

Environment and Social Monitoring Report

Quarterly Progress Report
January-March 2011
April-June 2011

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 2011 to Jun 2011

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

1. E&S Quarterly Progress Report Jan- Mar 2011
2. E&S Quarterly Progress Report Apr-Jun 2011

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



Nam Theun 2 Power Company Ltd.

Nam Theun 2 Hydroelectric Project

Quarterly Progress Report

Environment and Social Division

January – March 2011

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Executive Summary

Management

The NTPC management prepared a discussion paper presenting different scenarios of handing over the DS program to GOL. The discussion paper was presented to the NTPC's Board of Directors on the 15 February 2011. The most appealing transition scenario will be selected during NTPC's next Board meeting scheduled by end of June 2011.

The IFIs conducted a Mid-Term Review of the Downstream Program between the 14 and 25 February 2011. The draft of the Aide Memoire was presented to NTPC and GOL at provincial and central level. This Aide Memoire is under consultation.

A meeting was organized by the GOL to set up a central level committee with the purpose to support and facilitate the DSP transition phase (institutionally and financially) for the handing over of NTPC's DS program activities to GOL's line agencies.

The DS program and RMU assisted 6 districts in the development of activity and budget plan to take over and continue selected DSP activities starting at the beginning of the next GOL financial year.

NTPC's Board of Directors approved the EDF/NTPC service contract to extend the operation of the Aquatic and Environment Laboratory from another 3 years, starting from May 2011. Lenders' approval is required for such agreement and NTPC will proceed with a formal request shortly.

The Japanese Vice-Minister of Finance, Country Directors of WB and ADB, the Thai Energy Vice-Minister, the EGAT president and the CEO visited the dam site, powerhouse, Nakai resettlement villages and the downstream area on January 19-20th 2011.

A NTPC delegation consisting of the Chief Executive Officer, the GOL Relations Manager, the IMS Coordinator and the E&S Director met with the Governor of Nakai district, the Head of the Resettlement Management Unit and members of the District Working Group to discuss progress and vision of the Nakai resettlement and development program.

The E&S division presented at 2 occasions the NT2 case to public meetings having a special focus on foreign direct investments (mainly hydropower and mining) in the Lao PDR.

Monitoring Missions (external)

The Lenders Technical Advisors (S&E teams) visited the different programmes during the 3rd week of January when "the Power Station 200h Outage" happened. The LTA acknowledged good progress on all fronts and highlighted the need to speed up the launching of the microfinance system, accelerate pending compensation and grievance issues in Nakai, pay attention to fodder availability and ruminant stocking rates on the plateau and to strengthen the extension network.

The NTPC Board Independent Director carried out his last mission from 17 to 21 January) and highlighted the problematic contractor's camp, low survival rates of some of the re-vegetated construction sites and solid waste management on the plateau.

The International Advisory Group (IAG), who reports to the WB President, visited the project sites from 28 March to 2 April. No further missions are planned for the IAG.

POE conducted mission 18a from 27 January to 20 February with a special focus on the WMPA and related law enforcement issues.

The IMA conducted a monitoring mission about PL and Nakai from 7 to 14 February.

NTPC Board director visited the project site from the 7 to 13 February.

The EMO hydrobiology team and french experts conducted a special mission in the DS channel to investigate the skin irritation (cecaria and cyano bacteria) during the Power Station Outage.

Socio Economic monitoring (internal)

The Living Standard Measurement Survey tool was overhauled by the SE monitoring consultant and field tested for LSMS round 6 which is scheduled for May/June 2011. A consulting firm won the public tender and will be trained by the consultant team and implement the survey.

The Quarterly Socio Economic Monitoring methodology for the Nakai resettlement area was redesigned and applied over the first 3 months of 2011 based on a 577 HH sample and includes 14 villages.

The first results show:

- median per capita value of household assets was 3.4 million kip (approximately US\$430 per capita)
- mean per capita expenditure (proxy) was 14,500 kip/week with median expenditure of 10,200 kip/week.
- 88% of households have no debt or stated that they would have no difficulty in repaying household debt. 10% of households thought they would have a little of difficulty in repaying the debt and 2% of households thought they have a lot of difficult in repaying debt or would default (1 household).
- the source of loan or debt is mostly from relative and friends (73% of responses)
- household debt/asset ratio: the mean debt/asset ratio is 7%.
- significantly increased food security and availability and rice sufficiency on the plateau compared to pre resettlement

Compensation process

The Nakai paddy fields and Fruit tree compensation process is close to be completed. From 197 special cases, 191 cases are ready for payment and 6 need further investigations. Pending grievances are under process.

An agreement was reached regarding the number of dead buffaloes and the compensation fund has been transferred to the RMU. Negotiations on the distribution mechanism are ongoing.

The Riverbank garden compensation programme is closed and the grievance process is ongoing.

The Khamkeut livelihood compensation programme is complete and the grievance process is ongoing.

The RAP 1 and 4 of Project Lands is closed and 96% of all grievances are settled.

The process of formally converting pending entitlements for agricultural and forestry equipment's and tools is in its final stage.

Infrastructure programs coming to an end

The last batch of 2m * 1.5m granaries is under extension.

16 gully dams have been designed and contracts are being signed. Construction works will start once the reservoir level has sufficiently receded (most likely by early May).

The DS water supply program is complete with some rehabilitation and modification works ongoing.

Monitoring of water quality, hydro biology

In the first quarter, the water quality, especially the dissolved oxygen in the reservoir and in the downstream was above the guidelines. The begin of the thermal stratification is observed in the reservoir with increasing temperatures and declining wind velocity. The reservoir level by end of March was at 534.5m above sea level (asl).

Nakai Resettlement Office

- 16 gully dams have been designed and construction companies were selected through a public bidding process. The construction will commence once the water level in the reservoir has sufficiently receded.
- The irrigation system is complete and 54 model farmers are participating in dry season vegetable production in 13 villages. 19 households have grown feed corn and cabbage on 0,66 ha plots using the irrigation systems.
- The extension of 509 granaries has been completed. The extension of 223 remaining units is ongoing.
- The estimated fish catch during this quarter is 136,6 tons corresponding to an estimate value of 1,167,400,000 kips (~\$145'000./.) Compared to the last quarter, the estimated fish catch decreased by 17,2% whereby the cash value decreased by 7,4% only due to higher prices obtained during the period.
- 10 households have built their own cattle yard during the reporting period to keep animals at night time which brings the total number of cattle yards to 135 units.
- 51 families are participating in breeding pigs and/or poultry (27 for pigs and 24 for poultry) and act as input suppliers for 91 families who rear pigs and poultry for meat production and marketing.
- 160 buffaloes have been removed from the WMPA which is representing 25% of total estimated buffalo population in the WMPA area (637). After removal, 50 buffalos were sold and 110 are kept for rearing, out of which 94 buffalos vaccinated. NRO stopped supporting the transport of buffaloes with effect from 31st of March, 3 months after the GOL deadline has expired.
- A mission of subject matter experts assessed and reviewed the role, function and operations of the Agriculture and Demonstration Centers within the Nakai Resettlement Program (22-28/02/2011). The mission recommended to maintain only one Agriculture Demonstration Center and to reshape the research and extension towards higher community and household participation.
- Quarterly Socio Economic Monitoring is up and running with a first report expected by mid of April.
- Log and debris: 885 m3 of log and debris has been collected and cleared from the reservoir during this quarter.

Project Lands

- Compensation payments to 15 PAHs through RMU Invoice 21 (GML RAP Closure/Grievance) are completed.
- Finalized Asset Registration discussions and Village Consultations for impacts by the additional land acquisitions in the area adjacent to RNT.
Approvals by the relevant GoL authorities should be completed by the next reporting period. Requisition has been approved for payment. Awaiting issuance of RMU Invoice 22.
- Completed calculations for RAP 2 Closure and Grievance payments, presented these for endorsement to the RMU and awaiting issuance of RMU Invoice 23.
- Bid document preparation for the restoration of the Gnommalat Thai irrigation system completed.
- 26 Grievance cases remain open in Gnommalat, Mahaxai, Nakai, Xaibouli Districts.

Downstream Program

- Atypical water level notification system was activated several times during January based on data provide by O&M. The information dissemination system appeared to work effectively with no reports received of damaged assets. Steps to transfer the atypical water level notification system to OMD have been initiated.
- Following recommendations of the IFIs Mid Term Review and the request of GoL DSP management and staff have actively supported the organization of 5 District workshops aimed at preparing the work plan and budget of GoL to be part of the GoL commitment to take over the Downstream program activities.
- Participated in a meeting on 18 March with ADB Small Holder Project (SHDP) to explore feasibility of SHDP supporting DSP activities as part of the handover phase.
- Three Grievance Hearings were held for solving 624 riverbank gardens cases of Xe Bangfai (200) and Xaibouli (424) Districts. 144 cases were declared valid.
- A Khamkeut Grievance Hearing was held on 16 March for hearing 274 cases of which 122 cases were considered valid.
- Payment for Riverbank Garden compensation was complete for all valid Mahaxai grievances and for the last 3 villages with backwater effect (Nathan, Nahi and Phonsead).
- The Fish Catch Monitoring Interim Report that analyzes data until December 2010 was finalized and presented to the IFIs MTR.
- Water supply. All 550 boreholes were constructed. 535 from 536 hand pumps have been installed. 24 of 35 sand filters necessary for solving iron issues were built.
- The VIRF fund was transferred to six villages of Phase 7 with some delay by the end of January 2011. The first loans were being prepared in 2 villages at the end of the 1st quarter.

Public Health Program

- All primary health care functions are being carried out by the government health workers through the maternal, newborn and child health clinics in all villages.
- Ongoing monthly sentinel surveillance on skin rash in the XBF area reported 61 cumulated but mild cases during week 5 to week 13. Week 14 revealed no new cases.

- Meeting held on the development of a “Handing Over Program” with the ministerial, provincial and district officials on 29 March 2011.
- Mass campaigns on community vector control are conducted in the Khammouane Province and Khamkeut District of Bolikhamxay Province.
- Site visits to the Health Program by the following organizations:
 - Various visits and monitoring agencies: HR-Communication Directorate EDF Group, IMA, NTPC Board, WB consultant, Ministry of Health team
 - Minerals and Metals Group, LXML Sepon
 - Site visit of the Public Health Advisor 27/03-05/04/2011 – to review the Public Health Program, attended various meetings, took part in the development of Handing Over Strategy, wrote and reviewed various reports
- The award received by HPMU for participating in the Sustainable Development Trophy of the EDF Group amounting to Euro 10,000 has been marked for capacity building of selected health staff members in the project area

Environmental Management Office

- The 2010 Environmental Improvement Plan is complete as of 31/03/2011 and its implementation results in:
 - Quality, Health, Safety and Environment Incident Reporting System is currently operational.
 - New Hazmat storage areas for the Power Station is in the design and budgeting phase.
 - The third quarterly Hazardous Material Inventory of NTPC facilities’ was conducted in Quarter 1 of 2011.
 - Hazmat spill training materials have been developed and rolled out to E&S, OMD and AD staff.
 - The waste segregation system is now being rolled out and waste management training is currently being provided to all NTPC staff, residents and contractors working at NTPC facilities.
 - A new waste separation building has been constructed at Gnommalat Solid Waste Facility, and significant improvements have been made on the separation and storage of wastes.
 - The HC has obtained a quote for the construction of a high temperature incinerator for HazMat waste.
 - The modifications to the dosage regime continue to be effective in improving the performance of the Chlorine disinfection plants on the RNT and Powerhouse Waste Water Treatment Plants.
 - No Human Elephant Conflict call outs.
- Environmental Training Activities during Quarter 1 include the training of: 19 NTPC staff on QHSE online incident reporting system; 9 NTPC staff on General Environmental Awareness; 13 Senior NTPC employees on IMS awareness; 5 Employees on HazMat Management; and 100 Contractors on various environmental issues; including training in the waste separation scheme.
- 15 environmental incidents were recorded. The majority of these incidents were either non-conformances or near misses which show an increased awareness and reporting of environmental hazards by NTPC staff.

- Dissolved Oxygen remained above the Guideline for all downstream rivers (Nam Theun, Nam Kathang, and Xe Bang Fai). Dissolved Oxygen remained above the Guideline in the Nam Kathang and Xe Bang Fai during the 200-hour Power Station outage.
- 59 DSP boreholes were sampled for water chemistry, and 100 DSP boreholes were sampled for Faecal Coliform. 11 boreholes exceeding the guideline for Total Iron, and 18 boreholes exceeding the Guideline for Faecal Coliform.
- 27 Resettlers ground water boreholes were sampled for water chemistry, and 52 boreholes were sampled for Faecal Coliform and 5 boreholes exceeded the guideline.
- 104 Human Elephant Conflicts (HEC) incidents were reported, predominately in the Thathod Area (91), in the Thongkong-area (8) and on the Nakai Plateau (5). During Quarter 1, three new villages in the Thathod area were affected by HEC. Encouragingly 7 out of 8 mineral lick sites had evidence of elephant usage. There was also evidence of other wildlife using the mineral licks.
- Development of the survey and design report for the wetland below Full Supply Level. Problems with the survey meant the elevations of the benchmarks were resurveyed and the catchment area also needed to be recalculated. Given the forecast for reservoir water level, it is unlikely that the wetland will be constructed in 2011.
- EMO conducted 60 environmental site inspections of NTPC sites. These site inspections have identified a number of non-conformant situations that are reported through the Online QHSE Incident Reporting System.

Part 1 Nakai Resettlement Office

1. Summary

- Communities have been consulted on the locations and the upcoming works to build the gully dams and areas are being cleared for UXO before the construction commences. 16 gully dams have been designed and construction companies were selected through public bidding process. The construction will commence once the water level in the reservoir has sufficiently receded.
- The extension of 509 granaries has been completed. The last contract for extending the remaining 223 units is ongoing.
- The estimated fish catch during this quarter is 136.6 tons corresponding to an estimate value of 1,167,400,000 kip (~\$145,000./.) Compared to the last quarter, the estimated fish catch decreased by 17.2% whereby the cash value decreased only by 7.4% due to higher prices. The seven Village Fisheries Groups (VFG) operating their landing sites earned around 29 million kip through the management fee of which 7.4 million kip is contributed to the Reservoir Fisheries Association.
- 10 households have built their own cattle yard during the reporting period which brings the total number of cattle yards to 135. This represents 28% of all large livestock owners (483) in the resettlement villages. Additional 21 cattle yards are currently under construction.
- More and more resettlers are interested to generate income from small livestock activities, mostly the families from the lower income segment: 51 families are participating in breeding pigs and/or poultry (27 for pigs and 24 for poultry) and act as input suppliers for 91 families who rear pigs and poultry for meat production and marketing.
- 160 buffaloes have been removed from the WMPA which is representing 25% of total estimated buffalo population in the WMPA area (637). After removal, 50 buffalos were sold and 110 are kept for rearing, out of which 94 buffalos vaccinated. NRO stopped supporting the transport of buffaloes with effect from 1st of March, 2 months after the GOL deadline has expired.
- Log and debris: 885 m³ of log and debris has been collected and cleared from the reservoir during this quarter.
- Quarterly Socio Economic Monitoring survey, key indicators:
 - Wealth ranking between villages: the villages of Nong Boua, Sop Phene and Phonsavang are still lagging behind the other villages whereas Sop Hia and Nong Boua Kham are currently the wealthiest.
 - Mean per capita expenditure (proxy) was 14,500 kip/week with median expenditure 10,200 kip/week.
 - Median per capita value of household assets was 3.4 million kip (approximately US\$430 per capita).
 - Household debt: the mean debt/asset ratio was 7%. 88% of households have no debt or stated that they would have no difficulty in repaying household debt, 10% of households thought they would have a little of difficulty in repaying the debt and 2% of households thought they have a lot of difficult in repaying debt or would default (1 household). The source of loan or borrowed money is mostly informal from relatives and friends (73% of responses).
 - 91% of primary age students (age 5 to 11 inclusive) were enrolled in the school.

2. Achievements

2.1. Infrastructures and mechanism for infrastructure maintenance

2.1.1. Reception & Hand over the complete infrastructure

The RMU has appointed a PIO (Provincial Irrigation Official) to work with the irrigation team for overall inspection of the irrigation systems. A final inspection was conducted by the NRO irrigation team and the district working group prior to the end of the defects liability period and before the formal handing over to GOL.

2.1.2. Situation of Pending infrastructures:

Fish landing

Identified boat landing sites in Northern and Southern villages were inspected with the help of the irrigation team and in consultation with the village authorities and the Village Fishery Groups at both full reservoir and significant drawdown. The design of the proposed boat landing sites is currently under preparation and will be shared with concerned parties in the coming weeks.

Gully dams

Gully dam construction is scheduled to commence in June 2011 provided reservoir water level is sufficiently low. Following bidding results, 3 construction companies were selected. A total of 16 dams are scheduled for construction: Sop Phene 2 dams, Sop Ma 2 dams, Nam Nian 1 dam, Nakai Tai 2 dams, Nakai Neua 2 dams, Phonphanpek 2 dams, Bouama 1 dam, Sop On 1 dam and Ban Done 3 dams. UXO clearance will be undertaken by contractor prior to construction.

Granary extension

The extension of 338 granaries from (2 x 1m) to (2 x 2 m) is 100% complete. The extension of granaries from (2 x 1.5m) to (2 x 2 m) is covered by two contracts. The first contract covers 171 granaries and is 100% completed. The second contract includes 223 granaries and is ongoing.

Compost bins

Three types of compost bins were pilot tested in villages. A committee consisting of DWG, DAFO and NRO Agriculture team in collaboration with VDC conducted an evaluation to identify the most appropriate and preferred compost bin. The wooden compost bin with a dimension 2m x 2m was selected as the most appropriate solution by the committee.

2.1.3. SERF mechanism for operation & maintenance

Support RMU in developing mechanism and procedures to operate the Social and Environmental Remediation Fund (SERF). The first SERF payment requested by RMU is transferred to the SERF account. The RMU reported verbally that the first set of electricity bills for irrigation systems were paid by the SERF. Further development on mechanism and procedures are required by the Resettlement Committee.

2.2. Strengthening management and service provision of district and village organizations

2.2.1. Village Extension Workers operation (VEW)

16 VEW and 3 cluster's supervisors were monitored and supported by DAFO and NRO Agriculture team. All of them participated in TOT training and implementation of Village Development Plans (VDP). DAFO proposed to organize monthly review and planning meetings for the extension workers only. During these meetings strengths and weaknesses of each extension worker are identified and translated into a capacity building plan.

2.2.2. On farm demonstrations and trials are set up in line with principles and methods of participatory research

Agriculture

On farm demonstrations

Demonstrations on vegetable and cash crops growing in dry season were set up in 3 agriculture centers. 54 model farmers are participating in dry season vegetable production in 13 villages. 19 households have grown feed corn and cabbage in 0,66 ha plots using the irrigation systems. Farmers started preparing their 0,66 ha plots for cultivation during the coming rainy season.

Livestock

Continued on farm demonstration of raising small livestock (pig, chicken, duck)

During this quarter, 327 chicks and 41 piglets were produced. 408 chicken of a new breed (Egyptian strain) were purchased from Nongteng Station of the Department of Livestock and Fisheries, Ministry of Agriculture and Forestry; these new brood-stock chicks are kept and raised at the Nongbouakham Center.

Table: Monitoring of Small Animal Breeding (Production) at the Agri. Centers

No.	Animal breeding		Year 2010	Year 2011 (Q1)			Total Q1 of 2011
				Jan	Feb	Mar	
1	Chicken	No. of egg	1,258	219	307	263	789
		No. of chicks	450	122	61	144	327
		New Egyptian stain chicks			208	200	408
2	Duck	No. of egg	869	Since 2011, no ducks production in the centers but directly through 4 farmers in villages: each farmer received 4 females + 1 male			
		No. of duckling	171				
3	Pig	Piglets	91	21	20	0	41

Trainings and Visit organization for Resettlers and GoL staffs

34 participants including 25 farmers (24 women and 1 man), 3 VEW and 6 staffs attended a workshop in Nongboua and Bouama villages relating to compost application, botanical pesticide production and application.

Farmers' exchange program on corn growing at irrigated areas was conducted on the 18th of March. There were 20 participants including 17 women from 13 villages. The purpose of exchange program focused on sharing information between farmers to farmers on fertilizer application, mulch keeping, insect control and watering crop while using the irrigation system.

2.2.3. Increase Capacity of district service providers

Several meetings have been organized with RMU, DWG and DAFO for discussing different issues such as monthly activities meetings, diverse compensations, and animal remaining in WMPA, quarterly budget of RMU, Village Extension System and Village Development Plans.

Several DWG staffs received on the job work experience with NRO in different sectors such as irrigation, agriculture, livestock, fisheries, monitoring and off-farm activities.

2.2.4. Irrigation systems are functional and operated by Water User Groups

Continue follow up on the use of irrigation systems in all villages in order to support the water user group (WUG) on operation of the systems and to monitor the system running during dry season cropping period. A total of 94 households in 13 villages used the irrigation system.

The support included training to and consultation for the water users on irrigation system's operation and maintenance, guidance on water sharing and crop management.

2.2.5. Village fisheries groups (VFG) and the reservoir fishery association (RFA) are fully operational and Fisheries co management system is implemented

Supporting the implementation of RFA and VFG activities

The following activities were carried out by the RFA Support Office, under supervision of Fisheries Team:

Fishers Registration Activities

Fisher's registration is a continuing activity. From January to March, 98 households registered as professional fishers. To date, a total of 778 fishers obtained their fishing license for the 2010-2011 season of which 760 are licensed for professional and 18 for subsistence fishing.

Fish Marketing Monitoring

The number of the VFGs that operate their fish landing activities varied according to the month. The results of activities during this quarter are summarized in the table below:

Table : Village Fisheries Marketing activities, January to March 2011

Item	January	February	March	Total
Number of VFGs	4	7	3	
Fish sold (Kg)	13 tons	17,7 tons	15,2 tons	45,9 tons
Unit price (kip/Kg)	5.000 to 14.000	5.000 to 15.000	8.000 to 13.000	
Value of fishes (kip)	117 million	167 million	136 million	420 million
7% for VFG fee (kip)	8 million	11,5 million	9,5 million	29 million
25% of VFG fee for RFA (kip)	2 million	3 million	2,4 million	7,4 million

Fisheries patrolling activities

Patrolling activity was carried out in collaborating with VFG, village security force and district police in order to patrol and control the illegal fishing activities reported by the villages/fishers. The violators were fined according to the rules and regulations.

Table: VFG patrolling activities

	January	February	March	Total
Total violators	24	2	16	42
Fishing in protected area	18	1	11	30
Outsiders fishers without license	6	1	5	12

Implementing fisheries co-management plan

The detail implementation plan for fisheries co-management has been developed with the assistance of the Fisheries Consultant. The initial step started with organizing trainings for the RFA and VFG Management Committees:

Three training events were organized. They focused on the roles and responsibilities of the VFG and participatory techniques for Village Fisheries Groups (VFG). These trainings were conducted at the Reservoir Management Secretariat (RMS) meeting room from 11th to 29th of March 2011. A total of 27 participants including 10 females attended in the training sessions. The participants came from 9 villages; Thalang, Sop Phene, Nongbouakham, SopMa, Sophia, NamNian, Nakai Neua, Nakai Tai and Oudomsouk.

