	181	65.8	*	*	*
Turbidity	(NTU)	<10	0	1.62	0.04	0.28	0.33	0.96	0.26	0.13
Total Hardness	(mg/L)	<500	75.2	191	199	85.6	29.8	76.6	35.8	217
Fluoride	(mg/L)	<1.5	0.06	0.14	0.03	0.15	0.07	ND ¹	ND ¹	ND ¹
Nitrate-nitrogen(NO ₃ -N)	(mg/L)	40	0.880	0.016	ND ²	0.504	1.14	0.008	0.008	ND ²
Nitrite-nitrogen(NO ₂ -N)	(mg/L)		ND ³	0.008	ND ³	ND ³	ND ³	ND ³	ND ³	ND ³
Arsenic (As)	(mg/L)	<0.05	ND ⁴	ND ⁴	0.0008	0.0034	ND ⁴	0.0026	0.0013	0.0006
Iron (Fe)	(mg/L)	<1	0.100	0.075	0.035	0.050	0.011	0.174	0.052	0.040
Manganese (Mn)	(mg/L)	<0.5	0.062	0.021	ND ⁶	0.005	0.037	ND ⁶	0.010	ND ⁵
Faecal Coliform	FC/100 mL	0	0	0	0	0	0	0	0	0

Parameter	Unit	Lao Standard	RGW9	RGW10	RGW11	RGW12	RGW13	RGW14	RGW15	RGW16
Sampling Date			27/01/07	01/02/07	01/02/07	01/02/07	01/0/07	01/02/07	01/02/07	01/02/07
Sampling Time			09.19 h	09.25 h	10.30 h	09.56 h	12.07 h	12.30 h	13.07 h	10.20 h
Water Depth	(m)		-	-	-	-	-	-	-	-
Sampling Method			grab	grab	grab	grab	grab	grab	grab	grab
Water Temperature	(°C)	-	22.9	22.9	23.4	23.3	22.5	23.1	22.9	23.4
Odor		Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
pH		6.5-8.5	6.94	6.91	6.86	5.80	7.09	4.75	6.66	6.20
DO	(mg/L)	-	2.36	1.91	2.31	2.10	10.56	2.09	2.89	2.15
% DO Saturation	(%)	-	28.5	23.8	32.4	26.9	127.8	26.4	36.3	27.7
Conductivity	(µS/cm)	1000	449	*	*	*	*	*	*	*
Turbidity	(NTU)	<10	9.21	0.07	0	0.33	0.19	0.17	1.79	0.61
Total Hardness	(mg/L)	<500	170	172	236	69.6	258	4.0	186	99.5
Fluoride	(mg/L)	<1.5	0.18	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
Nitrate-nitrogen(NO ₃ -N)	(mg/L)	40	0.024	0.024	0.024	0.008	0.016	0.040	ND ²	ND ²
Nitrite-nitrogen(NO ₂ -N)	(mg/L)	0.2	ND ³	ND ³	ND ³	ND ³	ND ³	ND ³	ND ³	ND ³
Arsenic (As)	(mg/L)	<0.05	ND ⁴	0.0008	0.0008	ND ⁴	0.0076	ND ⁴	0.0014	ND ⁴
Iron (Fe)	(mg/L)	<1	0.194	0.028	0.032	0.152	0.152	0.093	0.108	0.092
Manganese (Mn)	(mg/L)	<0.5	0.011	0.020	ND ⁵	ND ⁵	ND ⁵	0.016	0.007	ND ⁵
Faecal Coliform	FC/100 mL	0	0	0	0	0	0	0	0	0

¹ taken from Resolution No.895/MOH (14th July 2003) * Not measured due to broken meter.^{1,2} Non-detectable (Detection limit = 0.001 mg/L)³ Non-detectable (Detection limit = 0.0003 mg/L)⁴ Non-detectable (Detection limit = 0.016 mg/L)⁵ Non-detectable (Detection limit = 0.014 mg/L)