Follow up with individual village consultation:

After completion of the training, each VFG was followed up with on the job support during the consultation in the villages. This was completed in 6 villages; Thalang, Sop Phene, Nongbouakham, SopMa, Sophia, NamNian and will be continued for the remaining villages.

The consultation is to cover a larger group of villagers beside the VFG members, such as members of Lao women union and village authorities. There were 202 participants including 137 females.

Key issues raised by the participants were:

- changes in the fish catch
- the effectiveness of the fisheries regulation and its enforcement and how the co-management process can contribute to better management of the fisheries resource



Procurement of boats for RFA and VFGs

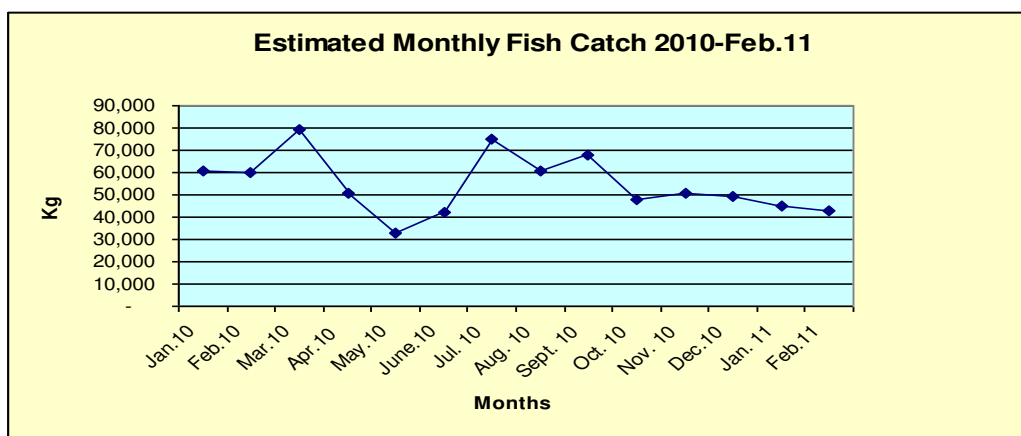
Six boats with engines were temporary delivered to VFGs of ODS, Nakai Neua, Nakai Tai, Nongboua and PPP, and one for the RFA to be used in the fisheries patrolling activities. However, official hand over of the boat will be organized when the construction of all 17 boats has been completed. The delay in completing the building of boats is due to a lack of suitable wood supplied by the VFA.

Fisheries monitoring and information collection

Fish Catch Monitoring

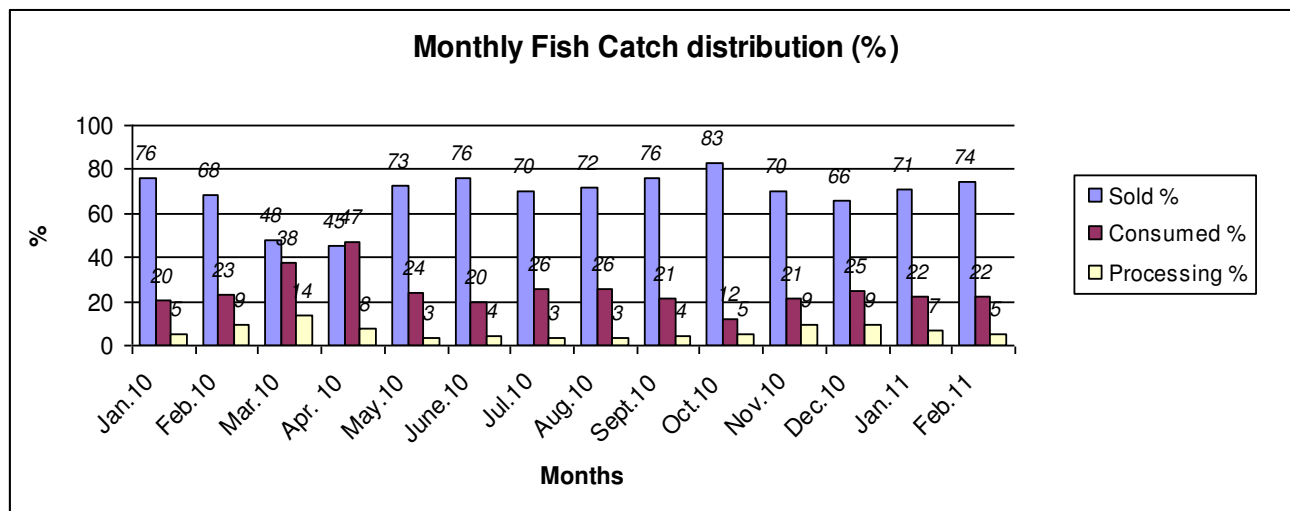
Average estimated Fish Catch and Value: The estimated fish catch during this quarter amounts to 136.6 tons and is corresponding to an estimated value of 1,167,400,000 LAK. Compared with the last quarter, the estimated fish catch decreased by 17.2% whereas the cash value decreased by 7.4% only.

Fig.. Estimated monthly fish catch in 2010-11



Fish Catch Distribution

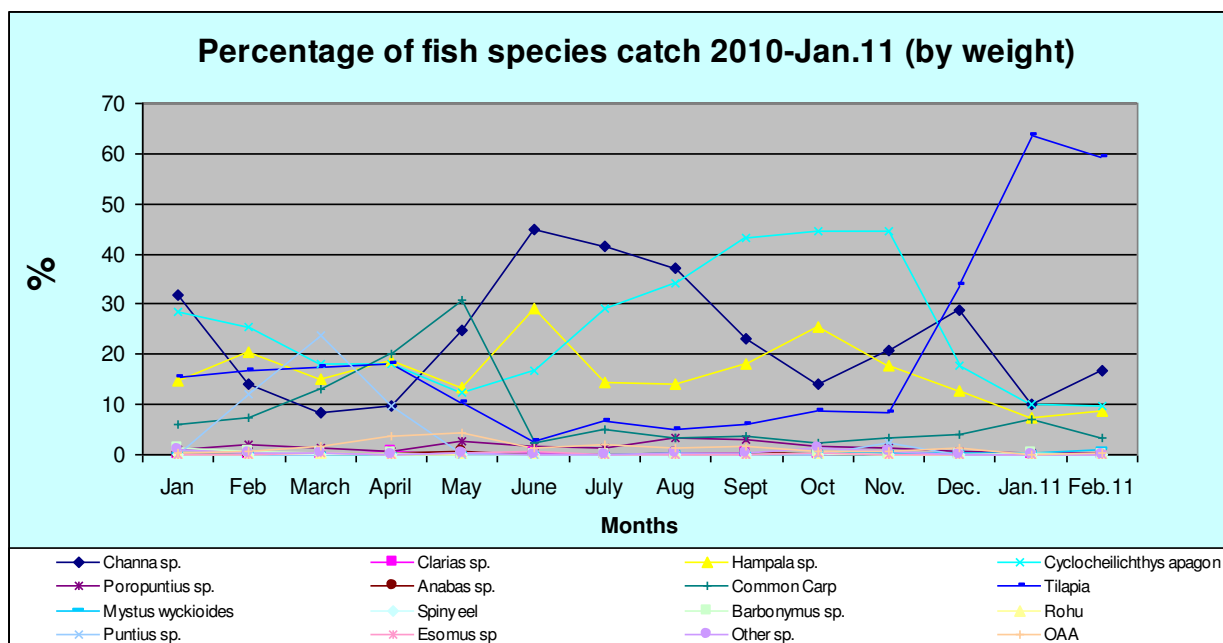
Fig.: The use of fish catch



Fish Species Composition

The most prominent species caught was Pa Nin (Tilapia) with over 59% of the catch. Pa Khor (Channa sp.) covers ~16.6%, Pa Oup (Cyclocheilichthys apagon) 9.6% and Pa Soud (Hampala sp.) 8.5% respectively. The graph below illustrated the changes in caught species over the past 13 months.

Fig.: Composition of caught fish species (January 2010 – February 2011)



Fishing Gear Use

The main fishing gear used in the Nakai Reservoir remain unchanged: Gill-net about 80% followed by hook and line about 16% and different locally made traps were about 4%.

Fish Landing Monitoring

The objective of monitoring of the fish landing site is to compare the information between FCM (Fish Catch Monitoring) and direct fish landed at different landing sites that were operating in each month.

Table: Summary of fish landing monitoring during Jan-Feb-Mar 2011

No.	Name of landing sites	Total fish landed (kg)	Nos. of days landed fish (days)	Avg. fish landed/day (kg)	Nos. of fishers landed fish (Pers.)	Avg. Nos of fishers landed/day (days)	Avg. fish weight/ fisher/day (kg)
1	Thalang	14,960	87	186.7	954	11.2	17
2	Oudomsouk	22,521	78	288.3	778	10	28.5
3	Sophia	1,575	39	37.5	151	3.52	9.4
4	Sop Phene	845	22	37.5	119	4.2	7.6
5	NamNian	2,280	44	49	257	6	9.2
6	Nakai Neua	1,912	27	71	385	14.3	5
7	Sop Ma	933	20	47	62	3.1	15
Total Q1 of 2011		45,026 kg	317	102.4	2706	7.5	13.1

Direct Fish Sampling Survey

The direct fish sampling survey was carried in late February and early March 2011 at the same previously selected sites. The result of the survey is reported in separate Technical Report.

Fishing Location Survey

The fishing location survey was started in the fourth week of March and will be continued to early April and results will be summarized and presented in MP

2.2.6. Support to government services include following programs

Education: The salary and food support program to Kindergarten School is ongoing:

- Monthly Food support for 420 students of 15 kindergartens in resettlement village
- Monthly Support of 22 salaries of assistant teachers of kindergarten schools

Social welfare and Vulnerable household support

Continued to implement monthly support program of rice and protein foods distribution to 25 vulnerable families (34 people) in 12 villages.

Setting up regular consultation with 14 Ahoe families on different issues linked with livelihood improvement such as vegetable garden, chicken raising and also school attendance of Ahoe's children.

UXO Clearance support:

CD Team continued to visit each village in the resettlement area to collect information and discussed with the villagers about the UXO awareness and roving response.

Two UXO were found in ODS and PPP during this quarter and were destroyed by contractor's team.

Gender mainstreaming

Gender mainstreaming activities continued to be an integral cross cutting component of all NRO activities. Gender Awareness has been raised at each appropriate occasion. Women were actively participating in different activities:

- 58 women participated in Ban Done gender awareness meeting
- more than 600 women of 14 resettlement villages actively participated in preparation of VDP

Communication of technical issues through appropriate use of information, Education and Communication materials

Appropriate IEC (Information Education Communication) materials were developed to communicate key messages to resettlers. For examples: two posters for Campaigning on gully dam construction



2.3. Compensation issues for impacted assets and land allocation

2.3.1. Compensation

Compensation for paddy lands and fruit trees Phase 2

The phase 2 compensation is concerning the special cases that require additional information and consultation with various stakeholders. From 197 cases, 191 are ready to be paid. The bank books and related documents have been sent to RMU and District authorities for signature. 6 cases still need clarification due to the absence of PAHs.

Compensation of died buffalos

The agreed compensation amount for lost animals was transferred to the RMU who, in turn, will make the transfer to the respective owners of the animals. District authorities are processing the required documents before starting the consultation and payment to beneficiaries.

2.3.2. Participatory Land Use Planning (PLUP) process

Implemented Phase 4 activities of PLUP and commence Phase 5. The main activities implemented included:

- Land cover mapping and identification of potential additional land based on satellite imagery
- Collection of social data in relation to land use practices and issues
- Refresher Training on GPS use for the RMU/ DWG PLUP team
- Field surveys of suitable additional agricultural land

- Boundary Surveys across the Reservoir

Following verification of several boundary points, the updated maps will be produced during the next quarter.

2.4. Income generation options for resettlers

2.4.1. Allocated Lands are used and managed according to principles of sustainability

The village extension workers and agriculture team have surveyed the Resettlers intention in respect of the use of the 0,66ha plots in the next wet season. 89% (or 1081 plots) of the Resettlers indicated that they intend to cultivate their 0.66 ha plots in the coming rainy season. 917 Resettlers plan to grow rice, 86 corn and 78 cassava. To date land preparation on 472 plots is ongoing. Follow up on crop cultivation is ongoing through the extension workers in each village.

2.4.2. Resettlers cultivate in DDZ during dry season

Based on last year's experiences, the agriculture team has disseminated information to extension workers and farmers about the use of the DDZ. The recommendations included the type and varieties of crops, the harvesting time before end of July and suitable sites above 534m absL.

Grow grass in draw down areas (*Surface under grass in DDZ*)

A total of 105 households in 14 villages are participating in trials to grow Para grass in the DDZ, for a combined trial area of 1.57 ha. The suitable drawdown area for Para grass growing is between 536 and 538 m absL; the grass can resist flooding by water to a depth of about 2 meters.

Trial of using irrigated water flow for fodder garden

Following to the LTA recommendation on using irrigated water flow system for growing grass garden, trials have been made at the irrigated plot of farmer in Ban Nakai Neua with the area of 55 m². The Napier and Elephant grasses were planted and failed due to a lack of water and to sandy soil. Currently the Livestock team is trying the same experiment at a different site in Ban Nongboua where the soil conditions may be more suitable; the outcome will be reported in the next report.

2.4.3. Resettlers livestock is managed based on improved fodder resources assessment

Test suitable grasses for pasture development

5,000 seedlings of *Leucaena* seedlings were produced in the greenhouse at the Nakai Neua demonstration farm. Due to extreme climatic conditions and disease, 50% of the seedlings were lost.

The grass growing trial in the DDZ of Phonsavang Centre showed slow growth (30 cm). Reasons are the relative rapid draw down of about 30-40 cm per week and respective water shortage in established plots. Initial watering is required in early growth stages when using the DDZ.

Develop cattle yard at individual HHs level and mineral licks

The construction of individual cattle yards is continuing: 135 households constructed their own pen for keeping animals during the night time. This represents 28% of the total of animals' owners (483) in resettlement villages. Currently 21 cattle yards are under construction.

	2010	Jan 2011	Feb 2011	Mar 2011	TOTAL
Cattle pens built	125	5	2	3	135

Mineral licks

Following the trainings on production of mineral licks, the Livestock team has produced extra mineral licks (about 150 pieces) for supply during the dry season.

A villager of Ban Oudomsouk has taken the initiative to produce the mineral licks for his own use and has sold the surplus to the neighbors. The Livestock team has let him borrow one set of equipment enabling him to produce 50 kg of mineral licks.

Define and develop community pasture

Consultations on pasture development were undertaken in 9 villages (KK, SO, BM, PPP, ODS, NKN, NKT, NBK and TL) to discuss mechanisms on developing communal pastures. including Sites inspections were conducted in each village to identify suitable locations. The size of the area depended on the availability of the land. The total area that could be developed as communal pasture is 35ha. 44 large animal owners participated in the activity.

Village name	Number of people	Proposed Area (ha)	Area description
KK	5	10	Savanna & dry dipterocarp area, next to the village
SO	12	3	Degraded forest opposite to village. This area may be cleared of any shrubs before the forage seed mix is sown
BM	4	4	Area proposed by villagers as community pasture.
PPP	3	5	Villager land near to the bank of channel next to the PPP village
ODS	4	5	Area along the road side towards the WMPA Office.
NKN	4	1	Community land near the village and school
NKT	5	5	Area in the old village location.
NBK	3	1	Area near to the land proposed for building new school
TL	4	1	Community land near the bridge
Total:	44	35	

Build capacity on improved large ruminants management

Livestock rearing group establishment:

Village consultations were conducted in Sop-On and Nakai Tai with 36 livestock owners. Out of these participants, 20 farmers are interested to form a livestock group, one group per village. The remaining participants still questioned the purpose and benefits of joining such group and prefer to continue the free range herding systems for now until they see positive outcomes and real advantages of the group based system.

Provide animal health care services

The total number of ruminants vaccinated has reached 27% of the total animals kept in the resettlement area. Only 7% of the total pigs and 14% of the total poultry stock is vaccinated.

The number of animal vaccinated does not include the animals supplied by our program which were vaccinated before distribution to resettlers.

Table: Summarize of animal vaccination up to March 2011

	2010		2011 (Jan-Feb-Mar)		
	Total animals	% vaccinated	Total animals	No vaccinated	% vaccinated
Pigs	686	7%	686	0	0%
Poultry	8928	8%	7533	1028	14%
Ruminants	2328	26%	2328	630	27%

Establishment of Small Enterprise on Veterinary Services (SEVS)

In order to provide efficient veterinary service to resettlers, the small enterprises on veterinary services have been established in each cluster: In the Northern cluster in SopMa, in the Southern cluster in Ban Done and in the central cluster in Oudomsouk.

The establishment of SEVS is implemented in collaboration with the Livestock and Fisheries Unit of DAFO Nakai. NRO supplied the necessary medicines and veterinary equipment for the service. The medicines will be sold to the Resettlers and the income will be managed through a revolving fund. The SEVS will be closely monitored by NRO and DAFO staff for technical backstopping and for the progress made by each SEVS.

Animal statistic updated to March 2011 (source DAFO)

Large animals

The total number of large animals in Nakai resettlement area remains unchanged. The number of animals registered is 789 heads.

Poultry statistic

The number of poultry is 7533, it is reduced by 18.5% or about 1400 heads due to an outbreak of diseases in many villages; the villagers are not paying sufficient care to prevent such outbreaks, through vaccination.

Animal production

Support to families interested to breed small animal for business.

Some of the produced animals were sold to the neighbors to get additional income to their families.

No	Types of Animals	Nos of animal Produced			Nos. of animal sold			Income from sold of animals			Nos. of Animals in stock
		2010	2011	All	2010	2011	All	2010	2011	All	
1	Pig	35	23	58	26	19	45	4,400,000	4,810,000	9,210,000	13
2	Chicken	516	429	945	109	30	139	3,178,500	1,239,000	4,417,500	220
3	Duck	123	138	261	134	18	150	3,030,000	880,000	4,430,000	95
Remarks: Most of the poultry is consumed in the family											

Small Animal Pen construction and distribution of the improved breed to HHs

	Accumulated up to Dec 2010			During Jan-Feb-Mar 2011		
	Pens	HHs received animals	Nb. animals	Pens	HHs received animals	Nb. animals
Pigs	99	28	65	71	27	59
Poultry	114	25	342	49	24	143

Resettlers households volunteer to rear small animal for business

Some households are interested to rear small animals for income generation. Up to now, the situation is as follows

Type of animals	Nb. of HHs at the end of March	Animals received at the beginning	Animals remained at the end of March	Returns from selling animals during this quarter (Jan-Feb-Mar 2011)*
Pig	48	107	13	23,565,000 kips
Chicken	27	303	19	1,364,000 kips
Duck	16	158	10	1,496,000 kips

* **Remarks:** Normally the poultry is consumed in the family and only a few animals are sold

Capacity building

Organized training courses on improving techniques for production and management of poultry for 3 clusters villages (Northern, Central and Southern). Sixty four (64) poultry rearing farmers from 16 resettlement villages attended, including 48 female participants.

The training focused on management techniques, diseases prevention and treatment; feed quality and feeding techniques and also included marketing of their products.

2.4.4. Resettlers have access to the markets and capital

Training on micro businesses development and planning

IGASU team monitored regularly income of resettlers who attended off-farm skill training and started micro businesses in the villages such as: hairdressing and beauty shops, weaving groups, vegetable producer group, handicraft processing.

Markets access for Nakai Products

Sale of vegetables : IGASU team assisted Resettlers in selling vegetables to ADEN restaurant.

	January	February	March	Total
Quantity vegetable	323 kg	217 kg	676 kg	1,216 kg
Value	1,722,000 kips	1,160,000 kips	1,805,000 kips	4,687,000 kips

Facilitated selling handicraft/woven products

IGASU team assisted Resettlers in selling their textile products and displayed in ADEN mini market at RNT and during an exhibition in Nakai District.

	January	February	March	Total
Value	2,460,000 kips	3,546,000 kips	1,397,000 kips	7,403,000 kips

Building Handicraft shop at Sophia

The members of the weaving group in Sop Hia agreed to build the handicraft shop in their village. The shop will be a place for selling their woven textiles and also for Resettlers living in nearby villages. VFA agreed to provide some of the required wood; the shop will be built by the members of the group. They will manage and operate the shop by themselves.

All Resettlers have access to micro credits at village level

Collection of the village fund is ongoing. The total loans recovered amount to 227 million kip and the remaining outstanding loans amount to 34 million kip. These figures exclude the cattle revolving fund. The total outstanding amount is not included the loans issued for 5 ice plants (184 million kip).

Design new micro credit management system

IGASU team prepared Information Education and Communication materials to train Village Fund Committees and to communicate rules and regulations for further discussion with the RMU and DWG. This will depend on DEPD and RC decision to change Resettlers Entitlements into shareholder capital as recommended by the POE.

Improve VF committees or set up new VF committees

The new village fund committees were elected and set up by district administration and will be reviewed again during establishment of the village fund.

2.5. Strengthening the Management of the NRO

2.5.1. NRO to be fully operational and continues to be well managed

Regular meetings with team leaders are organized to identify and solve problems.

Ongoing coordination with other E&S offices and government counterparts through the monthly coordination meetings under supervision of RMU, together with the DWG, DAFO, RFS, WMPA and VFA. Stakeholders share the results of activities in the month and also discuss ways to resolve a range of issues. A series of meetings were organized between E&S, NRO, the District Governor and the DWG to develop a common and consolidated development vision for the Nakai plateau.

2.5.2. Participate in and respond to recommendations of monitoring missions

Remove remaining buffalo out of WMPA: NRO has stopped to support the removal of animals from WMPA by 1 March 2011. The total number of buffalos removed is 160 heads or 25% of total estimated number of buffalos (637). After removal, 50 buffalos were sold and 110 are kept for rearing, out of which 94 buffalos were vaccinated. Those villagers who want to continue to relocate their animals will have to do so without NRO's support.

2.5.3. Socio-economic monitoring

Data Collection

The Quarterly Socio Economic Monitoring (QSEM) conducts short household surveys in 14 villages. A total of 577 of the scheduled 599 households were interviewed. 22 households were repeatedly unavailable for interviews.

Initial Result from QSEM-1

- Wealth ranking between villages: the villages of Nong Boua, Sop Phene and Phonsavang are still lagging behind the other villages whereas Sop Hia and Nong Boua Kham are currently the wealthiest. B. Nam Nian, which includes many of the Ahoe ethnic minority families, is a middle ranking village.
- The school students of 3 villages (Sop Phene, Bouama and Nongboua) reported low school attendance, less than 40% of school age children attended. Further investigation will be conducted to establish why the school attendance rate of these 3 villages is very low.
- House hold debt: Overall, 88% of households surveyed have no debt or stated that they would have no difficulty in repaying debt. 10 % stated they have debts and might have little difficulties in paying back the debt. Only 2% of households thought they have a lot of difficulty in repaying debt or would default (1 household).
- There are significant differences in households' debt observation between villages. Households in Phonsavang and Sop Ma had the highest level of perceived difficulties in repaying household debt which will be further investigated in April.
- The source of loan or debt mostly from relative and friends (73% of responses)

A more in-depth report will be prepared by the SE Monitoring Consultants during the next quarter.