Table: Resettlers & Project Lands Analytical Results

Parameter	Unit	Lao Standard	RGW17	RGW19	RGW21	RGW22	RGW24	RGW25	RGW26	RGW27	RGW30
Sampling Date			01/02/07	01/02/07	01/02/07	01/02/07	01/02/07	01/02/07	01/02/07	30/01/07	01/02/07
Sampling Time			10.07 h	09.41 h	08.54 h	08.03 h	12.40 h	12.55 h	13.15 h	09.45 h	09.20 h
Water Depth	(m)		-	-	-	-	-	-	-	-	-
Sampling Method			grab	grab	grab	grab	grab	grab	grab	grab	grab
Water Temperature	(°C)	-	23.7	23.3	23.1	22.5	22.7	22.9	22.8	22.6	23.2
Odor		Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
pH		6.5-8.5	6.78	6.37	5.31	6.34	6.74	6.06	6.36	5.89	6.57
DO	(mg/L)	-	1.61	3.59	1.80	1.59	2.04	2.06	2.25	2.45	2.38
% DO Saturation	(%)	-	23.5	44.6	21.4	20.4	26.7	26.8	29.6	29.9	30.1
Conductivity	(µS/cm)	1000	*	*	*	*	*	*	*	115	417
Turbidity	(NTU)	<10	0.41	1.46	0.61	0.45	0.08	0.94	0.65	0.12	0
Total Hardness	(mg/L)	<500	267	145	53.7	105	226	61.7	155	33.8	213
Fluoride	(mg/L)	<1.5	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹	0.14	0.09
Nitrate-nitrogen(NO ₃ -N)	(mg/L)	40	ND ²	0.008	ND ²	ND ²	0.016	0.032	0.008	1.28	0.616
Nitrite-nitrogen(NO ₂ -N)	(mg/L)	0.2	ND ³	ND ³	ND ³	ND ³	ND ³	ND ³	ND ³	ND ³	ND ³
Arsenic (As)	(mg/L)	<0.05	ND ⁴	ND ⁴	ND ⁴	ND ⁴	0.0041	ND ⁴	ND ⁴	ND ⁴	ND ⁴
Iron (Fe)	(mg/L)	<1	0.056	0.104	0.218	0.120	0.118	0.068	0.132	0.034	ND ⁵
Manganese (Mn)	(mg/L)	<0.5	ND ⁵	0.068	0.024	0.016	ND ⁵	ND ⁵	0.005	ND ⁶	ND ⁶
Faecal Coliform	FC/100 mL	0	0	0	17	0	0	0	0	0	0

¹ taken from Resolution No.895/MOH (14th July 2003) * Not measured due to broken meter.^{1,2} Non-detectable (Detection limit = 0.001 mg/L)³ Non-detectable (Detection limit = 0.0003 mg/L)⁴ Non-detectable (Detection limit = 0.016 mg/L)⁵ Non-detectable (Detection limit = 0.014 mg/L)

Table: Resettlers' & Project Lands Groundwater Faecal Coliform Results

Site	Faecal Coliform (FC/100 mL)	Project Guideline
Ban Oudomsouk		
RGW1	0	0
RGW28	0	0
Ban Oudomsouk Mai		
RGW2	0	0
RGW9	0	0
RGW27	0	0
School		
RGW3	0	0
Ban Phonphanpek		
RGW4	0	0
RGW29	0	0
Ban Nongboua		
RGW5	0	0
RGW30	0	0
Ban Bouama		
RGW6	0	0
RGW22	0	0
RGW23	0	0
Ban Phonsavang		
RGW7	0	0
RGW20	0	0
RGW21	17	0
Ban Sop-on		
RGW8	0	0
RGW10	0	0
RGW18	0	0
RGW19	0	0
Ban Done		
RGW11	0	0
RGW12	0	0
RGW16	0	0
RGW17	0	0
Ban Sop Phene		
RGW13	0	0
RGW32. from Pump	2	0
RGW32. from Tank	14	0
Ban Sop Hia		
RGW14	0	0
RGW24	0	0
RGW25	0	0
Ban Sop-ma		
RGW15	0	0
RGW26	0	0
Ban Khone Kaen		
RGW31. from Pump	0	0
Bottle blank	0	0
Field blank	0	0