Food Consumption Monitoring

Focus group discussions on Food Consumption were conducted in 14 villages and separately for the group of 14 Ahoe Households in B. NamNian.

Quantitative and narrative data from the discussions is entered into the database and being analyzed and reported by the Nutrition Consultant. The report will be available in the next quarter.

2.5.4. Data Management

The data management team continued to manage and maintained the databases for the operation of Nakai Resettlement Office. The tasks include:

- Data entries for ongoing surveys and monitoring
- Regularly extraction of data from the database when required
- Adjusting existing databases for new needs
- Developing new database

2.5.5. Log & Debris Management

Log and Debris team continued to collect the log and debris floating in the reservoir and consolidated the stocking of logs in different sites.

Quantity of log and debris collected during this quarter:

	<u>January</u>	<u>February</u>	<u>March</u>	<u>TOTAL</u>
Log	0 m3	24 m3	16 m3	40 m3
Debris of logs	119 m3	151m3	205 m3	475 m3
Debris of bamboo	149 m3	127 m3	94 m3	370 m3
Total	268 m3	302 m3	315 m3	885 m3

In addition to log removal, the team has also used the barge to assist EMO with their greenhouse gases measurements when one of the log barges became a “scientific floating platform” for 10 days. They also used 1 barge for transportation of buffalos from the WMPA to the resettlement area, as requested by DWG and Villagers.

3. Outlook

Irrigation/construction team:

- Continue to follow up the WUGs for O&M of irrigation systems
- Continue the process of gully dams construction
- Organize the official hand over of irrigation systems to GOL

IGASU:

- Explore more options for NTFP domestication and other potential crops and trees
- Present the draft of village fund manual and rules and regulations to District working group
- Finalize IEC for village fund management training.
- Continue to monitor income of Resettlers who participated in off-farm skill trainings
- Conduct off-farm skill training on mending of fishing nets, improving skills on hair dressing and beauty salons and cooking traditional desserts made from sweet corn and cassava.
- Conduct fish trader meeting to clarify roles and regulations of fish trader committee and discuss how to determine fish prices in resettlement area.

Agriculture:

- Follow up and provide support to Resettlers using their 0.66ha plots
- Follow up, provide information and support Resettlers using the DDZ
- Select model farmers for on-farm demonstration plot at household level
- Organize training on the use of botanical herbicide and pesticides
- Start construction of compost bins

CD team:

- Continue to implement Food Support Program of NTPC for 25 vulnerable families in the 12 resettlement villages.
- Continue to implement NTPC Education (kindergarten) support program
- Continue to implement UXO awareness program.
- Continue to provide assistance in development of IEC (Information Education Communication) material to support NRO program
- Continue to support the RMU and District PLUP staff and consulting firm to implement the Participatory Land Use Planning Program at Nakai-Nam Theun Resettlement Area, specifically focusing on the use of the DDZ and additional agricultural land
- Facilitate development of the villages based on the Village Development Plans established in each resettlement village.

Fisheries

- Continue implementation of Fisheries Co-management plans
- Continue Fish Catch and Fish landing Monitoring
- Complete the construction of 17 boats for RFA and VFG
- Survey suitable locations for construction of fish landing sites
- Continue to provide support to the RFA to implement their activities

Livestock

- Continue promotion of animal vaccination
- Monitoring of newly established Small Enterprise on Veterinary Services
- Continue to support cattle yards development
- Farmer to Farmers exchange visit
- Consultation with villagers for establishing of group of pasture development
- Continue pasture development at the at DDZ
- Continue to support Resettlers and model farmers on small animal and poultry's pens construction

Monitoring

- Prepare and Implement the LSMS-6
- Issue report on QSEM-1
- Issue report on food consumption monitoring
- Discuss adaptive management measures with Managers

Management

- Support LTA Mission in April
- Support POE mission in June
- Complete compensation Phase 2 of paddy land and fruit trees
- Support RMU/DWG to complete compensation for dead buffaloes
- Conduct strategic joint planning workshop with Nakai District

Part 2 Project Lands

1. Summary

- Compensation payments to 15 PAHs through RMU Invoice 21 (GML RAP Closure/Grievance).
- Finalized Asset Registration discussions and Village Consultations for impacts by the additional land acquisitions in the area adjacent to RNT. Approvals by the relevant GoL authorities should be completed by the next reporting period. Requisition has been approved for payment. Awaiting issuance of RMU Invoice 22.
- Completed calculations for RAP 2 Closure and Grievance payments, presented these for endorsement to the RMU and awaiting issuance of RMU Invoice 23.
- Coordination work ongoing with EMO for site cleaning and rehabilitation activities.
- Additional discussions for the clarification/definition of Concession Period Land areas.
- Bid document preparation for the restoration of the Gnommalat Thai irrigation system.
- 26 Grievance cases remain open in Gnommalat, Mahaxai, Nakai, Xaibouli Districts.

2. Management

2.1. Relations with other Departments/Divisions

2.1.1. PL and EMO coordination

Site Cleaning and Rehabilitation:

Joint site cleaning and rehabilitation field visits. 13 additional sites were proposed for inclusion into the Site Cleaning Matrix.

Location	LPA	Type
BA near DT 12G (left site DS Ch.)	38c	Cat.2
Temp. access road to BA (in Phathoung GML) – Villager's land	38c	P
Root Disposal (behind Oudomsouk camp) - 2 Villagers land	20b	P
Temp. access road to TL (in Khoksavang GML) - Villager's land	52	P
Soil disposal of 500kv tower in Xaibouli - Villager's land	54	P
Saddle Dam 14A Borrow Area Clay 2	14	Cat.2
DSC Spoil Disposal at Km. 12+500 to Km.12+900 (left side)	38c	Cat.2
DSC Spoil Disposal at Km. 11+800 to Km.12+200 (left ide)	38c	Cat.2
Platform - Temporary Office at Km. 2+300 (left side)	38a	Cat.2
Road F Tile Bed (right side)	6a	Cat.1
Borrow Area closed to DT 12F (Channel Section - 2) left side	38c	Cat.2
Borrow Area between Phathoung Quarry & Channel Section 2 (right side)	38c	Cat.2

- The breakdown for March is as follows:

	March 2011	Cat.1	Cat.2	P	Total
1	No. of Joint SCR inspections	3	7	0	10
2	No. of SCRCC issued	0	0	1	1
3	No. of rehabilitated sites with SCRCC	37	28	168	233
4	No. of sites still to be rehabilitated	33	76	6	115

- The Quarterly Progress results are summarized as follows:

	Details	January	February	March
1	No. of Joint SCR inspections	10	7	10
2	No. of SCRCC issued	6	2	1
3	No. of rehabilitated sites with SCRCC	230	232	233
4	No. of sites still to be rehabilitated	113	111	115

2.1.2. PL and DSP coordination

Additional manpower is recruited to implement and compensate the lost community assets through the DSP VIRF system in PL villages.

2.1.3. PL and NRO coordination

The Project Lands team works in close coordination with the NRO on various compensation issues carried out on the Nakai Plateau.

The NRO Social Scientist assisted with a KAP survey on paddy field cultivation and wealth ranking in B. Nahao

2.1.4. PL NTPC General coordination

Definition of Final Concession Period Land Areas:

Participation in various coordination efforts and meetings on the definition of Concession Period Land Areas involving members of the Administration, Asset Management, Finance, GoL Divisions. A decision on the DST bypass has progressed with the resolution of a future acquisition of this area (date still undetermined) and the immediate purchase of satellite imagery for the area.

Delimitation/marketing of Project Lands will commence following discussions with prioritization given to areas with a high risk of illegal occupancy.

2.2. GOL relations

Coordination meetings with GML District Working Group and RMU to discuss compensation payments for RMU Invoice 21, 22 and 23.

Discussions with RMU on the finalization of the Common Property Compensation policy which were temporarily halted pending the future of the DSP VIRF system in GML.

2.3. Grievances

Grievance status: 26 Grievances remain open. The breakdown per district is as follows:

District	TOTAL	Status		% Valid
		Closed	Open	
Gnommalat	542	535	7	25%
Mahaxai	71	68	3	37%
Nakai	33	18	15	55%
Xayboully	2	1	1	100%
Khamkeut	19	19	0	21%
Kaisone	1	1	0	100%
Thakek	1	1	0	0%
XeBangFai	1	1	0	100%
Total	670	644	26	28%

- Grievance status: 26 Grievances remain open. The breakdown in % per district is as follows:

District	JANUARY	FEBRUARY	MARCH
Gnommalat	99%	99%	99%
Mahaxai	94%	94%	96%
Nakai	55%	55%	55%
Xayboully	50%	50%	50%
Khamkeut	95%	100%	100%
Kaisone	100%	100%	100%
Thakek	100%	100%	100%
XeBangFai	100%	100%	100%
Total	96%	96%	96%

2.4. Irrigation restoration (GML Tai Irrigation System)

The proposal is under finalization. It is projected that construction will begin after the Lao New Year.

Additional delays in the implementation of an adequate restoration plan may result in additional compensation payments for the impacted PAHs. The additional compensation amount is estimated at 10,000 USD and will be determined when the construction starts.

2.5. Unanticipated Project Impact (Ban Nahao)

2.5.1. Livelihood Activities

Site survey for potential wet season supplementary irrigation. Based on initial estimates, there is a low feasibility for the overall contribution of supplemental irrigation to the surrounding land due to the limited options for water sources in the area.

- Preparations for demonstration of paddy and upland rice plots are ongoing.
- School Vegetable Garden Promotion activities undertaken
- Construction of demonstration cattle pen is ongoing

- Continued activities for the demonstration garden through seasonal vegetable promotion.
- Continued demonstration of small livestock raising and vaccination.
- The floating rice trial showed very low production due to rapidly rising water last year.
- Nahao village Knowledge, Attitude and Practice (KAP) rapid assessment on paddy field cultivation focusing on local knowledge, broken down by ethnic groups.
- Preparations for Drawdown Zone Activities ongoing.
- Discussions carried out with the WMPA regarding the development of suitable agricultural land and land re-distribution based on the EcoLao recommendations. A consultation team comprised of WMPA and Nakai District staff visited the village in order to explain the next steps and outline the necessary assistance/inputs from the villagers. An initial proposal has been received from EcoLao and is under review by the WMPA.

2.6. Monitoring

2.6.1. Ethnic Minorities

Based on recommendations from various monitoring agencies, the NRO social scientist and Ethnic Minority Consultant visited Ban Nahao for a preliminary assessment of the ethnic minority related issues. A more in-depth assessment is scheduled during his next mission

2.6.2. Livelihood related

Gnommalat District: Final Cash Livelihood Restoration Plan (FCLRP)

199 out of the 200 PAH have their LARC issued.

Project Lands has continued to carry out the provision of special assistance in the form of rice and protein supplements to 1 Category 3 PAH whose livelihood restoration has not been achieved due to temporary illness. Monthly monitoring is being carried out to monitor the progress of this case.

3. Achievements

3.1. Compensation and RAP Closure

Month	RAP 1	RAP 2	RAP 3	RAP 4	RAP 5
January	99%	36%	85%	99%	93%
February	99%	49%	85%	99%	93%
March	100%	52%	87%	100%	93%

The RAP closure process is still depending on a number of external factors that are out of control of the E&S division and require some patience.

4. Issues / Risks / Recommendations

4.1.1. Management

The design of the DSP's bridging phase will impact the compensation approach of lost common property resources that is initially planned to be undertaken through the DSP VIRF system.

The compensation strategy for lost common property resources will be revisited once the DSP bridging phase is defined.

Part 3 Downstream Program

1. Summary

- In January DSP began receiving daily water level forecasts from OMD for use as part of the “atypical water level notification system”.
- Atypical water level notification system was activated several times during January; the information dissemination system appeared to work effectively with no reports received of damaged assets.
- DSP management and staff have actively participated to the IFIs Mid Term Review of the Downstream Program in the second half of February.
- Following recommendations of the IFIs Mid Term Review and the request of GoL, DSP management and staff have actively supported the organization of 5 District workshops aimed at preparing the work plan and budget of GoL to be part of the GoL commitment to take over the Downstream activities.
- Participated in a meeting on 18 March with ADB Small Holder Project (SHDP) to explore feasibility of SHDP supporting DSP activities as part of the handover phase.
- Revised NT2 DSP grievance manual (Version 2.0) was disseminated to districts and subsequently to all Village Units by relevant districts.
- Three Grievance Hearings were held for solving 624 riverbank gardens cases of Xe Bangfai (200) and Xaibouli (424) Districts. 144 cases were declared valid.
- A Khamkeut Grievance Hearing was held on 16 March for hearing 274 cases of which 122 cases were considered valid.
- Payment for Riverbank Garden compensation was complete for all valid Mahaxai grievances and for the last 3 villages with backwater effect (Nathan, Nahi and Phonsead).
- *Erosion*. The first cross section survey after COD was implemented at the end of January 2011.
- The first fish catch monitoring program 6 monthly status report (covering period of Jan – July 2010) was issued as final. The Fish Catch Monitoring Interim Report that analyzes data until December 2010 was finalized and presented to the IFIs MTR. The first results indicate that :
 - The decline found for the first half of 2010 is continued for the second half of the year
 - There appear to be an NT2 impact in reduced CPUE and decline in reported catches especially for mainstream. It ranges between 25-45% compared with baseline data
 - Exact level of impact due to NT2 operations wasn’t quantified
 - Hinterland villages in Upper-Middle XBF are more impacted than riparian villages in the same fishing zone.
- The Phase 2 report (Vulnerability Analysis) of the DS SES 2009 was released (reference DKS1-S-K-140203-000002A).
- *Water supply*. All 550 boreholes were constructed. 535 from 536 hand pumps have been installed. 24 of 35 sand filters necessary for solving iron issues were built.
- The six villages of Phase 7 were transferred the VIRF fund with some delay at the end of January 11. The first loans were being prepared in 2 villages at the end of the quarter.
- Khamkeut livelihood compensation: the delivery of compensation to Phase 1 to 5 Villages is virtually complete. Khamkeut team concentrates now on Phase 6 villages – livestock mainly.

2. Management

2.1. Relations with other Departments/Divisions

2.1.1. E&S(DSP) and OMD coordination

Discharge restriction / cessation to the Xe Bangfai during Flooding

- On 14 Jan 2011 DSP management participated in a meeting in Vientiane regarding Xe Bangfai flooding issues. The meeting was attended by OMD (JLB), Asset / PPA (LW), E&S (RL, FD, RP), IMS (SD), GoL Relations (PD). . The main outcomes are:
 - a.) Flood event of October 2010 was managed in line with CA procedures
 - b.) Operation procedures for cease discharge require a revision prior to next rainy season that integrate lessons learnt from past cease discharge operations
 - c.) Although minor flooding occurred, no grievances were received thanks due to proper application of cease discharge procedures and notification/information to the GOL about interruption of operations prior to bench mark level.

Water level change notification system

Establishment & operation of “atypical” notification system

- Starting on 6 January OMD has begun to provide daily water level forecasts as previously discussed.
- Atypical system was activated several times during Jan-March; no damage to assets such as irrigation pumps has been reported to DSP.
 - On 3 January 2010 DSP activated the atypical notification system to inform Mahaxai district communities of an anticipated atypical event of ~2m. Substantially less discharge was realized, resulting in the event producing a 1m change in water levels, below the current trigger level.
 - On 7 January 2010 DSP activated the atypical water fluctuation notification system (3rd time during 2010-2011 dry season) to inform communities of the 4 districts of an anticipated atypical event of 1.5 to 2.5m according to the zones.
 - Prior to commencement of the NT2 power station shutdown in late January DSP activated the “atypical” water level notification system for the anticipated power station shut down. Similarly, notification was provided at the end of the shutdown period to inform of increasing water levels.
 - On 18 March for Mahaxai District only. It was anticipated that water levels at Mahaxai would change ~2m; however actual change was ~1m, due to a faster restart of discharge to the Downstream than initially forecasted by OMD.
- DSP collected field data during the shutdown event regarding water level changes which were subsequently provided to OMD for potential calibration of the model used by OMD. The water level village household monitoring during decreasing of DSC discharge to the Xe Bangfai River was held on 22-27 Jan 11, and water level monitoring during increasing of DSC discharge to the Xe Bangfai River was held on 31 Jan – 4 Feb 11.
- DSP now preparing a report to describe the notification system that DSP has established with district counterparts, how it is operated and recommendations to assist with maintaining the system in the future once E&S-DSP is no longer operating the system. The report will include a draft plan of action for transfer of responsibility to be reviewed by departments/divisions concerned. The report will be available before Lao New Year.

2.2. GOL relations

- Two coordination meetings with RMU were held during the quarter.
- DSP management and staff have actively supported the organization of 5 district workshops aimed at preparing the work plan and budget of GoL to be part of the GoL commitment to take over the Downstream activities. (Five districts are Gnommalat, Mahaxai, Xe Bangfai, Nongbok, Xaibouli).
- All 5 workshops were conducted between 23 and 31 March. Last preparation and first workshop were attended by a World Bank representative.
- All district level work plans and budgets were centralized in DSP and will be transmitted to RMU in early April. The work plan and budget produced during a district workshop will constitute the annexes of the official project document that each district has to send to the province for consideration and further consolidation with the plans of the other districts.
- VIRF team leader together with RMU deputy head met Heads and DWG staff of Gnommalat, Mahaxai, Xe Bangfai, Xaibouli and Nongbok so as to encourage them to solve the pending loans.

2.3. Meetings / Missions

- DSP participated in discussions with the social component of the Lender's Technical Advisor (LTA) and organized field visits to selected target villages during their mission #23.
- DSP staff and management had lengthy preparations, including meeting with World Bank in Vientiane, for the IFI "Mid-Term Review" of the Downstream Area (XBF). The MTR started on 14 Feb in Vientiane, followed by a kickoff meeting at DSP office in Thakhek on 15 Feb. DSP staff and managers participated to the various field visits and office discussions during the 10 days of the mission in Thakhek.
- Participated in a meeting on 18 March with ADB Small Holder Project (SHDP) to explore feasibility of SHDP supporting DSP activities as part of the handover phase. ADB has noted that it is likely that SHDP will need to be the vehicle for funding activities related to DSP handover. RMU, ADB and WB participated. Minutes of meeting were provided by ADB. This means that the previously reported ADB interest in supporting transition of the VIRF will likely not be possible.
- VIRF team leader met Xaibouli Deputy Governor and head of DWG to seek out solution of outstanding loans.
- VIRF Team leader together with RMU Deputy Head met XBL Deputy Governor and Nongbok DWG to review field activities planned and performed in Feb 11.
- The livelihood progress meeting of the first quarter 2011 was conducted for one day in TKK/DS meeting room. Twenty seven people from RMU, DAFO, DS/LH field staff attended the meeting. The objective of the meeting was to discuss the progress of livelihood activities implemented during the past three months and the livelihood work plan for the next quarter (Q2 2011).

2.4. Grievances

NT2 DSP Grievance Procedure Manual Version 2.0.

- VGUs of all 179 merged villages (covering the 159 XBF and 39 KKT villages) of 6 districts were trained by District Grievance Coordinators for explaining changes in the revised grievance Manual guideline and providing guidance on village grievance as necessary. Trainings were divided into 28 courses (3-XBF, 4-GML, 5-MHX, 5-NBK, 4-XBL & 7-KKT).
- Total of 564 Village Grievance Unit members have attended the trainings.

- Revised Grievance Manual and grievance forms were provided to all villages and participants.

Grievance status:

- **Khamkeut:**
 - Total of grievance cases of Khamkeut Phase VI villages at District level is 988. There is one additional case from Ban Pong. Total of Khamkeut cases is 989.
 - First investigation and District Grievance Hearing Meeting for 988 cases were organized; of those grievances 561 were considered valid and 427 – invalid at this stage.
 - 73 of 561 were however not qualified as all of them have been interviewed in the 1st round of fishery dependency survey in 2010.
 - Investigation on fisheries dependency and data analysis were completed for all remaining 488 cases (561 – 73).
 - On 16 March 2011 a first group of 274 grievance cases were taken into consideration of DSP-RMU-District Grievance Hearing. Another meeting for 215 cases is scheduled on 1 April.
 - The 1st Grievance Hearing of 274 cases determined that 122 grievances are valid & 152-invalid.
 - Form G for individual complainant will be issued and notified to all individual complainants as soon as the second Hearing for the second batch of grievances is done.
 - Interview and data collection have been completed for all valid cases except 2 complainants who were away from the village and could not be contacted several times (1 from Oudom and 1 from Phonmuangnoi). For both cases, village administration has certified effort of DSP in conducting interview and making data collection from the two complainants.
 - All interview forms were keyed into data base for further use and references.
- ***Riverbank Garden – general***
 - Riverbank garden grievance period is now closed for all villages, except those villages added due to additional backwater in Mahaxai and Gnommalat districts.
 - Forms G of all cases are being notified to grievants and registration of riverbank garden takes place after signing form G.
 - The total riverbank garden grievances from all districts and villages is closed at 1,109 cases of which MHX-292 cases, 7 villages; XBF-200 cases, 15 villages; XBL-424 cases, 15 villages & NBK – 193 cases, 7 villages.
 - As by the end of the reporting period, investigation and grievance hearing meetings had been organized for 916 cases from 37 villages of 3 districts and from those 261 were considered as valid, 640 – invalid and 15 – closed.
 - The last 193 cases from 7 villages of Nongbok will be taken into consideration of DSP-RMU-District Grievance Hearing on 6 April 2011.
 - The table below summarizes the status of RBG grievance processing and compensation payment. More details per district are provided further below.

RBG Use Compensation Program - Grievance Processing - Village Level Summary

Last updated: 7 April 2011

	Mahaxai Cluster 1	Mahaxai Cluster 2	Xe Bangfai	Xaibouli Cluster1	Xaibouli Cluster2	Nongbok	Summary
# of villages submitted grievance	3	4	15	7	8	7	44
# of Grievances	106	186	200	206	218	193	1,109
Grievance Hearing Meeting	2010	2010	6/1/11	14/2/11	15/03/11	Scheduled 6/04/11	
# of Valid Grievances	54	63	61	57	26	34(*)	269(*)
Form G signed (dates)	3-7/9/10	10-15 /11/10	24-28 /1/11	9-19 /3/11	17-23 /3/11	Scheduled 20-25 /4/11	
Registration data collection	17-18 /12/10	11-14 /1/11 & 20-22 /1/11	26-31 /1/11	10-15 /3/11	21/3/11	Scheduled 22/4/11	
Estimated Payment dates	23,25,28 /03/11	23,25,28 /03/11	Scheduled Week #3 04/11	Scheduled early 05/11	Scheduled Late 05/11	Scheduled Early 06/11	
Notes / comments	Closed	Closed					

(*) Figure made available on 7 April (after Nongbok grievance hearing) during the preparation of this report.

- RBG Mahaxai District –**
 - Final number of riverbank garden grievances is 292 cases of which 117 were valid, 170 – invalid and 5 – closed.
 - Payment for the 117 valid cases was done during the reporting period.
 - No appeal to decision of the Hearing was submitted by complainant in Mahaxai district.
- RBG Xe Bangfai District –**
 - Grievance Hearing Meeting was organized for considering 200 grievances concerning riverbank gardens from 15 villages of Xe Bangfai District. Of those, 61 grievances were considered as valid while 139 cases were invalid.
 - Forms G were countersigned by all 200 complainants.
 - Registration was completed in all valid plots and calculation and HIC consultations were completed for all valid complainants.
 - RMU invoice #79 for final Riverbank Garden Grievance Payments in Xe Bangfai District was submitted for processing.
 - Payment is expected before Lao New Year
- RBG Xaibouli Districts**
 - RBG Xaibouli – Group I-** Following Grievance Hearing on 14 Feb DSP has organized RBG field registration for the 57 valid cases. Calculation and HIC consultations were completed for all valid complainants.
 - Requisition has been submitted for payment of these grievances and payment is expected after Lao New Year.

- **RBG Xaibouli – Group II** - The Grievance Hearing was held on 16 March for hearing the remaining 218 cases of Xaibouli District. 26 cases were considered valid and will be processed for registration / payment, 190 were invalid and 2 were closed.
- Form G signature is ongoing.
- **RBG Nongbok Districts**
 - 193 grievances were received from 7 villages of Nongbok District.
 - Investigation, data collection and analysis are completed.
 - DSP-RMU-District Grievance Hearing is scheduled on 6 April 2011.
 - Notification of form G of Hearing will be after Lao New Year.
- The balance of remaining cases is at 1,403 cases as of 31 March.

Household (HH) & community grievances	Remaining cases as of 28 Feb 2010 (A)	New cases during reporting period (district level) (B)	Resolution ⁽¹⁾ during reporting period	Solved cases ⁽²⁾ (C)	Remaining cases at end of reporting period [(D)= A+B-C]	Further action needed for solved cases
RBG cases (1)	817 ⁽⁵⁾	0	639	406 ⁽⁴⁾	411	144 ⁽⁶⁾
Other HH cases (2)	575	414	989 ⁽³⁾	0	989	0
Community cases (3)	3	0	0	0	3	0
TOTAL (1+2+3)	1,395	414	1,628	406	1,403	144

⁽¹⁾ Means an action of investigation or grievance related data collection is carried out but no NT2 grievance meeting (DSP/RMU/Justice) is held yet. No final decision was made yet and accepted by grievant

⁽²⁾ Means the grievant has accepted the grievance decision. Further action may or may not be necessary.

⁽³⁾ **989** grievance cases under this category include (988 – from villages of KKT Phase VI & 1 case from Ban Pong) of which 427 determined as invalid and 561- invalid by the district grievance hearing meeting. From which 561 were submitted to DSP for further investigation and determination through DSP-RMU and District Grievance Hearing Meeting. Two meetings were organized for considering 562 cases as 274 on the 1st meeting and 215 on the 2nd and 73- were not qualified as all they have been interviewed in the 1st round of fishery dependency survey.

⁽⁴⁾ Include XBF and XBL group 1

⁽⁵⁾ Final number of remaining RBG grievances as of 31 Dec was incorrect

2.5. Monitoring

2.5.1. Erosion related

- The erosion monitoring was discussed during the IFIs Mid-Term Review. DSP has informed the IFIs that periodic riverbank observations would continue while the Site Specific Monitoring Program would be discontinued. Discontinuation occurred near the end of the quarter.

Riverbank observations

- The ninth field mission was conducted on 27-29 December to photograph areas of recent riverbank erosion. The report was issued in early January 2011.
- The tenth field mission was conducted on 22- 23 February 2011. Report was issued.
- The eleventh field mission for riverbank observations is scheduled for late April 2011.
- Areas of recent erosion overall remain concentrated in *lower* Xe Bangfai area, but overall quite limited. One area identified with recent erosion is of particular concern – immediately

in front of the historical Navang Neua temple. However it seems that erosion is mainly related to runoff.

- Dangsavanh bank slip
 - On Sunday 26 December DSP was informed that the main steel pipe of the irrigation station of Saova 2-2 was damaged on 22 December due to erosion (slip of the bank that pulled the steel pipe one meter to the river).
 - The DSP and RMU civil engineers visited the site on 27 Dec. The scheme was again operational after the villagers welded two lengths of pipe at the level of the stilling basin. About 140 HH of 2 villages (Dangsavanh and Khamsavang) are cultivating about 250 ha of rice this dry season.
 - DSP consultant visited the bank slip on 21 January and provided a field report. It is considered that it is not a coincidence that this bank slip occurred at a site of an irrigation pump station. Seepage of water from the unlined main canal and through the river bank could have leached out fine clay particles from the bank causing instability of the bank. The most likely future scenario is that the bank slip will worsen and result in a bank collapse, thus causing more problems with the pump station. The water level fluctuations caused by NT2 operation may worsen the situation. No grievance has been filed so far.

Site Specific Monitoring Program

- Conducted January and February 2011 site monitoring, no bank erosion of concern.
- After fourteenth site monitoring of SSMP, the results show that there is no serious of bank erosion around ~100 indicator points.
- The activity was discontinued in late March as it is redundant with the photograph missions undertaken.

Xe Bangfai Cross Section Survey

- The first cross section survey after start of NT2 operation was conducted during this quarter.
- Field survey work carried out during period of outage of powerhouse in January 2011.
- Survey data is being finalized and will be available in April. It is expected that the report will be prepared by next quarter.

2.5.2. Livelihood related

Fish Catch Monitoring(FCM1)

- Downstream fisheries 6 monthly status report. Following comments of NTPC the consultant has provided the final version of the report that was released.
- Collection of Daily Catch Logbook data has improved significantly since DSP hired directly the FCM1 supervisors as NTPC full time consultants in October 2010.
- The Interim Report (limited to Xe Bangfai area only) was prepared and finalized. The report analyzes data of Daily Catch Logbook until December 2010 included.
- The results indicate that :
 - The decline found for the first half of 2010 is continued for the second half of the year.
 - It appears to be an NT2 impact in reduced CPUE and decline in reported catches especially for mainstream.
 - It ranges between 25-45% compared with baseline data but exact level of impact due to NT2 operations wasn't quantified, but year-on-year change in catches cannot explain observed catch decline.

- Hinterland villages in Upper-Middle XBF are more impacted than riparian villages in the same fishing zone. In Lower XBF the CPUE decline is of similar amplitude for hinterland and riparian villages.
- Compensation for hinterland villages is appropriate.
- Long term effects are still uncertain.
- Fourth round of Xe Bangfai Fisheries Observations was done on 16-21 December 2010. The report was issued in January.
- Fifth round of Xe Bangfai Fisheries Observations was done from 7 to 10 February 2011. The report was issued the same month.
- All reports were distributed to RMU (GoL).

Socio-economic survey

- The Phase 2 report (Vulnerability Analysis) of the DS SES 2009 was finalized and released. The draft version was made available for discussion during the IFIs review in mid-February.
- The draft of the 2009 DS-SES Completion Report was submitted by the consultant in February and NTPC comments were provided. The Consultant is currently incorporating DSP comments and the report is expected to be issued in early April.

3. Achievements

3.1. Xe Bangfai Region

3.1.1. Community coordination

- During the reporting period, the update of village household lists by the Community coordination team was limited. The 3 villages affected by unanticipated backwater were added.
- Work for further update has just recently restarted but is a low priority (priority given to full resolution of grievances)

Progress on Household List Update

District Names	Target villages*	Villages updated previously	Update during reporting period	Villages still to be updated
Gnommalat	22	21	0	1
Mahaxai	26	17	0	7
Xebangfai	34	18	0	16
Xaibouli	37	24	0	13
Nongbok	40	24	0	16
Khamkeut	39	39	0	0
	198	143	0	53

3.1.2. Riverbank Gardens Compensation Program

- All non-grievance related payments for Riverbank Garden Use are complete, including in villages not initially included in the 2009 registration campaign (Ban Elan, Veun, Nathan, Nahi, Phonsead).and that are impacted by unanticipated Xe Bangfai backwater

- Finalization of payment plan and payment for all Mahaxai Grievances completed.
- Finalization of payment plan for all Xe Bangfai Grievances completed.
- Registration and compensation calculations complete for first group of valid Xaibouli Grievances.
- Grievance Hearings (two) on Xaibouli grievances held.
- Registration complete for approximately 50% of valid grievances in Xaibouli District.



3.1.3. Irrigation pumps modifications

- Consultant completed work for relocation of electric cabinets in mid-January. No disruption to ongoing irrigation activities experienced.
- C1424 Pontoon Pump Modification on 19 Stations in Mahaxai, Xe Bangfai and Xaibouli Districts: Field inspection for the Defect Liability Period was done on 7-8 Feb 11. Following review of the contract, it was determined that the contractor was not required to replace / repair any works. The contractor has subsequently been instructed to submit an invoice for final payment (10% retention).

3.1.4. Access Restoration in Ban Khoksavang (GML)

- On 6 January RMU has transmitted (to NTPC in Thakhek) the Khammouane Governor letter regarding the proposed access road / funding agreement for the Nam Phit access grievance. The Khammouane Governor is requesting a funding from NTPC (equivalent to the budget for the proposed access road) for repairing the bridge and would constitute the compensation to Khoksavang village for the backwater impact. NTPC has assessed the request and followed up with discussions with GoL.
- Khoksavang grievance: “Form G” from the grievance procedure was signed by the village, but formally rejects NTPC’s proposal of the alternate access road. Khoksavang then formally filed an appeal received at DSP on 29 Jan 2011 as per the grievance procedure.

3.1.5. Water gate rehabilitation

- Five Water Gates Renovation in Nongbok and Xaibouli Districts: Joint field inspection with DSP / RMU and the contractor conducted on 24 Mar 2011 to clarify all defect works during the Defect Liability Period; the contractor has been requested to submit a work plan to repair defects currently evident so that works can be completed prior to the end of the Defect Liability Period, as well as in advance of the wet season. Repair work will start in late April.

3.1.6. UXO Clearance

- UXO clearance support to water supply and fish pond soil testing activity was complete.

3.1.7. Water supply / Sanitation

- Required scope of work: 550 boreholes now required (instead of 549 last quarter).
- To date all 550 boreholes constructed
- Work during the reporting period has focused on the replacement / repair of defective boreholes.
 - In the quarter 25 boreholes were drilled, of which only 20 were productive and
 - 3 boreholes were repaired / redeveloped – 1 failed.
- Construction of Platform, Hand pump installation: 15 HP which means to date 535 of 536 Hand pump installed:
 - Type – A: 11 HP (7 New, 4 Replacement)
 - Type – B: 3 HP (1 New, 2 Replacement)
 - Sand Filter: 1 HP (Replacement)
- For solving iron issues the target is to construct approximately 35 sand filters. To date 24 units have already been built.
- Construction of Community/school toilet: none was added to the program. Total provided is 56 buildings.
- Construction of Household Sanitation: program is now closed. Total provided is 6,575 units, completed 5,381 units
- Sanitation and hygiene training: program is closed.
- Water quality monitoring program have been mobilized on 60 boreholes with 60 samples from DSP BH, and recheck platform label on borehole with W-Series

3.1.8. Livelihood / aquaculture

- This quarter about 390 HH attended a training and 3,600 HH attended a workshop or technical meeting, ~980 HH received extension material and ~160 HH received production inputs (see summary table in Annex).
- Third mission of the new Senior Marketing Advisor to site in January. Awaiting the final reports.
- Four specific rice activities are included in the 2010 – 2011 dry season plan. They are supported by a rice specialist consultant from the RCCRC (Rice and Cash Crops Research Center) in Vientiane. All 4 activities have developed normally without incident during the reporting period.
 - (1) Iron toxicity rice trial (repetition of the trial conducted last dry season).
 - (2) Increasing rice productivity in some ethnic groups' villages (demonstration).
 - (3) Rice production with two different sources of water (Xe Bangfai and Downstream Channel).
 - (4) Multiplication of seeds of 2 submergence tolerant rice varieties for mass and breeder seeds production.

Demonstrations

Iron tolerant rice varieties trial

- The trial is being repeated with 5 HH in 5 villages being involved.

- Five varieties (TDK5, TDK6, TDK7, TDK11 and RD10) are used for this experiment. Two rates of fertilizer are applied (0 and 50 kg/ha of zinc fertilizer).
- No issue during the growing period. Harvest will be done near the end of April.

List of farmers involved in the activity

No	Villages	Districts	Source of water
1	Navang Neua	Nongbok	borehole
2	Pova	Mahaxai	Xe Bangfai
3	Mahaxai	Mahaxai	Xe Bangfai
4	Nakatang	Gnommalat	Nam Gnom
5	Boungbao	Gnommalat	Nam Gnom

Increasing rice productivity in ethnic minority villages (demonstration)

- **Rationale:** in 3 villages (Dang, Nakio, Somsanouk) Mahaxai district with ethnic groups most of villagers are facing rice shortage problem because villagers have been using systematically the same rice varieties for several years, a major part of them being photoperiod sensitive rice varieties not adapted to the dry season: their production cycle is short but it brings very low yield.
- New rice varieties such as TDK-11, TDK-5 or TDK-sub1 are new alternatives to improve rice production in this area in conjunction with a full package of intensive rice production technique.
- The demonstration is ongoing in these 3 villages with 26 HH involved. 860 kilo of non-photoperiod-sensitive rice varieties have been delivered (TDK-11). There was no issue during the growing period so far. Harvest is expected near the end of April.



Demonstration plots of TDK1-Sub1 and TDK11 in Nakio Village (left) and TDK 11 in Somsanouk Village (right)

Rice production with two different sources of water (Xe Bangfai and Downstream Channel)

- **Rationale:** The water now available in the Xe Bangfai, mixing natural and NT2 water, could be considered by some villagers as of lower quality than before discharge started and therefore possibly affecting the rice production.

- A demonstration was set up for comparing dry season rice production using either fully natural Xe Bangfai water or Downstream Channel (DSC) water. The trial is installed in Nakio Village, Mahaxai District and involves 2 HH.
- Pumping from the Xe Bangfai is through the regular irrigation system of Nakio Village and a pumping system was installed in the DSC for pumping NT2 water.
- TDK11 variety is used for this trial (Table 6). This activity is implemented in the area of about 3,759 m² (1,935 m² for NT2 water and 1,824 m² for Xe Bangfai water). Seed was sown on 20/12/10 and transplanting was done on 18/1/11.
- The nitrogen fertilizer (Urea 46%) was applied two times (on 15/02/11 and 28/02/11). The activity has been on going well throughout the growing stage. No issue so far.

Seed multiplication for Submergence tolerant rice

- On 18 Jan 2011 was conducted the workshop on submergence tolerant rice at PAFO; a total of 80 people including 12 women attended the workshop. The participants were from 28 villages (36 farmers), PAFO Khammouane, PAFO Savannakhet, DAFO and DWG of 5 target Districts (Gnommalat, Mahaxai, Nongbok, Xe Bangfai, Xaibouli), NAFES, RCCRC, RMU, Xe Bangfai Seed Production Center of PAFO Khammouane, KDP project and Khammouane District Governor. The objectives of the workshop were to (1) present and discuss the results of two years of submergence tolerant rice trials in Downstream target villages and (2) present the seed production plan in dry season 2010-2011.
- The seed multiplication plan includes 2 components:
 - A mass multiplication of seeds with a number of farmers scattered in all target districts. The seeds produced will be disseminated in a maximum of target villages with flood prone paddy field areas.
 - A multiplication for getting breeder seeds

Mass seed multiplication

- 29 households, 18 village, in 5 districts, involved in seed multiplication for submergence tolerant rice in dry season 2010-2011, with a total area 9.8 ha (refer to table in annex for details). The target of production is 25 tons.
- The activity has developed without incident during the reporting period. The harvest is expected late of April.



Picture: Field in Somsaat village



Picture: Field in Nongping village

Breeder seed multiplication

- Breeder seed technology is usually done only in the Rice and Cash Crop Research Center. However, to ensure the sustainable use of submergence tolerant variety “TDK1-Sub1” in the commodities, the technique is introduced at the village’s level. The objective of the activity is to rehabilitate submergence tolerant rice variety “TDK1-Sub1” in order to maintain purity of the variety.
- The activity is conducted in 6 villages of 3 districts with participation of 6 farmers (see list below). The target is to harvest four thousand panicles.
- Rice growth has been ongoing without incident. There was however insufficient weeding in some sites that needs to be quickly corrected. Nitrogen fertilizer (urea 46%) was applied in February and March 2011. The nitrogen fertilizer is very important for rice growth because it promotes tillering number per planted area in order to achieve higher grain yield. Up to date, rice’s plants are in tillering stage.

No	Village	District	Number of panicles	Seed sowing date	Transplanting date
1	Yangkham	Xe Bangfai	500	6/12/2010	28/1/2011
2	Naphoktha	Xe Bangfai	1,000	3/12/2010	21/1/2011
3	Hatkhamhieng	Xe Bangfai	500	4/12/2010	21/1/2011
4	Kengphosee	Xaibouli	1,000	14/12/2010	15/1/2011
5	Mahaxai	Mahaxai	500	2/12/2011	18/1/2011
6	Somsanouk	Mahaxai	500	7/12/2010	13/1/2011
	Total		4,000		

Livestock

- Workshop on livestock activity strategy plan 2011 with related colleagues as Livelihood Assistants, juniors and DAFOs from 5 districts. The workshop had a particular focus on the red pig breeding program.
- Study trip on livestock in Khoun District, Xiengkhuang Province. There were 21 participants: 8 farmers; 3 DAFO ; 9 NTPC; 1 RMU. The objective was for farmers and NTPC / DAFO staff to exchange with farmers and project staff on successful livestock activities in this area (cattle fattening groups, goat raising groups and native pig raising households).

Forages and other animal feed – Demonstration farms

Rationale

- In the traditional way of livestock raising cattle is usually left without much care and animal is provided with few feed of good quality. It is particularly a problem in dry season. Growing forage is not difficult and some farmers have even opportunities for producing forages in dry season.

Activities.

- After some limited demonstrations in 2009 promotion of forage and animal feeding started really in April 2010 with 15 villages in 4 districts, 34 HH, and 3 HH in 3 villages were selected as pilot for demonstration. Promotion includes:

- Production and use of mineral blocks
- Forages plantation and use of cut and carry system (4 species)
- Forages processing for silage
- Rice straw urea treatment
- During the quarter a training on rice straw treatment by urea and Urea Molasses Mineral Block production (UMMB) was conducted for 6 villages, 34 HHs. The training was conducted in two sessions in Hatxiengdee (Nongbok) and Mahaxai (MHX). The objective of the training was to promote animal feed processing and mineral block production amongst the farmers. 72 mineral blocks was produced. Participants were from Hatxiengdee (13 people, 4 women), Navangtai (3), Kuase (1), Kengsavang (16 people, 5 women), Mahaxai Neua (1) and Mahaxaitai (1).
- 72 blocks were produced during the training and distributed to all participants for testing it with their cattle, buffalo and goat.



Training on UMMB in Hatxiengdee



Training on UMMB in Mahaxai



After the training UMMB has been used for goat



Urea rice straw treatment is now regularly practiced in the farm

Kengsavang cattle farm:

The activity is ongoing. The extension of the watering system was completed by installing 6 sprinklers to supply water to the additional area of pasture. The system is working well. The aim is to produce more forage to feed the cattle in dry season. The farm owner also continues to produce by himself supplemental feed such as urea treated rice straw and Urea Molasses Mineral Blocks (UMMB).

Kuase cattle farm:

After one season of forage production, a new watering system was installed in his farm, with the equipment made of 12 sprinklers to supply water to pasture field. The aims are to (1) have more forage in wet season for silage production, (2) use the silage as complement feed in dry season and (3) improve the pasture field in dry season and increase its production. In total the farm had 16 heads of cattle at the end of wet season, 13 were sold and the farm owner got an income of 37,000 Bahts.

Village fund funded activities

Dry season rice 2010-2011

- Numerous HH (1,464) from at least 27 villages have borrowed from the VIRFs for this dry season. This could cover up to 1,156 ha with a total amount of 1,265,300,000 kip borrowed from VIRFs. See more details in Annex.
- There was no particular incident to rice culture recorded during the reporting period. The harvest is expected in late April.
- 148 HH, in 8 villages of 3 districts has outstanding loan since dry season rice 2009 until now, more detail see table below
- No loans were issued in Mahaxai villages because of the outstanding loans (dry and wet seasons)

Number of outstanding loans by district for dry season rice 2009-2010

District	No Village	No Household	Outstanding loans (kip)
Mahaxai	7	127	200,700,000
Xe Bangfai	1	21	6,900,000
Total	8	148	207,600,000

List of outstanding loans by district for wet season rice 2010

District	No Village	No Household	Outstanding loans (kip)
Xaibouli	7	546	495,800,000
Nongbok	12	1,086	326,946,000
Gnommalat	4	116	109,200,000
Total	23	1,748	931,946,000

Mushroom culture

- Mushroom culture has been demonstrated in the past in Mahaxai area but never expanded. The activity has begun in early 2011 in 3 villages of Xaibouli (Beungxe, Khamsavang, Houayhair) on the initiative of farmers using mainly their own capital.
- The spores (Nanglom variety) come from Savannakhet (Agriculture College); DAFO staff has assisted in training. Farmers have found the market, mainly a local one at village level. There is also auto-consumption.
- The production is still in its first cycle in 2 villages (cycle will finish in May). One village has started a second cycle. Provisional results are shown in the table below.

Xaibouli Mushroom activity provisional results.

No	Village	HH	Number of bags cultured	Production (kg)	Input (kip)	Gross income (kip)
1	Khamsavang	2	2,500	214	1,600,000	3,200,000
2	Beungxe	1	1,000	90	700,000	1,350,000
3	Houayhair	1	900	45	800,000	675,000
Total:		4	4,400	349	3,100,000	5,225,000



Pictures: Mushroom culture in Khamsavang village

- Rattan plantation is expanding to 4 villages in Nongbok District, with 10 HH, total area 2.1 ha. The farmers buy the seedlings produced by the DSP supported rattan seedling group in Ban Phanang (Mahaxai District).

Cattle raising

- An update of the status for Mahaxai and Xe Bangfai districts livestock groups is in Annex. No information was made available for Gnommalat District.

Goat raising

- Following the setup of small scale demonstration goat farm and the organization of study trips a new goat farm was established in Navang Tai Village. It expands from a former demonstration farm. The household now aims at raising the goats for regular marketing. For the moment he has 7 goat and plans to buy 3 more soon. The goat pen was 90% completed through a personal investment (about 4 million kip). Forage plantation will start this wet season.

Handicraft

- Handicraft workshop on evaluation and planning was conducted in Xe Bangfai and Mahaxai districts in 3 sessions. The objective was to (1) evaluate handicraft activity after implementation for several years and (2) narrow down the activity while focusing on quality and marketing. The participants included 80 women (for 3 sessions).

- 3 handicraft group members have joined the handicraft fair during the tourism promotion festival of 5 southern Provinces. The festival was conducted for 6 days. ~20 types of handicraft products were presented during the festival. Products were sold for a value of 6.1 million kip.
- Handicraft groups from 4 districts have also sold their products during Sikhottabong festival which was held for 3 days (15-18 February). Products were sold for a total value of 22,180,000 kip.