Table 6.3 Community Groundwater Analytical Results

Parameter	Unit	Lao Standard	GW1	GW2	GW3	GW4	GW5	GW6	GW7	GW8
Sampling Date			31/01/07	29/01/07	30/01/07	30/01/07	30/01/07	30/01/07	30/01/07	30/01/07
Sampling Time			08.49 h	11.14 h	10.18 h	10.45 h	12.00 h	13.00 h	11.15 h	11.40 h
Water Depth	(m)		-	-	-	-	-	-	-	-
Sampling Method			grab	grab	grab	grab	grab	grab	grab	grab
Water Temperature	(°C)	-	19.9	21.7	23.0	23.3	26.2	26.3	25.9	20.9
Odor		Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	earthy	Acceptable	Acceptable
pH		6.5-8.5	5.01	5.47	4.54	4.63	4.88	4.51	5.84	6.13
DO	(mg/L)	-	5.41	4.86	5.10	5.94	2.28	1.56	3.21	5.54
% DO Saturation	(%)	-	66.2	58.6	59.5	69.9	29.9	19.3	4.0	63.3
Conductivity	(µS/cm)	1000	*	*	32	38	*	*	195	30.1
Turbidity	(NTU)	<10	6.09	6.74	1.99	2.52	0.10	14.1	1.89	7.08
Total Hardness	(mg/L)	<500	10.0	10.0	2.0	6.0	20.9	4.0	86.6	27.9
Fluoride	(mg/L)	<1.5	ND ¹	0.03	ND ¹	ND ¹	0.03	0.08	0.14	0.11
Nitrate-nitrogen(NO ₃ -N)	(mg/L)	40	1.28	0.384	1.58	1.31	2.08	0.065	4.08	0.131
Nitrite-nitrogen(NO ₂ -N)	(mg/L)	0.2	ND ²	ND ²	ND ²	ND ²	0.001	ND ²	ND ²	ND ²
Arsenic (As)	(mg/L)	<0.05	0.0014	0.0009	ND ³	ND ³	ND ³	ND ³	ND ³	ND ³
Iron (Fe)	(mg/L)	<1	0.466	0.271	0.068	ND ⁴	ND ⁴	0.530	0.080	0.432
Manganese (Mn)	(mg/L)	<0.5	0.698	0.020	0.028	0.052	0.036	0.022	0.049	0.134
Faecal Coliform	FC/100 mL	0	23	0	43	32	14	59	83	66

Parameter	Unit	Lao Standard	GW9	GW10	GW12	GW13
Sampling Date			28/01/07	30/01/07	28/01/07	30/01/07
Sampling Time			08.20 h	12.45 h	13.35 h	13.20 h
Water Depth	(m)		-	-	-	-
Sampling Method			grab	grab	grab	grab
Water Temperature	(°C)	-	23.8	25.1	27.3	23.5
Odor		Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
pH		6.5-8.5	5.61	6.64	6.55	6.56
DO	(mg/L)	-	2.54	4.79	3.29	4.80
% DO Saturation	(%)	-	31.3	59.1	42.8	57.4
Conductivity	(µS/cm)	1000	57	*	425	*
Turbidity	(NTU)	<10	267	14.4	3.45	11.3
Total Hardness	(mg/L)	<500	41.6	249	170	134
Fluoride	(mg/L)	<1.5	0.09	0.26	0.09	0.14
Nitrate-nitrogen(NO ₃ -N)	(mg/L)	40	2.60	0.205	4.92	1.60
Nitrite-nitrogen(NO ₂ -N)	(mg/L)		ND ¹	ND ²	ND ¹	0.002
Arsenic (As)	(mg/L)	<0.05	0.0008	ND ³	ND ²	ND ²
Iron (Fe)	(mg/L)	<1	6.01	0.427	0.086	0.178
Manganese (Mn)	(mg/L)	<0.5	0.228	0.116	0.032	ND ³
Faecal Coliform	FC/100 mL	0	0	24	2	97