Aquaculture

In the first quarter of 2011, main aquaculture activities have focused on preparation for coming cycle of fish culture: (1) establish aquaculture information systems and arrange VDC meeting (2) conduct the training courses for VDC representatives and production group leaders from all 83 targeted villages (3) training farms establishment planning (4) farmer training curriculum development (5) printed extension materials production (6) support HH seed producers for common carp breeding (7) support basic materials for fish breeding to input supply network and providing technical support to households using VIRF for fish culture activities in 6 villages of phase 7.

- In this quarter, fisheries team and DWG technical staff conducted village meeting in 83 villages for explaining on aquaculture options and their investment, sources of technical services and fish seed supply. Aquaculture information boards were provided and fixed in each village. One thousand and four (1,004) persons attended one of the meetings (see table in annex).
- In this quarter, fisheries team and DWG technical staff conducted training courses on aquaculture options and how to write HH activity plan for 167 VDC representatives and group leaders (see table in annex).
- Basic fish culture trainings were organized for 83 households of six Phase 7 villages who will use loans from VIRF for their fish culture activities.
 - **Pond sealing program.** An on-farm experiment was done in Pova Village with one fish farmer that faced this seepage problem near the end of the 2008 dry season (February). The pond sealing experimentation consisted in sealing the pond (10m x 15m x 1.5m) by disposing agricultural lime (40 kg), cow and buffalo manure (100kg), paddy husk (150 kg) and saw dusk (about 200 kg) on the pond bottom and then ploughing and harrowing the pond bottom for mixing all materials with the pond bottom soil before filling with water. In March 2009 water seepage was considered not to be a problem anymore: enough water was remaining for fish raising and even for watering vegetables cultivated on the pond dikes.
 - Before the 2009 wet season the fisheries team replicated the pond sealing program with 6 HH in 3 villages of Xaibouli and Xe Bangfai district. Before the 2010 wet season the pond sealing program was extended to 115 HH in 11 villages of Gnommalat, Mahaxai and Xe Bangfai district. Pond sealing snap shot evaluations were done with 80 HH (out of 105 HH) in November 2010. From water level measurement it was found that 10% of fish ponds did not have retained water, 40% had less than 1 m of water, 21% had less than 1.5 m and 19% had still more than 1.5m. Due to a very tight schedule of work in this quarter, the final evaluation had to be postponed from March to late April 2011 and will be reported in the next quarterly report.

Contract farming

Wet season feed corn

Background.

- Feed corn has been promoted in DS target area since wet season 2008 in wet season, firstly as a demonstration activity. Although facing several important difficulties that first season showed promising results.
- Since 2009, wet season feed corn has started as contract farming activity (5 villages, 30HH, 7.9 ha, 16.7 ton production, sold 16.7 million). The trader came from Thakhek. The activity expanded in 2010 in 11 villages of 3 districts with 56 HH but was affected by the drought in early wet season. The trader this time came from Savannakhet.

2011 activity.

- In 3 districts (XBF, GML, and MHX) a meeting with district authority was conducted with the aim of setting up a steering committee for cash crop promotion at district level, feed corn promotion being part of this. The main task of steering committee is step by step take over the role of facilitator/ acting/ leading of cash crop promotion. The steering committee is composed of: Deputy District Governor, Head of DWG, Head of Financial office, Head of Commerce office, Head of Land Management office and Head/Deputy of DAFO.
- Xe Bangfai, Gnommalat and Mahaxai districts have completed gathering wet season feed corn data. See data below.

No.	District	Villages	HH	Area (ha).
1	Gnommalat	11	69	9.44
2	Mahaxai	6	60	16.6
3	Xe Bangfai	8	68	24.45
Total		25	197	13.49

- It should be noted that Gnommalat District has seen the potential of the activity and has further promoted it in 6 other non-DSP target villages, mainly located on the road to Vietnam at the foot of Sayphou Ark escarpment (53 HH, 4.6 ha).

Value rice TDK11 and TDK8

- TDK-11 is a glutinous variety recently introduced and promoted in the target villages. Its main advantages are high yield, an attractive color, easy milling (few broken rice) and it is also tolerant to iron toxicity.
- 889 farmers from 12 villages in 3 districts (Mahaxai, Gnommalat, Xaibouli) have signed contracts with various miller groups. The total area concerned is about 884.8 ha.
- Xaibouli: 5 villages (Kengphosee, Kangpa, Phakpheua, Somsaat and Phonthan). 56 tons TDK11 and 6 tons TDK8 provided by millers group of Thakhek District.
- Gnommalat and Mahaxai: 7 villages (Dang, Somsanouk, Pova, Mahaxai, Gnommalattai, Houayyen and Boungbao). 7.2 tons TDK11 provided by millers group of Mahaxai District.
- Rice is in growing stage.

Rice VND in dry season 2011

- 2 villages in Xaibouli were successful with rice for Lao Beer factory last dry season. The farmers are continuing the activity this dry season. The trader is from Thakhek rice miller

group. In this moment, rice are in the growing stage; expected harvest is late of April. See the target number below.

No.	Name of villages	HH	Area (ha).	Seed (kg)
1	Phakpheua	10	3.7	250
2	Kengphosee	6	4.0	300
Total		16	7.7	550

Cassava production

- Cassava production is a new alternative cash crop / being considered for contract farming support in DS target area. In last few month Cassava production was discussed in all 5 target districts. The aim was to look at the feasibility to grow cassava in DS target villages and to get feedback from the farmers about their interest. One company below was invited to attend the cash crop workshop that was organized in Xe Bangfai District during the quarter.
- Two companies, a trading import-export Company from Vientiane and another new Chinese company that is settling in Gnommalat District are looking for development opportunities. Some detailed information concerning these companies is listed in Annex 7.
- The first one is expanding in wet season 2011 in Savannakhet, Khammouane and Bolikhamxay Province. Mahaxai, Nongbok and Xaibouli Districts are the ones of interest for DSP.
- The second one is targeting Gnommalat District but is also interested by Nongbok District.
- On 1 April, 2011, the first introduction meeting was conducted in Nongbok district. The aim of the meeting was to get the trader to meet producers and discuss about cassava plantation in Nongbok area (feasibility discussion) and to exchange information. The participants were 26 people with 3 villages involved (Beungsantheung, Muangkhai and Nongbok village). The contract conditions were presented (see in Annex 7).
- Nongbok District authority has accepted to establish a committee to follow up with this activity. For this moment 1 villages, 10 HH of Beungsantheung would like to start this activity in this rainy season with a total area of 10 ha. For the moment, the company is waiting for final data from the village and district.
- Villages expected to be involved for wet season cassava promotion are listed below.

District	Village	Households	Area (ha)
Nongbok	Beungsantheung	10	10
Mahaxai	Mahaxai Neua	4	5
Xe Bangfai	Beunghouana	2	2
Xaibouli	Vern, Tonhaen, Khamsavang	25	25
Total:	6 villages	41	42

Service provision

Rice dryer equipment and rice seed production

- The rice dryer equipment in Somsaat (Xaibouli District) is operational. The 10 HH rice seed production group in Somsaat has been active during this last wet season. Originally made of

10 farmers, the group lost 2 members but gained 4 others from Kengphosee, and Phakpheua Village (2 HH each). Five varieties were produced namely: TDK1, TDK1-sub1, TDK11, TDK8 and one Thasano variety during the last wet season.

- This dry season the seed production group extended to 2 more villages (Naphoktha and Beungxe). The total number of households involved is now 30 HH (Kengphosee – 8, Somsaat – 8, Beungxe – 9 and Naphoktha – 5).
- The area is about 15.1 ha and 5 rice varieties are being produced: TDK-1, TDK8, TDK-11, TDK-1Sub1, VND 95-20. Planted areas are respectively TDK1= 3.2ha, TDK8= 7.28ha, TDK11= 3.86ha, VND= 0.3ha and TDK1-Sub1= 0.49ha. All varieties are high yield popular varieties with high demand.
- Rice is in growing stage with no particular issue. Harvest is expected late April.

Red pig farms

- In May 2009 DSP provided support to the improvement of 5 small farms for (1) producing pure red pig breeders and (2) promoting half bred pigs by mating local sows by the red boar of these farms.
- DSP provided 1 red boar and 1 red sow from Champasak to each of these 5 farms.
- Workshop for reviewing red pig activity was organized during this quarter. Thirty four people attended the workshop: 5 HHs from the red pig farms, 8 HHs clients for half bred pigs, 5 DAFO staff and all livelihood team. The results of the workshop will be made available in the next report.

Aquaculture extension

In the first quarter of 2011, many aquaculture activities have focused on service provision (1) establish aquaculture information systems and arranged VDC meeting (2) conduct the training courses for VDC representatives and production group leaders from all 83 targeted villages (3) training farms establishment planning (4) farmer training curriculum development (5) printed extension materials production (6) support HH seed producers for common carp breeding.

- To strengthening capacity of aquaculture service provision of DAFO, DSP had provided budgets to nine households in five districts for improving training facilities (training building, tables, chairs, boards); HH contribute some wood and labor for construction. These “training farms” will be used as aquaculture training place for DAFO and used as demonstration farms of integrated farming.
- To increase effectiveness of farmers’ training of DAFO technical staff, a farmer training curriculum development workshop was organized with DSP and DWG technical staff to finalize eight farmer training curriculums (contents, process and training and extension materials). Two curriculums (aquaculture introduction and basic fish culture) were already implemented and lessons learned will be used for further improvement.
- One important activity of aquaculture promotion is extension material production. DSP is organizing the production of six printed materials, 4,800 sets, for the 2011-2012 fish growing season.
- Strengthening of fish seed supply in DSP intervention area was started in this quarter by:
 - A) supporting basic materials of breeding (hormone, syringes, Motilium and fish feed for catfish nursing) to six input supply network members in five districts who will sell to any fish seed producer at a standard price; their income will be used as a revolving fund for the future
 - B) supporting HH seed producers on common carp breeding and on preparation for silver barb and catfish breeding in the coming quarter. Eleven HH currently produced 150,000 heads of common carp fingerlings. In Gnommalat district, DSP

had supported 80 kg of broodstock, spawning and nursing hapa to DAFO to conduct the breeding activity. Production plan was developed and DAFO will allocate technical staff for guarding and implementing activity in the coming quarter.

Fisheries Co-Management

- Fisheries co-management activities have been focusing on developing (1) one pilot site in Nong Oun, Khoksavang Village, Gnommalat District (2) integrated water gates management including flood protection and various agricultural water use together with fisheries in Nongbok and Xaibouli District and (3) conduct fisheries resources assessment in Houay Saypay, Xe Bangfai district and Nam Oula, Mahaxai district.

Nong Oun Fisheries Co-Management

- This quarter the Community Fisheries Management Committee (CFMC) has organized fish harvest from Nong Oun in February 2011. However they could not catch fish because of the heavy (natural) presence of many snails of a species that provokes a strong skin allergy. From their observations there were many fish in Nong Oun conservation area. CFMC will continue their fisheries management activities in the coming season.

Integrated Watergate Management and Fisheries co-management

- Referring to the results of water gate stakeholders meetings in November 2010, the water gate management committees were established in Houay Lo and Houay Saleung and the initial management activities were developed. In this quarter DSP and DAFO technical staff conducted the in-depth assessment in 12 villages within both water gates watershed for checking feasibility of management activities proposed by the committees. The formal fisheries management plan will be developed following the results of the in depth assessment in consultation with DSP management including DSP backstopping consultant. Activities behind both water gates will start in the coming quarter.

Fisheries assessment in Xe Bangfai tributaries

- DSP and DAFO technical staff just completed the fisheries resources assessment in 11 villages that use Houay Saypay, Xe Bangfai District and Nam Oula, Mahaxai District. The stakeholders' workshop is scheduled in April 2011 for presentation the assessment results to VDC representatives, village clusters, DAFO and district authorities.
- The first IEC "Community fisheries posters" were drafted (both contents and layout) by the team and the backstopping consultant. An artist will be hired for production in next quarter.

3.1.9. VIRF

- Monthly meetings with DWG heads done in Jan and Feb, except Mar due to DWG's workload and transition workshops with district authorities
- **Ban Dang VIRF embezzlement.**
 - Dossiers related to the wrongdoer submitted to the justice court. The schedule of judging by the court is to be identified.
 - A consultation/clarification meeting done in Ban Dang of MHX, villagers who attended the meeting re-elected VFC, there were clarification of LRA status and change of signatories of Dang VIRF account

- Organized a specific meeting with RMU/Mahaxai DWG to review the issues pertinent to Ban Dang embezzlement issue in order to identify ways in which the VIRF system can be strengthened to prevent similar occurrences.
- On 12 Jan, a workshop was held with participation of GML, MHX, XBF, NBK and XBL DWGs to review the VIRF system. Gaps/issues identified and consequently submitted to DWG heads as their commitment for VIRF efficient and effective improvement
- 65 VIRF or 78.31% (out of 83 VIRF) received the revised VIRF regulation so far.
- Organized accounting training course for 35 VFC members of 7 villages including the 6 villages of Phase 7.
- 330 VFC members or 79.51% (out of 415) trained/retrained in revised accounting system.
- 225 additional HH were reported to have accessed to VIRF for the first time during the reporting period. Overall access to VIRF system is now 76.23 % (from 73.9% in four quarter of 2010) . VIRF access data are summarized in Annex 2.
- On time repayment at the end of quarter 1 of 2011 has slightly increased by 13.07% due to increased VIRF regulation enforcement (see chart in annex).

Phase 7 villages

- Six villages of phase 7 received fund transfer in late Jan. Up to now only two villages requested for loans that are to be disbursed after Lao New Year. Others are under loan processing request.

3.2. Khamkeut Region

3.2.1. Phase 1 to 5 Activity

- 2,840 HH are entitled to compensation. 2,835 HH were already provided compensation. Remain 5 HH who have moved out-in the villages. Four HH have selected livestock and 1 HH selected water pump for rice field. Compensation is being processed and will be completed early in next quarter.

3.2.2. Phase 6 Activity (final phase)

- Compensation for Phase 6 villages is provided only to selected HHs (not all HHs as in Phase 1-5).
- Main options selected for Phase 6 (820 HH) are grass cutting machines (351 HH), various types of land development (33 HH), weir construction (3 HH), pumps (56 HH), cattle (117 HH), goat (71 HH), pig (45 HH), animal pens (56 HH) and catfish in tank (44 HH), pond (7 HH). Twenty four HH selected small shop and 1 HH moved out from village.
- Land development activity: Construction completed for the 33 HH.
- Weir construction completed for all 3 HH.
- Grass cutting machine handed over to all 351 HH. Training completed.
- Water pumps distribution done for 10 HH. Distribution ongoing.
- Training VVW done on 24-26 March 2011.
- Training on Animal Raising is ongoing (29 March-7 April).
- Aquaculture: Cement tank construction completed (44 tanks). Fingerlings to be provided.
- The purchase of animals for 242 HH is the main remaining activity.
- The status as of 31 March is summarized in the table below.

Status	Number of HH	Percentage / status category
Fully complete	407	49.6%
Mostly complete	136	16.6%
Mostly incomplete	242	29.5%
Not yet started	35	4.3%
Total	820	

- However, following resolution of grievance cases a significant number of HHs will be added to the original number of 820 HHs. The additional number of HH is estimated at 260. Consultation for compensation will likely start late April or early May 2011.

3.2.3. Community activities

- Community activities were completed in 24 of 25 villages. It is ongoing in the last village. School improvement in Ban Pakha will be completed during school holiday in May. Equipment's (iron sheets and nails) were provided to village authority.

3.2.4. Other

- UXO: Contract C1818 was closed during the quarter. No more UXO clearance will be implemented. *This means that livelihood compensation activities including soil disturbance will be excluded from the basket of options for HH with valid grievances who will be proposed compensation during the next quarter.*

3.3. Nakai Reservoir Watershed Region

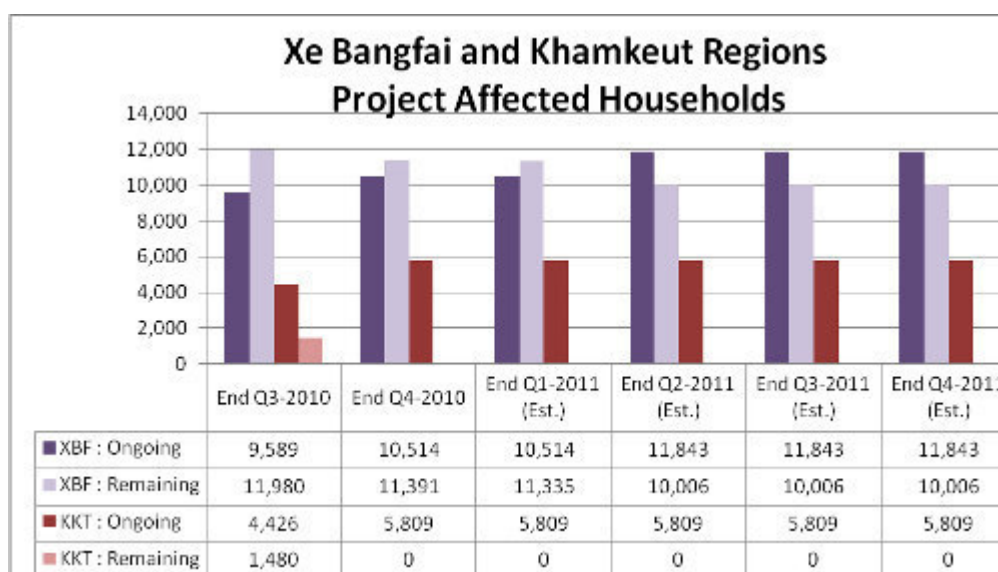
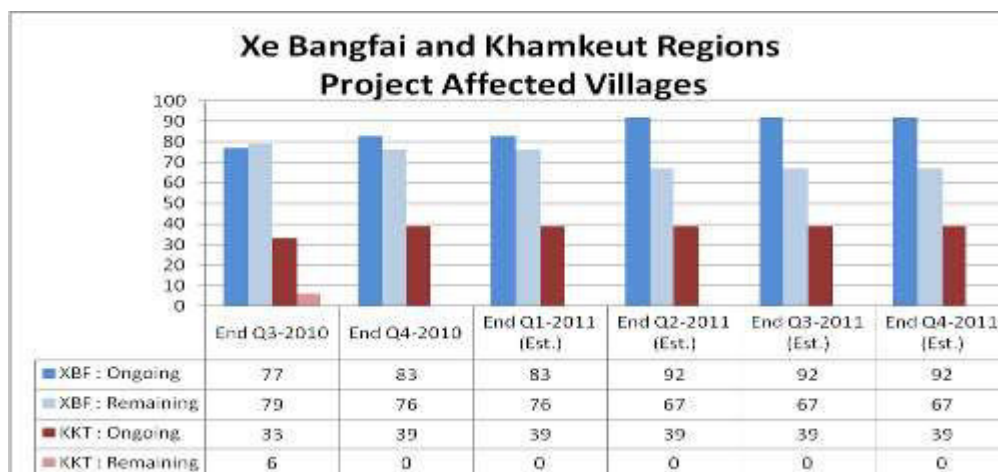
- No update. Fish catch monitoring is ongoing.

3.4. Village Summary

As of the end of March 2011:

- *No change from last quarter.* The total number of villages is now 159 in Xe Bangfai and 39 in Khamkeut.
- Following the inclusion of villages affected by backwater in the Upper Xe Bangfai (upstream of Nam Gnom confluence) and the results of the hinterland villages fisheries dependency analysis, the classification of the Xe Bangfai villages has been reorganized to more accurately reflect the various zones. Refer to annex 5.
- DSP has livelihood related activities ongoing in 83 Xe Bangfai villages (~10,500 HH concerned) and 39 Khamkeut villages (~5,800 HH concerned). No change from previous quarter.
- Household list has been updated to date in 149 villages of which Khamkeut (39); Gnommalat (21); Mahaxai (17); Xe Bangfai (18); Nongbok (25); Xaibouli (29)
- Khamkeut village household lists were revised and several discrepancies noted in the last quarterly report have been reconciled. As a result the total number of households has decreased by 97 units from 5,906 down to 5,809. This last number includes all Phase 6 village households.
- For Khamkeut villages it must be noted that not all households of the Phase 6 villages are receiving compensation (refer to Grievance section). The number of eligible households is 820 out of 2,569. Following resolution of grievance cases a significant number of households may be added to the original number of 820 households. A first grievance hearing has already considered 122 cases as valid. Approximately 140 additional households may be added following the Grievance Hearing to be held on 1 April.

- The AIP included a Xe Bangfai Phase 8 to start in quarter 1 of 2011. Following recommendations of the IFIs MTR priorities have been revised and Phase 8 will not start before mid-May 2011. Phase 9 due to start in quarter 2 is now cancelled. The graphs below include these revisions as well as some adjustments due to update of households lists.
- See updated graphs below with an estimate for the next quarters (Phase 8 in XBF region).



4. Analysis and discussions

4.1. Management

- IFIs mid-term review has been a challenge for Downstream Program. It has consumed a significant part of time and energy of DSP management and team leaders for the preparation and its execution. More time and energy were unexpectedly requested from managers and team leaders for addressing with a very tight schedule a first major recommendation of the MTR, e.g. supporting GoL districts in establishing the district work plans and budgets as a first step in the preparation of the takeover of Downstream activities.

- AIP preparation has also started with the particular difficulty for Downstream Program to plan because of the uncertainty of DSP future.
- Therefore DSP will provide by Lao New Year a short AIP made of 2 sub-plans:
 - Scenario A: the NTPC-Downstream Program will stop activities once the Concession Agreement allocated 16 MUSD are exhausted (likely early 2012) and
 - Scenario B: the NTPC-Downstream Program will extend activities into 2012 through a “bridging phase”.
- Additional workload for the DSP management has slowed down the progress of several activities such as the VIRF consultancy (shares), the WASH O&M system, finalization of Riverbank Garden Documentation and the finalization of access issues. Higher priority will be given to these aspects during the next quarter

4.2. Xe Bangfai

Fisheries: the FCM 1 interim report and the various fisheries observations reports indicates fishermen are facing problems for catching fish because of the additional water and its velocity. Level of impact is still to be determined. In the next 6 month report due in late June the consultant will manage to further evaluate the situation as changes could be due to NT2, to the general fisheries decline or to the annual variations.

4.3. Khamkeut

Late 2010 the slow progress in Phase 6 grievance processing had alerted the DSP management that has increased support for the district to process the grievances faster from the beginning of the quarter. All grievances were investigated by late March but forms G were not yet countersigned by grievants (to be done late April, early May). The schedule for organizing compensation for all valid cases before the start of the wet season remains tight. , provide technical support to all HH during the wet season and be able to close Khamkeut office by the end of 2011.

5. Outlook

5.1. Management

- Atypical Water Level Notification System (AWLNS). OMD will commence review of forecast data to identify potential atypical events and contact district coordinators directly.
- Riverbanks observation; The eleventh field mission for riverbank observations is scheduled for late April 2011.
- The Xe Bangfai Riverbank Cross-section Survey data report will be issued
- The second 6 month Fish Catch Monitoring Report (required by the CA) will be prepared from late May and issued at the end of the next Quarter. The report will cover the available data collected until 30 April 2011 in all 3 DSP zones (Xe Bangfai, Khamkeut, Upstream of Reservoir).
- The next rounds of Xe Bangfai Fisheries observations are scheduled in early April and early June.
- The DS-SES completion report will be released in the beginning of the next quarter.
- A “provisional“ AIP with 2 sub-components will be produced in April. The AIP will be further developed in June-July depending on the scenario chosen for the future of DSP.
- Resources for designing / planning for the DS SES 2012 will be organized.

5.2. Outputs

- All remaining riverbank garden grievances will be processed (and paid) before the end of the next quarter.
- However it is expected that full riverbank garden documentation (including grievances cases) will not be complete until early Quarter #3.
- Revised VIRF regulations including issuance of shares, already delayed, should be in place in the next quarter.
- DSP will be active (VIRF/livelihood activities) in all villages of Xe Bangfai Phase 8 before the end of the Quarter #3.
- All remaining compensation (outside grievances) for Phase 6 villages in Khamkeut will be delivered before the end of the Quarter #2.
- The bulk of compensation for valid grievances in Khamkeut (~260 cases) will be delivered by the end of the Quarter #2.

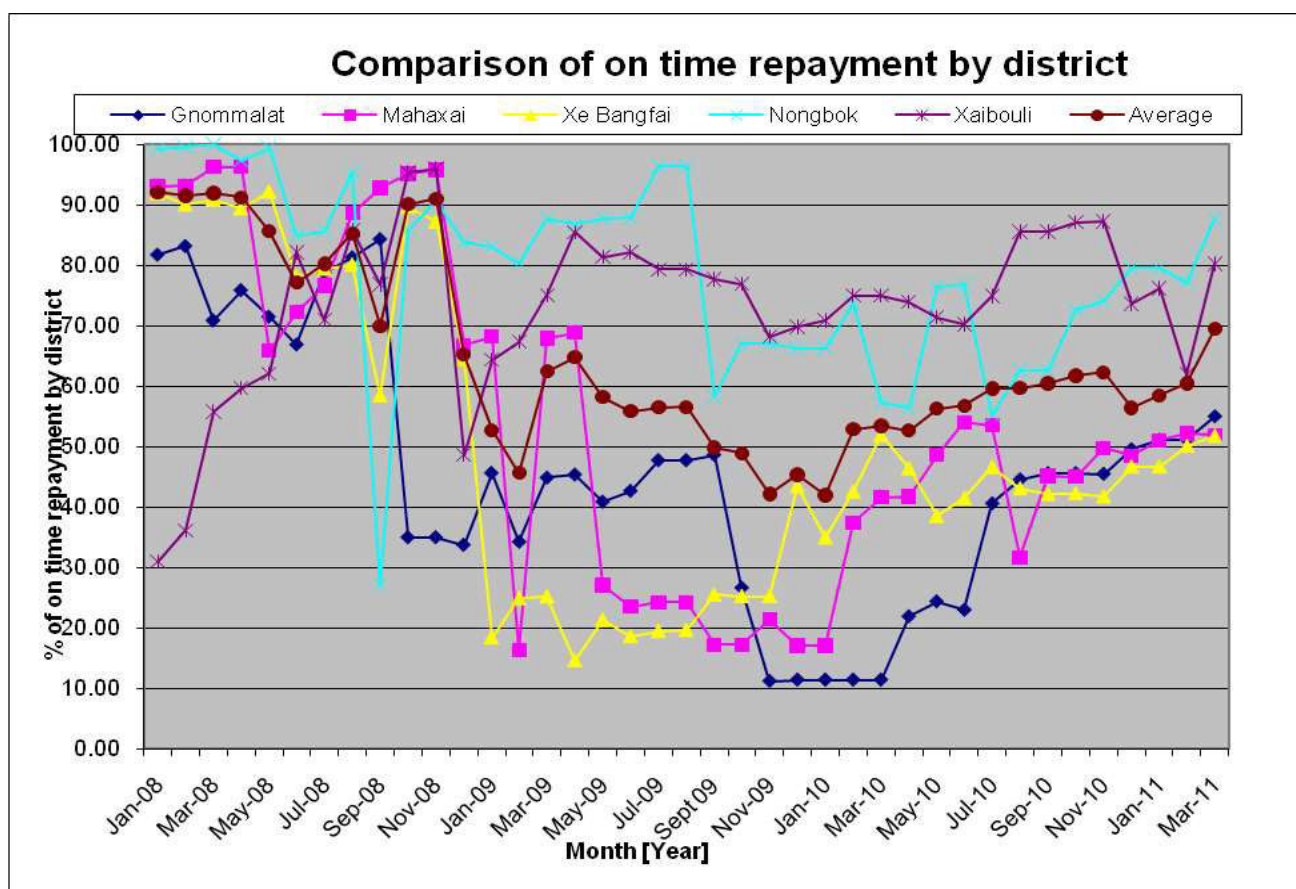
6. Annexes

1. Participation of HH to VIRF per Livelihood Phase at the end of the quarter

Phase	Number of villages	Current total HH	Total participating to VIRF	% of HH participating to VIRF	Total poor	Poor participating to VIRF	% of poor participating to VIRF
1	20	2,514	2,017	80.2	505	319	63.2
2	20	1,723	1,226	71.2	326	180	55.2
3	5	818	717	87.7	206	146	70.9
4	16	2,164	1,892	87.4	285	228	80.0
Total 1-4	61	7,219	5,852	81.1	1322	873	66.0
5	8	1,007	630	62.6	458	205	44.8
6	8	1,294	775	59.9	459	216	47.1
Total 5-6	16	2,301	1,405	61.1	917	421	45.9
Total 1-6	77	9,520	7,257	76.2	2,239	1,294	57.8
7	6	915			145		
Total 7	6	915			145		
Grand total	83	10,435			2,384		

Remark: Total HH and poor participating to VIRF are calculated only for phases 1-6 (total poor of phase 1-6 is 2,239 and poor participating to VIRF is 1294).

2. Evolution of VIRF on time repayment per district



3. Number of Households having received Livelihood support during the quarter

<u>Activities</u>	Training	Workshop / Meeting	Extension material	Production Inputs
Demonstration				
Agriculture	35	113	0	0
Livestock	2	3	12	2
Handicraft	0	0	0	0
Aquaculture	0	0	0	0
FCM2	0	0	0	0
Others	0	0	0	0
Sub-total Demonstration	37	116	12	2
VIRF funded				
Agriculture	3	18	0	0
Livestock	34	7	260	0
Handicraft	0	104	0	0
Aquaculture	113	111	113	0
FCM2	0	0	0	0
Others	0	0	0	0
Sub-total VIRF funded	150	240	373	0
Contract farming				
Agriculture	0	1,542	0	0
Livestock	1	0	0	1
Handicraft	0	0	0	0
Aquaculture	0	0	0	0
FCM2	0	0	0	0
Others	0	0	0	0
Sub-total Contract Farming	1	1,542	0	1
Service Provision				
Agriculture	64	21	230	160
Livestock	3	17	200	0
Handicraft	0	0	0	0
Aquaculture	132	1,004	167	0
FCM2	0	662	0	0
Others	0	0	0	0
Sub-total Service Provision	199	1,704	597	160
Grand total	387	3,602	982	163

4. Downstream of NT2 Power Station (Xe Bangfai) – WASH Status

Water supply construction

<i>Last update</i>	31 March 2011									
	# BH required		# BHs constructed, but need repair						# BHs not need repair (w / pump)	
District	Total	Change since (date)	Turbid	Salt	Iron	Other	Total	Change since (date)	Total	Comment/more clarification
Gnommalat	121	N/A	0	0	0	0	0		121	
Mahaxai	55	N/A	1	0	0	0	1		54	
Xe Bangfai	69	N/A	0	2	0	0	2		69	2BH salt were acceptable
Nongbok	114	N/A	0	2	16	0	18		111	3BH iron to be improved by Sand filter
Xaibouli	191	N/A	1	2	13	0	16		183	2BH salt were acceptable, 7BH iron to be improved by Sand filter
Total	550		2	6	29	0	37		538	

Household Sanitation Construction

District	Total villages participating	Village completion		Total PAHs participating	PAH completion		
		# villages 100 %	# villages >75 %		# PAHs 100 %	# PAHs >75 %	# PAHs Remain + <75 %
Gnommalat	13	3	10	941	231	710	23
Mahaxai	9	6	1	734	445	106	183
Xe Bangfai	13	8	5	897	369	508	20
Nongbok	16	1	9	1,498	109	716	673
Xaibouli	24	8	7	2,505	706	726	1,073
Total	75	26	32	6,575	1,860	2,766	1,972

5. Downstream of Nakai Dam (Khamkeut District) – Livelihood compensation

<i>Last update</i> <i>31 March 11</i>		<i>by:</i>		<i>Planning completed</i>		<i>Compensation Completed</i>		<i>Change since (specify date)</i>		<i>Notes / Comments</i>
<i>Phase</i>	<i>DSP Start date</i>	<i># villages</i>	<i># PAHs</i>	<i># villages</i>	<i># PAHs</i>	<i># PAHs</i>	<i># PAHs</i>	<i># PAHs</i>	<i># villages</i>	
Phase 1	Mar 08	1	107	1	107	107				
Phase 2	Oct 08	5	647	5	647	647				
Phase 3	Oct 08	4	325	4	325	325				
Phase 4	Sep 09	9	1,053 (1,052)	9	1,053	1,053				
Phase 5	Feb 10	6	708	6	708	703				5 HH remaining (livestock / pump)
Phase 6	Aug 10	10	820	10	820*	407				Compensation ongoing for 413HH
THPC/THXP	Jun 10	4	401	4	400	400				
Total	n/a	39	4,061 (4,060)	39	4,051	3,119				

Note:

1. “Compensation completed” indicates material input provided; however technical assistance still on-going for all phases
2. “Planning completed” indicates village level consultations have been completed and PAHs have selected preference for compensation
3. Bold numbers in brackets are current data base numbers that are being reconciled with updated figures from the field.
4. (*) A likely 260 HH with valid grievances will be added in April 2011.

6. Farmers involved in mass seed multiplication of TDK1Sub1 rice during the dry season 2010-2011

No	District	Village	Area (ha)	Sowing date	Planting date
1	Xe Bangfai	Hatkhamhieng	0.38	5/11/10	10/1/11
2	Xe Bangfai	Hatkhamhieng	0.14	5/11/10	3/1/11
3	Xe Bangfai	Yangkham	0.34	7/12/10	6/1/11
4	Xe Bangfai	Yangkham	0.18	11/12/10	6/1/11
5	Xe Bangfai	Naphoktha	0.53	27/11/10	23/12/11
6	Xe Bangfai	Naphoktha	0.33	3/12/10	1/1/11
7	Xe Bangfai	Naphoktha	0.16	20/12/10	23/1/11
8	Xe Bangfai	Naphoktha	0.11	20/12/10	19/1/11
9	Xe Bangfai	Somsaat	0.12	20/12/10	20/1/11
	XBF Sub total:		2.29		
10	Xaibouli	Kengphosee	0.5	12/1/10	7/2/11
11	Xaibouli	Somsaat	0.3	14/12/10	23/1/11
12	Xaibouli	Somsaat	0.5	14/12/10	17/1/11
	XBL Sub total:		1.3		
13	Mahaxai	Mahaxai	0.6	19/12/10	1/1/10
14	Mahaxai	Povatai	0.6	17/12/10	22/1/11
15	Mahaxai	Somsanouk	0,3	7/12/2010	9/1/10
	MHX Sub total:		1.5		
16	Nongbok	Navangneua	0.7	16/12/10	10/2/11
17	Nongbok	Phakeetou	0.5	10/12/10	20/2/11
18	Nongbok	Phakeetou	0.3	10/12/10	15/2/11
19	Nongbok	Navang Noy	0.1	15/1/11	20/2/11
20	Nongbok	Samnadee	0.2	6/1/11	12/2/11
21	Nongbok	Samnadee	0.5	3/1/11	5/2/11
	NBK Sub total:		2.3		
22	Gnommalat	Nongping	0.38	14/12/10	15/1/11
23	Gnommalat	Nongping	0.4	14/12/10	12/1/11
24	Gnommalat	Nongping	0.16	14/12/10	15/1/11
25	Gnommalat	Nongping	0.12	13/12/10	6/1/11
26	Gnommalat	Gnommalattai	0.22	16/12/10	8/1/11
27	Gnommalat	Gnommalattai	0.73	13/12/10	8/1/11
28	Gnommalat	Gnommalat Neua	0.2	16/12/10	10/1/11
29	Gnommalat	Boungbao	0.2	16/12/10	10/1/11
	GML Sub total:		2.41		
	Grand total:		9.8		

7. Villages with VIRF support for 2010-2011 dry season rice production

District/village	Households	Area (ha)	Borrowed from VIRF (kip)	Farmers received (kip)	Remark
Xaibouli					
Houyhair-Naxiengkhan	82	58	65,600,000	65,600,000	
Nasang	130	85	130,000,000	130,000,000	
Beungbouathong	55	30	55,000,000	55,000,000	
Bouakhai	11	7.8	8,800,000	8,800,000	
Sakong	119	75	95,200,000	95,200,000	
Somsaat	130	53	54,000,000	54,000,000	
Kengphosee	97	103	77,600,000	77,600,000	
Khamsavang	6	54	5,400,000	0	Release of funds not confirmed
Kangpa	181	168	144,800,000	0	Release of funds not confirmed
XBL Total	397	255.8	636,400,000	486,200,000	
Nongbok					
Hatxiengdee	157	139.9	125,600,000	125,600,000	
Dongsagnam	54	59.6	43,200,000	43,200,000	
NavangYai	42	47	91,000,000	91,000,000	
Sokbor	103	75	82,000,000	82,000,000	
Phakeetou	45	33.8	36,000,000	36,000,000	
Natai	45	36.9	36,000,000	36,000,000	
Navang Noi	77	82.1	61,600,000	61,600,000	
Navangtai	52	50.3	41,600,000	41,600,000	
Dongphakpheua	60	49.2	48,000,000	48,000,000	
Namphou	76	75			Data not available for money borrowed
Hatxaifong	84	120			-
Samnadee	36	35			-
Navangneua	116	72			-
Sadeu	280	150			-
Phonsaoea	96	76			-
Thamuang	41	55			-
NBK Total	1464	1156	565,000,000	539,000,000	
Xe Bangfai					
Naphoktha	52	26	45,000,000	45,000,000	
Somsaat	19	9.4	18,900,000	18,900,000	
XBF Total	71	35.4	63,900,000	63,900,000	
GML					No borrowed money, because proposal form not clear for the farmer
MHX					No borrowed, because too many outstanding loans
Grand total:	1,103	865	1,265,300,000	1,089,100,000	

8. Villages with VIRF support for cattle raising (data for Mahaxai and Xe Bangfai districts only)

Member Data					Period		Activities		Output					Payment Status				Remark
Dist.	Village	Round	HH	Capital	Start	End	Live-stock	Head	Born	Died	Sale	Con-sumed	Re-main	HH. repay	Payment	Debt or	Time Over	
MHX	Kengsavang	1	12	24,000,000	9/2008	9/2010	Cattle	12	10	1			21	11	22,000,000	1	216 d	NA
	Kengsavang	2	10	21,000,000			Cattle											
	Mahaxai Tai	1	24	48,000,000	9/2008	9/2010	Cattle	24	9	1			32			24	216 d	
	Mahaxai Neua	1	5	10,000,000	9/2008	9/2010	Cattle	5	2				7	3	2,300,000	2	216 d	
	Mahaxai Kang	1	4	8,000,000	9/2008	9/2010	Cattle	4	4				8	3	6,000,000	1	216 d	
	Pong	1	23	46,000,000	6/2008	6/2010	Cattle	23	9				32	12	24,000,000	11	308 d	
	Phanang	1	30	60,000,000	6/2008	6/2010	Cattle	28	20				48	16	23,752,000	14	308 d	
	Somsanouk	1	11	22,000,000	12/2008	12/2010	Cattle	11	2				13			11	125 d	
	Nakio	1	13	26,000,000	5/2009	5/2011	Cattle	13	2				15			13		
	Pova tai	1	14	28,000,000	5/2009	5/2011	Cattle	14	na	na	na	na	14			14		
	Dang	1	6	10,200,000	12/2009	12/2011	Cattle	?	?	?	?	?				6		
	Total		152	303,200,000			0	134	58	2	0	0	190	45	78,052,000	97		
XBF	Thakhor	1	18	36,000,000	8/2008	8/2010	Cattle	18	20	2			36	4		14	247 d	
	Thahat	1	19	42,000,000	5/2008	5/2010	Cattle	19	18				37			19	339 d	
	Kasee	1	10	22,000,000	5/2008	5/2010	Cattle	10	10				20			10	339 d	Old data
	Kengkhaen	1	8	16,000,000	5/2008	5/2010	Cattle	8	10				18			8	339 d	Old data
	Kengpe	1	30	60,000,000	2/2010	2/2012	Cattle	30	16				46			30		
	Kuase1	1	18	18,000,000	5/2009	5/2011	Cattle	18	20	1			37			18		
	Kuase2	1	20	20,000,000	3/2010	3/2012	Cattle	20	10				30			20		
	Dangtha1	1	10	20,000,000	6/2010	5/2012	Cattle	10	20				30			10		
	Dangtha2	1	11	9,900,000	6/2010	5/2012	Cattle	11	2				13			11		
	Naphok1	1	10	20,000,000	6/2010	5/2012	Cattle	10	20				30			10		
	Naphok2	1	17	15,300,000	8/2010	7/2012	Cattle	17	5				22			17		
	Total		171	279,200,000				171	151	3	0	0	319	4		167		
MHX	Mahaxai	1	9	18,000,000	9/2008	9/2010	pig	41	na	na	na	na	41	6	12,000,000	3	216 d	
	Total		9	18,000,000				41	0	0	0	0	41	6	12,000,000	3		
MHX	Mahaxai	1	5	10,000,000	9/2008	9/2010	goat	20	na	na	na	na	20	1	2,000,000	4	215 d	
	Total		5	10,000,000				20	0	0	0	0	20	1	2,000,000	4		

9. Information about cassava production within contract farming

Downstream Program has established contact with 2 companies or their representatives.

Trading import-export Company in Vientiane,

The Company has 2 years of experience to promote cassava production in Vientiane Capital (Xaithany and Naxaythong District) and Vientiane Province (Phonehong, Keooudom, Thoulakhom and Vienkham Districts). The company is looking for new locations for their investment. There are some key features of the company as such :

- Area in this year is expected 3000 ha, but for both wet and dry season is 10,000 ha
- This year the company needs 500,000 tons of product (raw production) >Markets are Thailand, China and Korea
- Buying 320,000 kip/ton raw production in the field, 500,000 kip/ton at storage in Vientiane
- The company is expanding in wet season 2011 in Savannakhet, Khammouane and Bolikhamxay Province
- For what DSP may be concerned the Company is targeting Mahaxai, Nongbok and Xaibouli

Cassava Powder Processing Company in Gnommalat.

This company is located in Gnommalat area. The company would like to construct the factory in Ban Bounbao, Gnommalat District. The factory construction is ongoing and is expected to complete in November 2011. The capacity of the factory is 240 ton per day. The company work through two main traders, who will be dealing direct with farmers as in list below:

- The first trader, resident of Gnommalat-Neua will promote this wet season 200 ha in Bor, Na and Donepeuy villages in Gnommalat District. Trader will invest and buy the product at 150,000 kip/ton raw production in the field.
- The second trader is based in Thakhek District. This wet season 2011, he will promote about 150 ha in Nasaat, Tadthong and Sisomlak village, Thakhek District, and Napao village Xaibouathong District

On 1 April, 2011, the first introduction meeting was conducted in Nongbok district, the aim of the meeting was to get trader to meet producers and discuss about cassava plantation in Nongbok area (feasibility discussion), exchange information of both sides. The participants were 26 people, 3 villages involved (Beungsantheung, Muangkhai and Nongbok village 12 people).

The trader presented their inputs/contributions:

- Cassava material planting – Huy-bong-60 variety, from Thailand, 2,400 pieces/ha (2); barbed wire(3); liquid bio fertilizer (4) pay in credit as mentioned below, all will return after harvest.
 - materials seedling 1/5 (get back of material planting after harvest)
 - provide liquid bio- fertilizer (1litre - 10,000 kip), Barbed wire: 1,5 million kip/ha.
- The key technical specifications are:
- Space of planting: 1,200 hole/ha;
 - Expected yield: 70-96t/ha; if technical guidelines are followed 8-10 kilo/hole can be harvested per plant.
 - Price of cassava (in the field) is 350,000kip/ton, a farmer can get total income about 20-28 million kip per ha .
 - The main cost of investment are land clearing (1), (3 categories)
 - Small bushes price is 1,2 million kip/ ha(1); mid-bushes price is 3 million kip(2);
 - Heavy case, price is 5 million kip(3).

Part 4 Public Health Program

1. Introduction

The Health Program is quite unique and is implemented alongside with the national health program. The aim of the project was to operate through and provide full support to the existing health system which requires continued capacity building.

Improvements in the health service delivery is mainly achieved through a number of interventions such as monthly maternal, newborn and child health (MNCH) clinics, education programs on sexually transmitted infections (STI) for the high risk group and the public at large, improved lab facilities and obstetric and gynecological care.

The NTPC health team provided targeted support to identified needs and gaps that were identified in initial health impact assessments. The overall standard of the health service delivery has improved and the whole provincial health infrastructure has been strengthened. It is anticipated that the current level of service will be maintained and further improved by the existing MOH support.

The HPMU is currently working on the Handing Over Strategy (HOS) with the Provincial and Ministry of Health officials. Following the initial meeting in December 2010, a HOS Workshop was conducted with a team of senior officials from the provinces and the Ministry. The plan is expected to be completed before the end of 2011.

HPMU team believes that continued support through training and supervision will make the health workers understand their responsibilities. Hence, the experiences and lessons learnt will be gradually absorbed and maintained by the government staff leading towards a sustainable program.

2. Summary

The NTPC health team is constantly working on strengthening the health system through comprehensive supervision of health staff at all levels. During the last three months some significant improvements were made as follows:

- All primary health care functions are being carried out by government health workers through the maternal, newborn and child health clinics in all project villages
- The increased utilization of health service improvements, the improved nutritional status of under five children, the reduction of childhood mortality indicate the level of positive impacts triggered by the improved public health services
- A meeting was held on the development of a “Handing Over Program” with the ministerial, provincial and district officials on 29 March 2011 and a special task force was set up to develop the handing over strategy and road map.
- Review on mother and child health program conducted in February reveals further improvements in the nutrition and health status of children under 5 years.
- The health information system is further complemented by quantity and quality of updated data sets.
- A number of meetings were held during the months of January to March with GoL health staff at all levels (i.e. ministry, province, district and health center), village authorities, Institut Pasteur, EDF and monitoring agencies. Meeting events are considered as a capacity building to the GoL counterparts and community health workers.
- Carried out the health center quarterly meetings in Nongbouakham and Sop On ICHCs

- Supported Health Education/Awareness on general health promotion/prevention, prevention of HIV/AIDS/STIs in the project districts
- Mass campaign on community vector control in Khammouane Province and Khamkeut District of Bolikhamxay Province
- In-house film development of health related topics, including the NTPC Health Program
- Ongoing monthly sentinel surveillance on skin rash in XBF area reported 61 cumulated cases during week 5 (2 February) to week 13 (30 March). Week 14 revealed no case.
- Site visits to the Health Program by the following organizations:
 - Various monitoring agencies: HR-Communication Directorate EDF Group, IMA, NTPC Board, WB consultant, Ministerial team,
 - Minerals and Metals Group, LXML Sepon, Director of the Community Programme
- Site visit of Public Health Advisor 27/03-05/04/2011 – to review the Public Health Program, attended various meetings, took part in the development of Handing Over Strategy, wrote and reviewed various reports
- The award received by HPMU from SDT EDF Group to the amount of 10,000 Euro has been earmarked for capacity building of selected GOL health staff who contributed to the projects achievements.