¹ Non-detectable (Detection limit = 0.001 mg/L)² Non-detectable (Detection limit = 0.0003 mg/L)³ Non-detectable (Detection limit = 0.016 mg/L)

No water in GW11

¹ taken from Resolution No.895/MOH (14th July 2003)

* Not measured due to broken meter

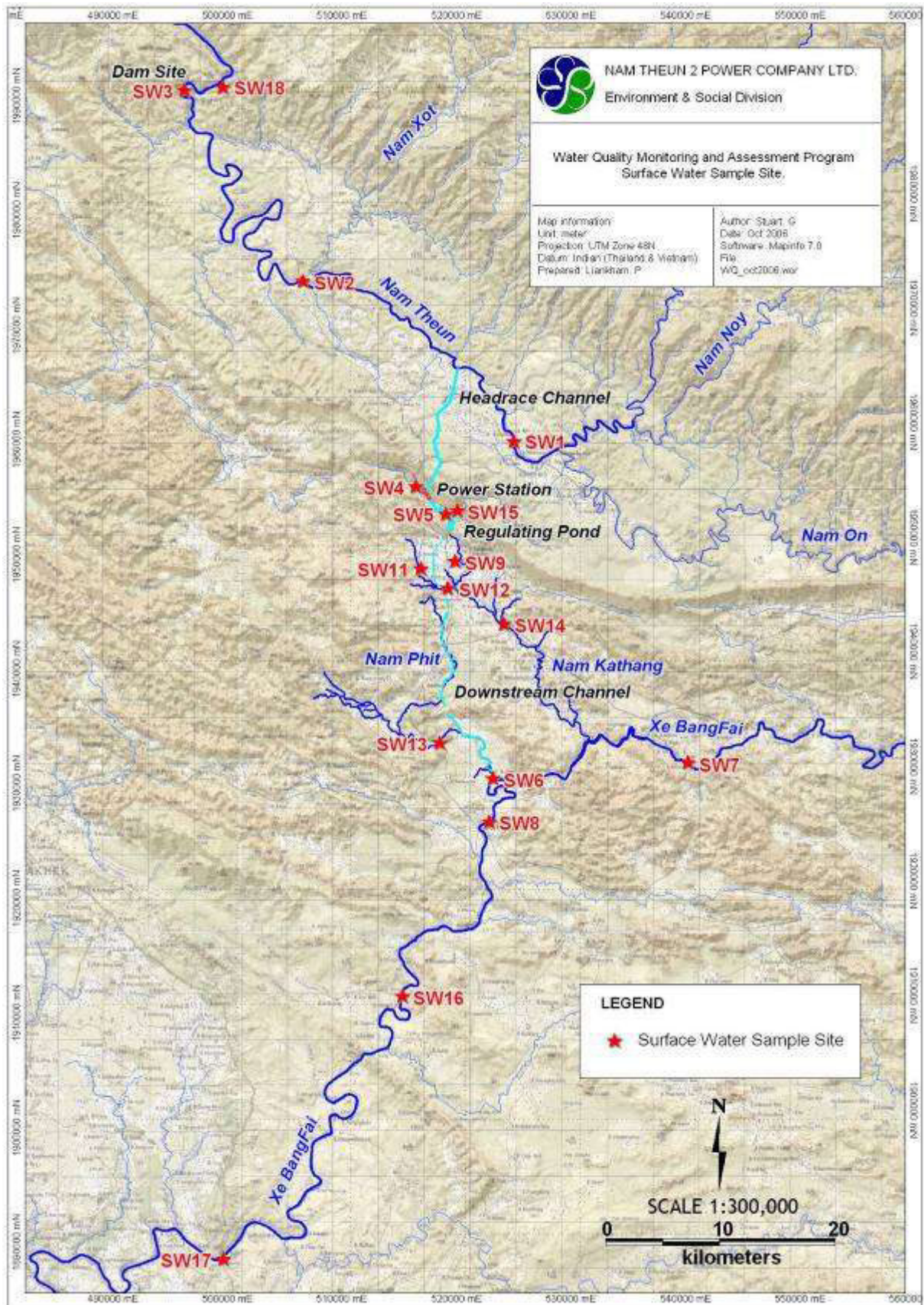
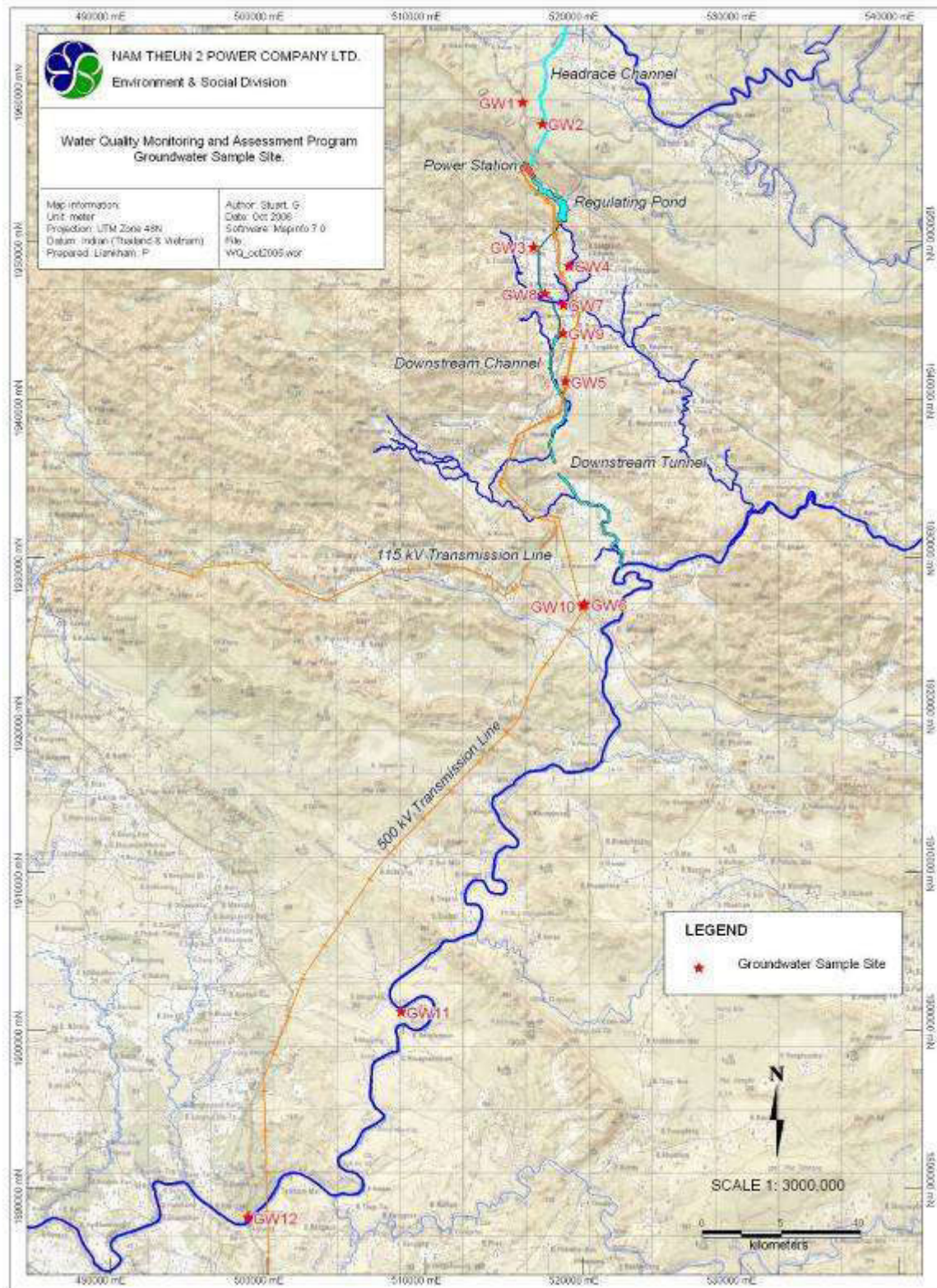