3. Management

3.1. Human Resources

The number of NTPC Health staff and backstopper remains unchanged during the reporting period. The Public Health Advisor, visited the program during 27/03-05/04/2011.

The following training sessions were held for the health workers at all levels:

- Training ICHC staff on the survey tool “rapid assessment of toilet use” in the resettlement area
- Preparation of the training modules and trained new district and health center staff on (1) supervisory and management skills, (2) Overview of the NTPC Public Health Program and the comprehensive primary health care system and (3) Improved management information system and reporting
- Carried out the refresher training sessions for village health workers in Nongbouakham and Sop On areas
- Carried out training session for district hospital staff on drowning/life saving skills by Dr. Xavier from the NTPC/SOS health clinic

3.2. Relations with other Departments / Divisions / Institutions

- HPMU and EMO Coordination:
 - Assisted in carrying out Monthly Sentinel Surveillance of skin rash in Xe Bangfai area by GoL health and HPMU team. Water Quality Control by EMO and AE Lab team.
 - Met with an EDF Specialist, Evaluation des risques sanitaires environnementaux, EDF - Délégation Groupe Santé Sécurité, Service des Etudes Médicales
 - Field investigation with AEL team in Xaibouli and Nongbok Districts

- HPMU and NRO: Reviewed the LSMS data round 1 to round 5 and modified the questionnaire on health and fertility sections for round 6. Discussed with NRO monitoring team on the development of the Food Flag (major food groups) to be used for the food consumption monitoring in the resettlement villages
- HPMU and Human Resource (HR): Drafted the best practice of the NTPC Health program for 2010 EDF-CSR agreement review
- HPMU, Swiss Tropical and Public Health Institute (STPHI) and Emerging Pathogens Institute, Florida University – a joint publication preparation in its final stages
- HPMU and IP Lao and PHO Collaboration:
 - Attended PHO-IP-NTPC meeting:
 - Appointment of a new IP medical officer, to fill vacancy created
 - Hospital In-patient, birth and death data collected by the previous IP Medical Officer is not usable because of its incompleteness
 - Brief overview of the NTPC's E&S structure and the Health Program to the new IP Nakai medical officer
 - Assisted the district health teams in preparation of the vector control campaigns to reduce the mosquito breeding sites in all nine districts of Khammouane Province and Khamkeut district as follows:
 - Carried out the vector control workshop in Khammouane Province
 - Setting and resetting up of the District Vector Control Committees in 10 districts
 - Mass campaign on community vector control and completed in Xe Bangfai, Xaibouathong, Nongbok, Hinboun, Boualapha and Khamkeut Districts. The campaign is ongoing in Thakhek, Mahaxai, GMLT and Nakai Districts
 - Reviewed and commented on IP Annual Report (2010-2011)

3.3. GOL Relations and Interactions

- NTPC health team works in close collaboration with GoL Health Sector by providing technical advice through meetings, on the job training, feedback sessions and comprehensive supervision.
- Reorganized the provincial and district supervisor team. Followed up by training session on the supervisory and management skills
- In view of sustainability and ownership of Health Program, a Handing Over Strategy (HOS) was drafted and submitted to MOH
 - Site visits to the health facilities of the ministerial team
 - Organized the First Handing Over Strategy Meeting with MOH, PHOs and DHOs on 29 March 2011

Following decisions were taken at the meeting:

- Setting up the Task Force for building the strategy on “Handing Over Process”.
- NTPC Health team will service the group in finalizing the HOS and submit it to MOH for review.
- The next meeting of the Task Force is planned for 4-5 July 2011 in Khamkeut District Office.

3.4. Meetings (related to management, outputs and decisions)

HPMU team met with provincial, district and health center staff on a regular basis and as required during supervision visits, quarterly meetings and other health related activities. The opportunity was used to provide practical training and monitoring to the HC staff and village health workers. A number of meetings were carried out during the last three months as follow:

- Updated and feedback of the site visits to four project districts and plans for the first quarter to doctors from PHO
- Attending IP-HPMU monthly meeting
- Attended meetings with the following monitoring missions:
 - LTAs team
 - Reviewed the CA database with IMA team following the site visit to Nongbouakham Integrated Community Health Center (ICHC) and GMLT and MHX District Health Offices
- Attended the Maternal, Newborn and Child Health (MNCH) and Nutrition Task Force, Ministry of Health
- Discussed with NRO monitoring team on the development of the Food Flag (major food groups) to be used for the food consumption monitoring in the resettlement villages
- Met with EDF Specialist Wallet, Evaluation des risques sanitaires environnementaux, EDF - Délégation Groupe Santé Sécurité, Service des Etudes Médicales
- Attended the health center quarterly meetings in Nongbouakham and Sop On ICHCs
- Organized the Handing Over Strategy (HOS) Meeting with MOH, PHOs and DHOs on 29th March 2011
- Attended district monthly meeting in four project districts

3.5. Awareness and Health Education

- Carried out mass vector control campaigns in full collaboration with district, provincial and IP completed in five districts (Gnommalat, Khamkeut, Xe Bangfai, Xaibouathong and Hinboun) and ongoing in another five districts (Nakai, Thakhek, Nongbok, Boualapha and Mahaxai)
- In-house film development of the following in Lao version:
 - NTPC Health Program film (Lao version) – Source of information: EDF Head Quarter
 - In-House development and updated of NTPC Health Program film (both in Lao and English versions)
 - Life Cycle of Aedes Mosquitoes (English version and translated in Lao) – Source of information: National Environment Agency - Singapore

3.6. Health Service Delivery Development

- Comprehensive primary health care support was provided to the ICHCs through the monthly maternal, newborn and child health (MCH) clinics in all project villages.
- The HPMU team participated in the quarterly Mother and Child Health review with health center staff and village workers on the Nakai plateau and provide support on the quality control as well as the health service provision. The review's result show improvements in nutrition status of children under five in the resettlement area (see annex 2) .

3.7. Monitoring

- Ongoing monthly sentinel surveillance of skin irritation in Xebangfai area, Ongoing monthly sentinel surveillance and reporting on skin irritation in XBF area, there were 61 cases during week 5 (2 February) to week 13 (30 March). Week 14 revealed no case.
- Further to the improved health information system in the impacted areas, the methodology transfer has been planned to other non-project area of Khammouane Province and Khamkeut District by PHO and DHOs under the Lao-Luxemburg support.
- Regular supported in supervision to all health facilities in four project districts
- Assisted in carrying out monthly MCH clinics in the target villages
- Assisted in carrying out the quarterly review of maternal, newborn and child health clinics in the resettlement villages
- Conducted the rapid assessment of toilet use in conjunction with Nakai Health district in the resettled community (in view of continued high hookworm infestation)
- Reviewed the LSMS data round 1 - 5 and modified the questionnaire on health and fertility sections for round 6
- Conducted the maternal death investigation in GMLT District
- Updated the summary of Public Health Program progress 2005-2013

Site Visit of the following missions:

- IMA team to Nongbouakham Integrated Community Health Center (ICHC) and GMLT and MHX District Health Offices
- Director, NTPC Board to the Nongbouakham ICHC
- WB consultant mission to Nakai and Mahaxai District Hospitals and Bouama and Phonelay Villages on benefits of hydropower projects
- HR-Communication Directorate EDF Group to Sop On ICHC
- Accompanied the Ministry of Health officials to the following health facilities:
 - Nadou health center and Mahaxai district hospital
 - Khedphit health center and Gnommalat district hospital and GMLT land fill
 - Nongbouakham and Sop On ICHC and Nakai district hospital
- Site visit of Public Health expert who joined the following activities:
 - Site visits to the health centers with the ministerial team
 - Attended handing over workshop
 - Conducted maternal mortality and district supervisor meetings
 - Report writing on the toilet use in the resettlement area
 - Attended IP-PHO-NTPC monthly meeting
 - Reviewed and commented to the IP Annual Report
 - Feedback on the progress of the health program and planed for future visits.

4. Achievements and impacts

4.1. Human Resource Development

- A process of handing over strategy is being developed with the provinces and Ministry of Health and HOS is expected to be completed by the end of the year.
- The Annual Review Workshop was conducted on 15 Dec 2010. The response of the stakeholders (district and provincial staff) was encouraging. There was a genuine interest among the district staff to move towards taking over more responsibility and work towards sustainability of the public health support program.
- Further strengthening of GoL capacity building through regular meetings, on the job trainings and comprehensive supervision of health staff.

4.2. Awareness and Health Education

- Knowledge on health issue was gained through regular health education sessions on the prevention of common diseases to general population during the outreach program and on the prevention of STIs/HIV/AIDS to the high risk group.
- Completed the community vector control campaigns in full collaboration with district, provincial and IP completed in five districts and ongoing in another five districts.

4.3. Health Service Delivery Development

- Increasing of health service delivery within health facility and in the community.
- Capacity of health staff was further strengthened. This is reflected in the wider range of services that were made available at the district health center and community levels which includes full primary health care functions.
- The nutrition status of children under five and adults of the majority of resettlers are improving (refer to annex 2) and reflect the positive impact of the monthly MCH clinics.

4.4. Surveillance and Monitoring

- Continuous monitoring of the health facilities in order to improve the quality of the health services and the health information system. Vital information like births and deaths as well as other health indicators to be collected and computerized. Followed by the feedback sessions to each health facility through regular supervision visits.
- Improved health information system through the strengthening of GoL health staff and comprehensive supervision by HPMU team. The main focus of the NTPC health team for 2010 onwards and to make the provincial and district health staff to take over the function of supervision and support of the health workers at grass root levels.
- Information is shared with NRO to take adaptive management measures.

4.5. Collaboration with Other Institutions

- Monthly meeting with IP and PHO. Reviewed IP Annual Report 2010-2011
- Swiss Tropical and Public Health Institute, Basel, Switzerland and Emerging Pathogens Institute, University of Florida, Gainesville on the preparation of manuscript for publication

The following publications were made through the above collaborations:

- Selected health related publications have been posted on the NTPC Public website

5. Analysis and discussions

5.1. Management

- Overall, the health program is running smoothly as planned.
- First Handing Over Strategy Workshop with the ministerial, provincial and district officials on 29 March 2011.

5.2. Outlook for April to June 2011

Management

- Comments received from the workshop held in March 2011 are being incorporated within the strategy. An updated draft will be circulated before the next meeting in July 2011.
- Apart from regular support provided by the Health Advisor, the following specific task are planned for the next three months:
 - Finalization of rapid assessment of toilet use in the resettlement area
 - Update of births and deaths data for review of findings in improving the health planning and capacity building
 - Finalizing the pending publication

Meetings

- District monthly / quarterly meetings
- Health center quarterly meeting with village health authorities in each locality
- PHO-IP-NTPC monthly meeting

Trainings

- Specific and need based on the job training is required at all levels and suitable trainers have to be identified
- The award received by HPMU from Sustainable Development Trophy (SDT) EDF Group in the amount of 10,000 Euro has been marked for capacity building of selected staff members in the project area. Three staff will be sent for long term training from quarter II onwards.

Awareness and Health Education Program

- The mitigation measures and awareness raising of sexually transmitted infections (STIs) including HIV and AIDS among the high risk group in the district municipalities is ongoing
- Preventive and curative health care to women in the reproductive age is provided through the monthly maternal, newborn and child health clinic
- Continue to strengthen the Vector Control Campaign in the Khammouane Province. Continue the community vector control in Nakai, Thakhek, Nongbok, Boualapha and Mahaxai District

Health Service Delivery Development

- Monthly maternal, newborn and child health clinics in all target villages. Quarterly MCH review in Nakai plateau in May 2011.

Surveillance and Monitoring

- Report writing of the rapid assessment of toilet use in the resettlement villages
- Continuous health monitoring through district health service and outreach program
- Monthly sentinel surveillance of skin rash in the riparian villages along Xe Bangfai river
- Reviewing of family health files, birth, deaths and other health indicators in all target villages in four districts

Publications

- Publications on the NTPC health program are under the preparation in close collaboration with STPHI and Florida University.

6. Annexes

Table 1: Summary of training, meeting, health education sessions, integrated outreach/ MCH program and FCMP activities since May 2005 to 31 March 2011

No.	Activities	Jan-Mar 2011		Cumulative (May 2005 - Mar 2011)		Remarks - Attendance rates
		No. of sessions	Participants	No. of sessions	Participants	
1	Training at community level	3	412	117	3,295	59.6% are female
	Training at health center and district level	5	153	192	2,476	50.7% are female
2	Meeting at community level	2	40	111	3,800	43.1% are female
	Meeting at district and provincial level	9	154	314	6,029	41.8% are female
3	Awareness and Health Education Program	74	4,382	1,854	165,209	57% are female
4	Monthly Maternal, newborn and Child Health Clinic	285		4,578	95 clinics per month	

Table 2: Attendance Rate on Growth Monitoring of children under five by health facility in September 2000 and March 2011

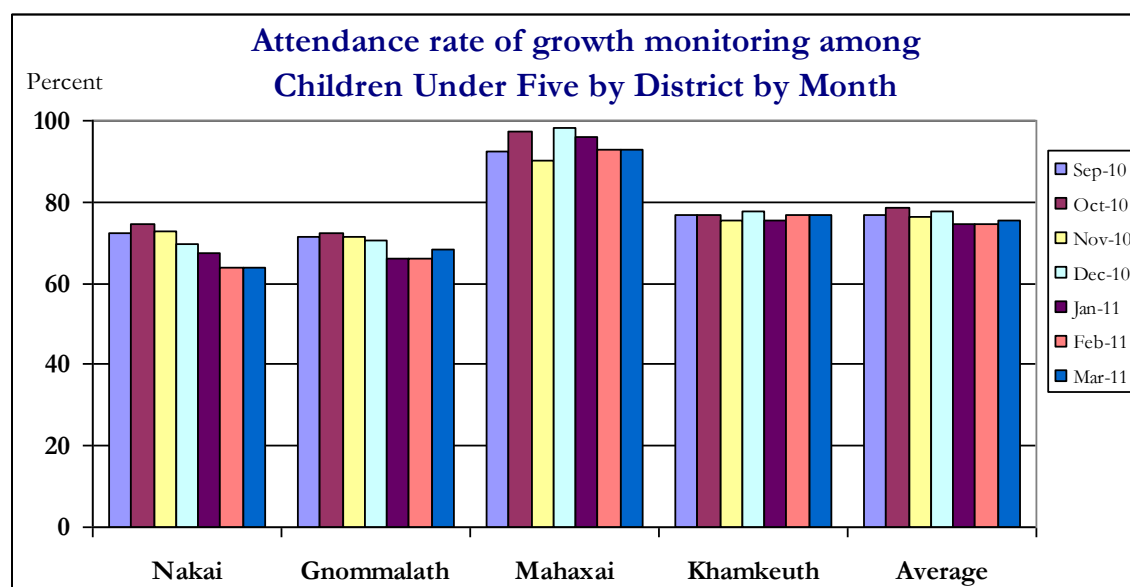


Table 3: Nutrition Status of children under five and adults in the resettlement area

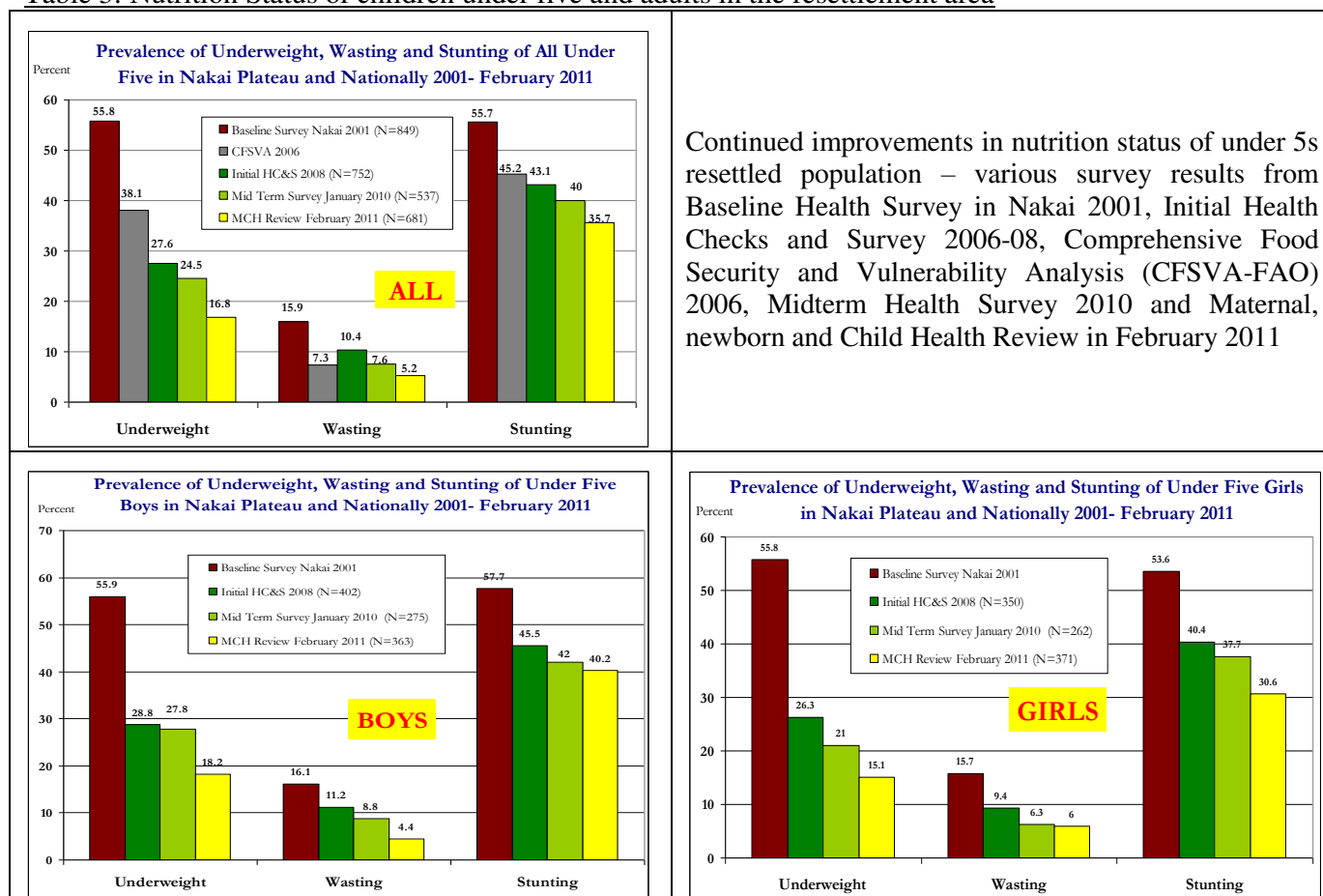


Table 5: Numbers of Outpatients, Inpatients and bed occupancy rates by the health facility in November 2010 and February 2011

	Number of OPD patients					Number of IPD patients					Bed occupancy rates				
	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11
Nakai DH	556	501	379	425	377	49	35	26	39	52	17.8	13.5	12.7	16	23.3
GMLT DH	316	144	177	204	417	103	94	103	90	146	27.4	28.4	28.4	21.7	36.7
MHX DH	358	278	261	319	329	36	32	24	39	52	23.2	21.3	15.5	24.5	26.7
KK DH	351	518	731	1011	568	700	798	672	249	700	85.1	87.4	71.5	63.8	79.9

Part 5 Environmental Management Office

1. General

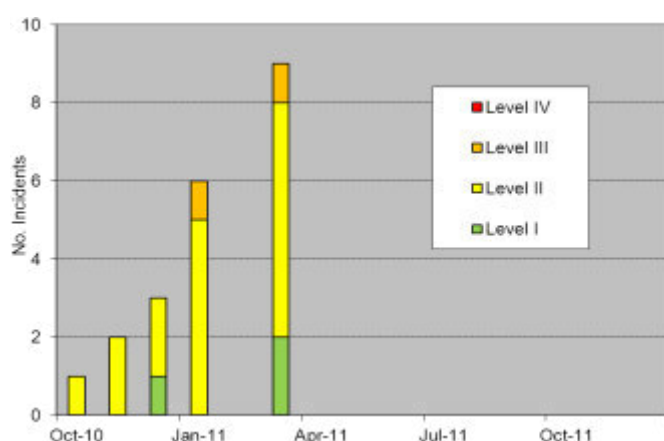
The report summarizes activities undertaken during First Quarter of 2011 under the Company Environmental Management and Monitoring Plan being implemented within an Environmental Management System framework.

2. EMS Internal Audit

The Health, Safety and Environment Management System (HSE MS) internal audit plan was finalized with internal HSE MS audits to commence in late April.

	4.1 General Requirements	4.2 Policy	4.3.1 Environmental Aspects - Health and Safety Risks	4.3.2 Legal and Other Requirements	4.3.3 Objectives and Targets	4.3.4 HSE Management Programs	4.4.1 Structure and Responsibility	4.4.2 Training Awareness and Compliance	4.4.3 Communication	4.4.4 IMS Documentation	4.4.5 Document Control	4.4.6 Operational Control	4.4.7 Emergency Planning and Response	4.5.1 Monitoring and Measurement	4.5.2 Evaluation of Compliance	4.5.3 Nonconformance, Corrective and Preventative Action	4.5.4 Records	4.5.5 IMS Audit	4.6 Management Review
Events/2011	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Conducted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Status	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Apr-11																			
May-11																			
Jun-11																			
Jul-11																			
Aug-11																			
Sep-11																			
Oct-11																			
Nov-11																			
Dec-11																			

3. Incident Reporting



- 15 environmental incidents were recorded. The majority of these incidents were either non-conformances or near misses which show an increased awareness and reporting of environmental hazards by NTPC staff.
- Two environmental incidents were deemed to be Level III. These incidents resulted from:
 - Inadequate HazMat waste storage area at the Power Station; and
 - Inadequate maintenance of the grease trap at RNT.
- The increase in reported incidents during Quarter 1 was due to:
 - Continued implementation of training for the QHSE Online Incident Reporting System;
 - Increased use of the QHSE Online Incident Reporting System;

- The increased work resulting from the 200-hour & 168-hour outages; and
- The commencement of Joint Site Environmental Inspections at NTPC residential facilities by EMO and AD.

4. Corrective & Preventative Actions

One Corrective Action Plan was developed for the Level III environmental incident relating to inadequate HazMat storage at the Powerhouse, which was recorded in January. The actions identified in this plan are ongoing with the design of new HazMat storage facilities nearing finalization.