Figure: Community Groundwater sampling sites



3.4 Environment Management Unit (EMU) Technical Assistance (TA)

Activities undertaken by the EMU and EMU TA during February 2007 are presented in the Work Plan below³ and also include:

- EMU personnel continue to accompany EMO Inspectors on joint site inspections, alternating personnel from EMU Khammouane and EMU Bolikhamxay. Details of the construction areas inspected by the EMU are provided in Part B, Section 1.2 (*Environment Protection*) of this Report.

CA Ref No.	EMU Activity (Work Plan)
NA	Translation of the EMU Environmental Monitoring Manual
03	Commence consultation with the SLMU regarding salvage logging operations and measures to maximize biomass removal.
03	Meet with RMU and VFA to discuss roles regarding lesser value biomass removal
07	Consult with the NTPC regarding establishment of adaptive management committee for the Nam Kathang
11	Request information from NTPC regarding the design specifications of the Confluence Area to confirm that appropriate stabilization or protection measures, such as rip-rap, are provided to minimize scouring.
11	Commence infield spot checks of the Confluence Area to confirm consistency of construction activities with design specifications.
13	Conduct infield spot checks of the Downstream Channel construction to confirm provisions for localized low points
18	Consult with WMPA, RMU and district authorities to assess the capacity of the GOL enforcement agencies (technical, human, financial resources) to implement hunting controls in the Resettlement Areas. Assist the GOL enforcement agencies with the development of capacity as required.
19	Consult with the NTPC regarding establishment of adaptive management committee for wildlife program
21	Conduct a GPS survey of the extent of spoil disposal areas in Gnommalat
23	Conduct investigation of vegetation clearance with respect to design standards along new road zones D and F
24	Request the NTPC to provide the results from the PCR field surveys, as well as the recommended mitigation and management measures
25	Request the NTPC to provide a copy of the Health and Safety Program.
26	Request the NTPC to provide a copy of the EIAs for quarry areas.
26	Request the NTPC to report on the progress of quarry activities.
27	Request the NTPC to provide the results of the environmental impact assessment for the final alignment of the Transmission Line
34	Request the NTPC to provide a plan to mitigate noise exceedances as reported in the NTPC Progress Report
36	Review the Landscaping and Revegetation Management Plan (RevA)
36	Follow-up request for the NTPC to report on progress of revegetation activities
37	Request the NTPC to report on the implementation of enforcement mechanisms for controlling vehicle speeding
37	Coordinate with GOL to strengthen capacity to enforce speed limits
39	Request the NTPC to report on the implementation of environmental training of construction workforce
41	Request the NTPC to provide copies of the Village Development Plans for resettled villages
41	Clarify roles and responsibilities of the EMU with the RMU with respect to Part A, Part C and Part E
44	Request that NTPC provide a progress report for environmental grievances
44	Assess the feasibility for the EMU to provide capacity building to district staff with respect to grievance management
NA	Review the Salvage Logging Code of Conduct and Technical Guidelines, and the EMP for the Salvage Logging access road to confirm the inclusion of adequate measures to avoid and minimize impacts of pollution
NA	Prepare monitoring report including observations and non-compliances for submission to the Salvage Logging Committee

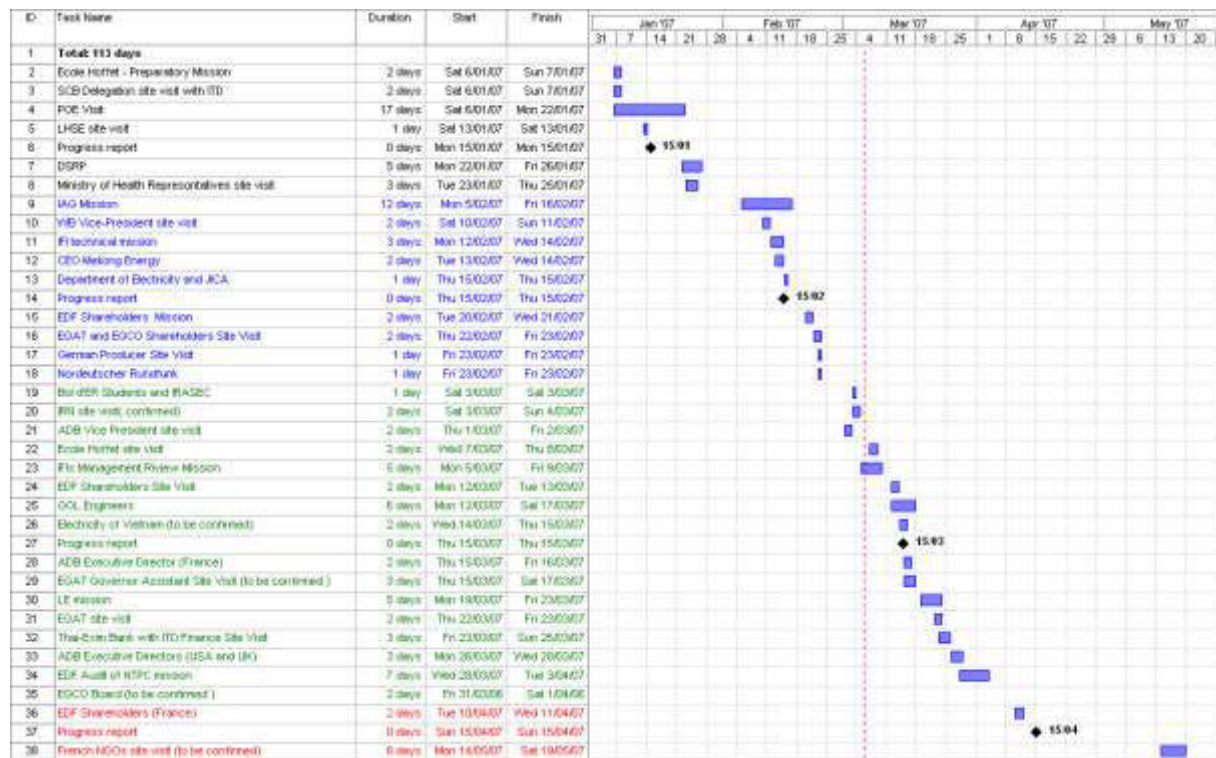
3.5 EMO's activities linked to construction

The environmental activities linked to construction works are part of the Construction Progress Report, Part B of this Monthly Progress Report.

Internal, External Monitoring

4 Internal and External Monitoring

Schedule of visits: Visits of the month in blue - Next scheduled visit in green.



GOL Related Activities

5 GOL related activities

5.1 Watershed Management Protection Authority (WMPA)

The WMPA received hi-level delegations from the World Bank and spent some days in preparation for his delegation of 15 people by helicopter to visit a remote village cluster, Ban Navang, within the Watershed Area. The villagers prepared a welcome ceremony for the Vice President and his delegations visit. Also during February, the WMPA separately prepared for another mission by the World Bank which involved taking the technical staff of the World Bank in to the watershed area for a few days. During this technical visit, the technical expert was able to give further advice to the WMPA. In addition to hosting the site visits, the WMPA commenced work on ground surveys in order to develop the future watershed access strategy.

5.2 Optimization of Salvage Logging on the Nakai Plateau

Progress Report on Salvage Logging and Reservoir Sanitation Operations has been released by Ministerial Steering Committee Salvage Logging and Reservoir Sanitation Management Nam Theun II Project.

5.3 Social issues (RMU & DWG)

See social section.

Annexes