For the Level III environmental incident relating to the maintenance of the RNT grease trap, discussions have already been held with the contractor and a larger grease trap will be installed.

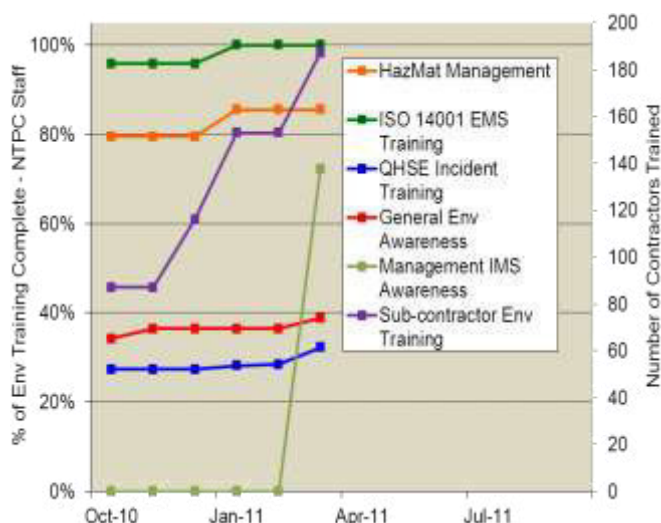
5. Environmental Improvement Plan

The 2010 Environmental Improvement Plan is complete as of 31/03/2011. The 2011 Environmental Improvement Plan was developed during March and will be finalized in April.

Action Plan Item	Status	Summary of actions at 31/03/2011
AEIP20101 – Hazmat Reporting System	Complete	<ul style="list-style-type: none"> QHSE Incident Reporting System is currently operational. New Hazmat storage areas for the Power Station is in the design and budgeting phase. The third quarterly Hazardous Material Inventory of NTPC facilities' was conducted.
AEIP20102 – Chemical Management Database	Complete	<ul style="list-style-type: none"> This action item is complete. However, as an operational improvement, the password protected Excel database is currently being transformed into a "sql" database and integrated with SharePoint.
AEIP20103 – Hazmat Spills Response Time	Complete	<ul style="list-style-type: none"> No serious HazMat spill has occurred since the commencement of the EMS. Hazmat spill training materials have been developed and rolled out to E&S, OMD and AD staff.
AEIP20105 – Waste Management Strategy	On going	<ul style="list-style-type: none"> The waste segregation system is now being rolled out and waste management training is currently being provided to all NTPC staff, residents and contractors working at NTPC facilities. Additional waste infrastructure to facilitate the waste segregation scheme is now on site. A new waste separation building has been constructed at Gnommalat Solid Waste Facility, and significant improvements have been made on the separation and storage of wastes. The HC has obtained a quote for the construction of a high temperature incinerator for HazMat waste. This represents the best long term solution for the majority of NTPC's non waste oil, Hazmat waste from the operations phase of the project.
AEIP20106 – Effluent Management	Complete	<ul style="list-style-type: none"> The data show that the modifications to the dosage regime continue to be effective in improving the performance of the Chlorine disinfection plants on the RNT and Powerhouse WWTPs. There was a slight deterioration in the performance of the system observed in late March. This observation is now being followed up with the contractor responsible for the operation of the systems.

Action Plan Item	Status	Summary of actions at 31/03/2011
AEIP20107 – Hydrogeological Study of Gnommalat Solid Waste Facility	On going	<ul style="list-style-type: none"> Groundwater modelling is still in progress. The study is scheduled to be completed by Quarter 2, 2011.
AEIP20108 – Human Elephant Conflict Management	Complete	<ul style="list-style-type: none"> No HECRU call outs. The mean response time for those call-outs from April 2010 to March 2011 was within the target of less than 48 hours.

6. Environmental Training



Environmental Training Activities during Quarter 1 include the training of:

- 19 NTPC staff on QHSE online incident reporting system;
- 9 NTPC staff on General Environmental Awareness;
- 13 Senior NTPC employees on IMS awareness;
- 5 Employees on HazMat Management; and
- 100 Contractors on various environmental issues; including training in the waste separation scheme.

7. Waste Management

Since the new contractor for waste collection and disposal commenced work in January 2011, there appears to have been improvement in removal of recyclables and covering of the waste cell. The contractor has accumulated a large volume of recyclable to sell to local vendors. Additionally, the construction of a new waste separation building and toilets was completed and will assist in the continual improvement of waste management at the site.

The repair the HDPE liner and modification of the discharge of the leachate treatment system at Gnommalat landfill was completed.

An “at source” waste separation system an NTPC’s non-industrial and industrial sites was implemented. Training of NTPC employees, residents and contractors commenced during March 2011 to support the roll out of this new system.

8. Hazardous Materials and Contamination Control

A review of the HazMat storage facilities at the Power Station was conducted in February. This review identified the following HazMat storage requirements at the Power Station:

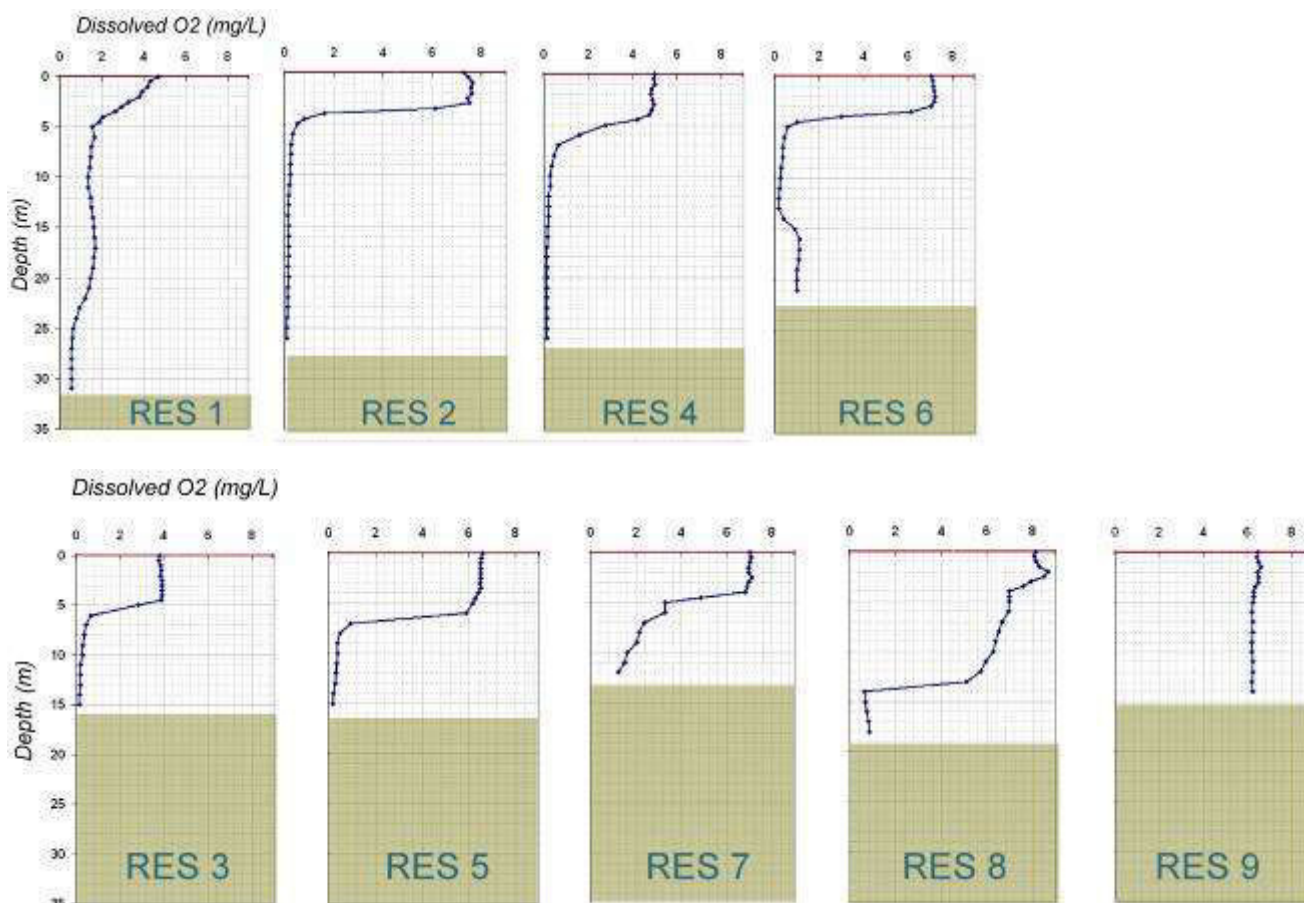
- A new oil drum storage area is required to replace the degraded, insufficiently bunded, unroofed, area to the rear of the Power Station warehouse;
- The internal HazMat storage area needs to have shelving installed to increase the storage capacity;

- The containers currently used for bulk chemical storage area are insufficient. A new air-conditioned area needs to be constructed to house these chemicals; and
- A general HazMat and HazMat waste storage area needs to be constructed to the rear of the Power Station.

All of the required structures are currently in the design and budgeting process.

9. Water Quality Monitoring

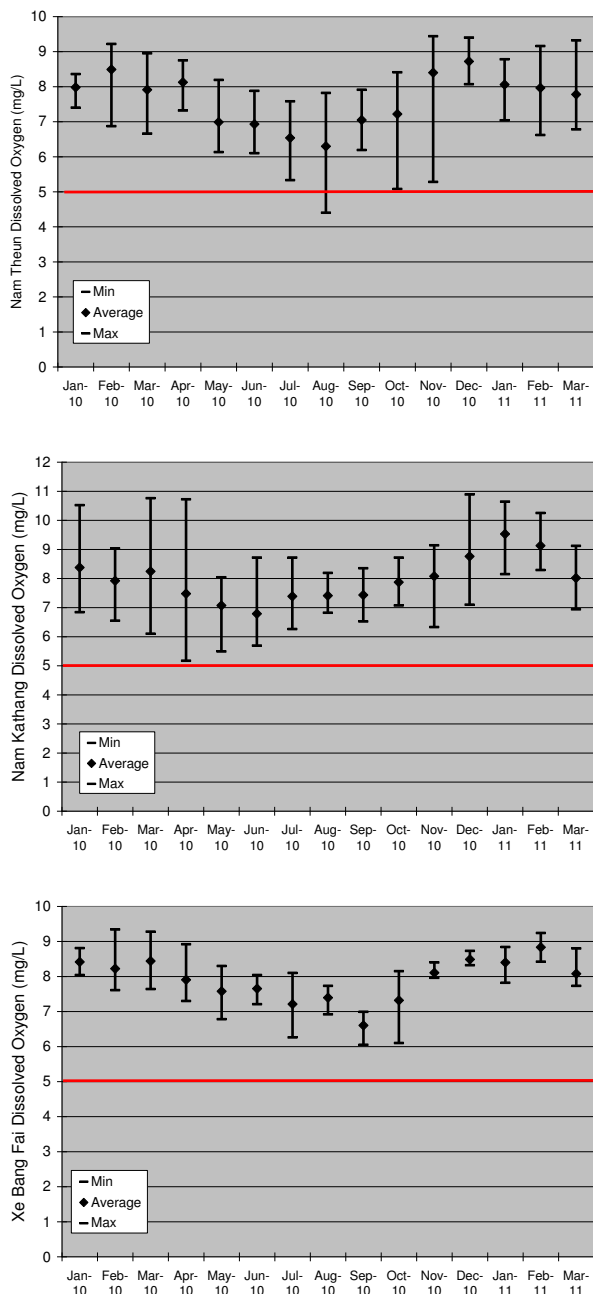
9.1. Reservoir



- The water column at the Intake has remained relatively homogenous with high Dissolved Oxygen entering the Intake.
- In January the reservoir was not thermally stratified due to cool air temperatures and windy conditions. In general, during this period, the eastern reservoir exhibited low to medium levels of Dissolved Oxygen throughout the water column, and the western reservoir exhibited high levels of Dissolved Oxygen throughout the water column.
- In February and March, thermal stratification started to form and strengthen. In March 2011, the reservoir Dissolved Oxygen profiles (see graphs above) are as follows:
 - Most of the reservoir is now thermal stratified and consistent with an increase in solar radiation and decrease in windy conditions.
 - For the reservoir west of Thalang (RES 1, 2, 3, and 4), high surface Dissolved Oxygen (4-7 mg/L) becoming anoxic or near anoxic at a depth of 5-7m. Although no anoxia measured at the Dam Site (RES1), Dissolved Oxygen decreases below 2 mg/L at a depth of 5m.

- For the reservoir east of Thalang (RES 5, 6, 7 and 8), high surface Dissolved Oxygen (6-8 mg/L) becoming anoxic or near anoxic at a depth of 5-13 m.
- For the Intake (RES9), water column was homogeneous with high Dissolved Oxygen (>6 mg/L) throughout the water column entering the Intake.

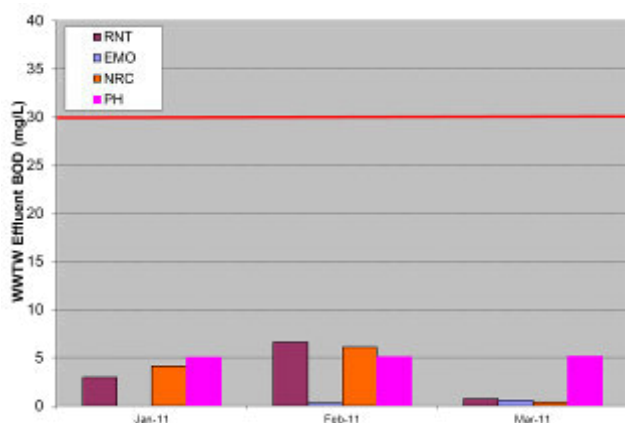
9.2. Downstream



Key WQ results related to Project releases:

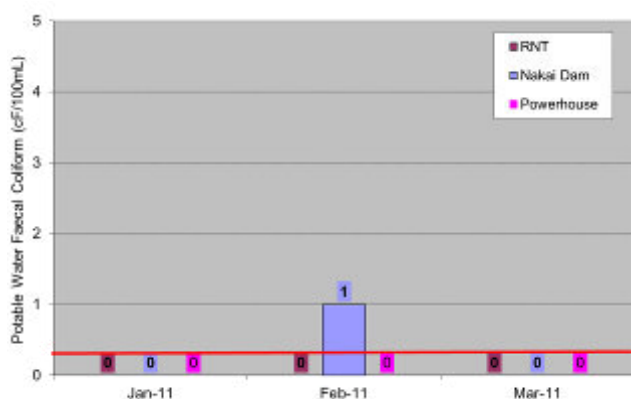
- Dissolved Oxygen remained above the Guideline for all downstream rivers (Nam Theun, Nam Kathang, and Xe Bang Fai). Dissolved Oxygen remained above the Guideline in the Nam Kathang and Xe Bang Fai during the 200-hour Power Station outage.
- In January, Ammonia exceeded the Guideline in the lower Nam Kathang (NKT5) but is not deemed to be Project-related.
- In January and February, Ammonia in the Nam Theun directly downstream of the Nakai Dam (NTH3) exceeded the GOL Standard (0.2 mg/L). However, the pH was less than 7 so Ammonia concentrations are not deemed to be significant and remained below the Guideline for pH 7 at those temperatures.
- In January, Total Suspended Solids exceeded the Guideline in the Xe Bang Fai downstream of the DSC confluence (XBF2). The source of the exceedence is not clear because TSS concentrations upstream (2.9 mg/L) and downstream (11.8 mg/L) of XBF2 were low, and TSS concentration in the lower DSC was also low (7.6 mg/L).
- COD exceeded the GOL Standard in Nam Kathang, Nam Gnom, Nam Phao, Nam Theun, and Xe Bang Fai; including the upstream control on Nam Theun and Nam Kathang. It is believed that the new GOL Standards for COD may be too stringent because rivers in the Project area exceed the Standard in the baseline scenario and upstream control.

9.3. Facility



Waste Water Treatment Works:

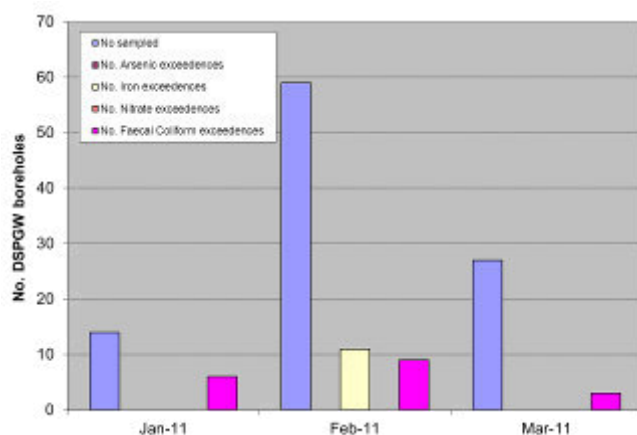
- There were no exceedences of the BOD Guideline for RNT, NRC, EMO and Power Station Waste Water Treatment Works effluent.
- In January, Ammonia and Nitrate exceeded the Guideline for the Power Station WWTW effluent.
- Throughout Quarter 1, TSS exceeded the Guideline for the NRC WWTW effluent. In February and March, Oil and Grease exceeded the Guideline for the NRC WWTW effluent. Improvements to the WWTW system are underway.
- In February and March, COD exceeded the Guideline for the EMO and NRC effluent. COD also exceeded the Guideline for RNT in March.
- In January and February, Faecal Coliform was within the Guideline for the RNT and Power Station WWTW effluent and indicates that the chlorination units of these WWTW are working effectively. However, in March, Faecal Coliform exceeded the Guideline for RNT and the Power Station, and the operators have been notified to adjust the chlorination system.
- In March, Residual Chlorine exceeded the Guideline for Power Station effluent, and the dose rate will be adjusted.



Potable Water Supply:

- Faecal Coliform exceeded the Guideline (0 cF/100ml) for the Nakai Dam potable water. Potable water was resampled and no Faecal Coliform were found. The exceedence may have resulted from carry over during analysis. During the Quarter 1, Faecal Coliform were within the Guideline for RNT and Power Station Potable Water.
- In January and February, Color exceeded the Guideline in Nakai Dam Potable Water.
- In January, Color and Total Iron exceeded the Guideline in the RNT Potable Water.
- In February and March, Mercury exceeded the Guideline in the RNT Potable water. EMO is conducting an investigation into the cause of these exceedences.
- Throughout the Quarter 1, Aluminium exceeded the Guideline for the Power Station Potable Water.

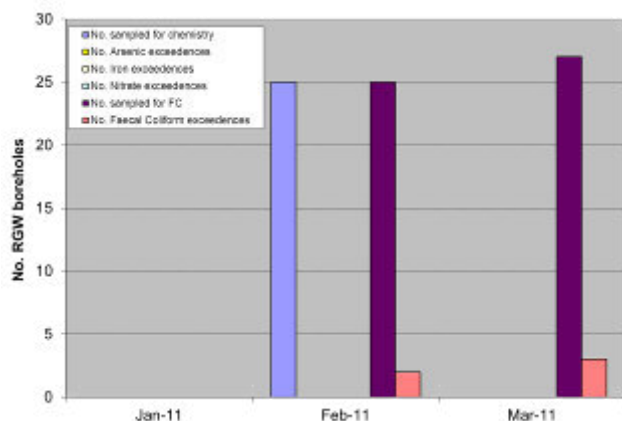
9.4. Groundwater



Downstream Program Groundwater:

The main exceeds during Quarter 1 are:

- 59 DSP boreholes were sampled for water chemistry, and 100 DSP boreholes were sampled for Faecal Coliform
- 11 boreholes exceeding the Guideline for Total Iron, and 18 boreholes exceeding the Guideline for Faecal Coliform. There were no exceedences of the Guideline for Arsenic or Nitrate.
- Two boreholes exceeded the Guideline for Fluoride. These boreholes will be resampled to help understand whether this represents a health concern.
- A number of boreholes exceeded the Guideline for Conductivity and Chlorine, and indicates a high ion content from haline geology deposits.
- A special sampling event was conducted in January to resample two boreholes that had elevated Nitrate concentrations in December. Nitrate was below the Guideline in these two boreholes but still considered a relatively high. Nitrate in these boreholes will be monitored during the next sampling event.

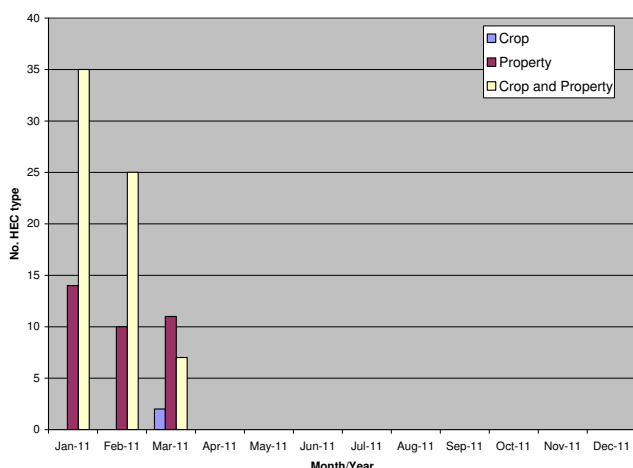
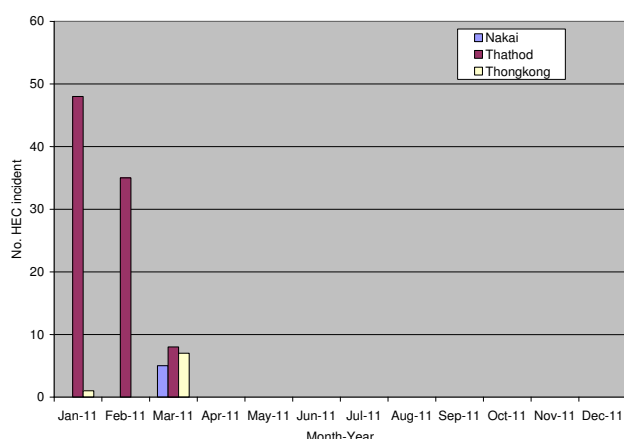
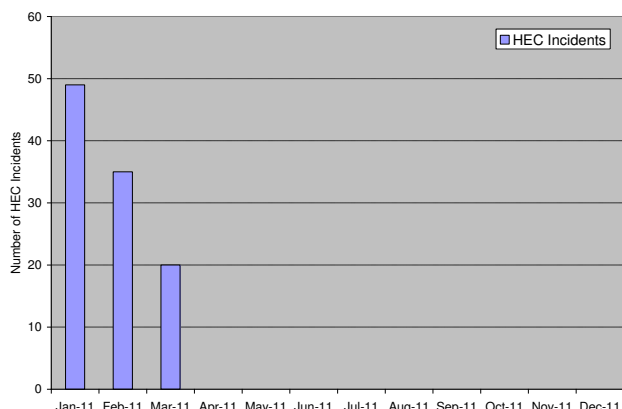


Resettlers' Groundwater:

- 27 RGW boreholes were sampled for water chemistry, and 52 boreholes were sampled for Faecal Coliform.
- 5 boreholes exceeded the Guideline for Faecal Coliform.
- There were no exceedences of the Guideline for Arsenic, Total Iron, or Nitrate.

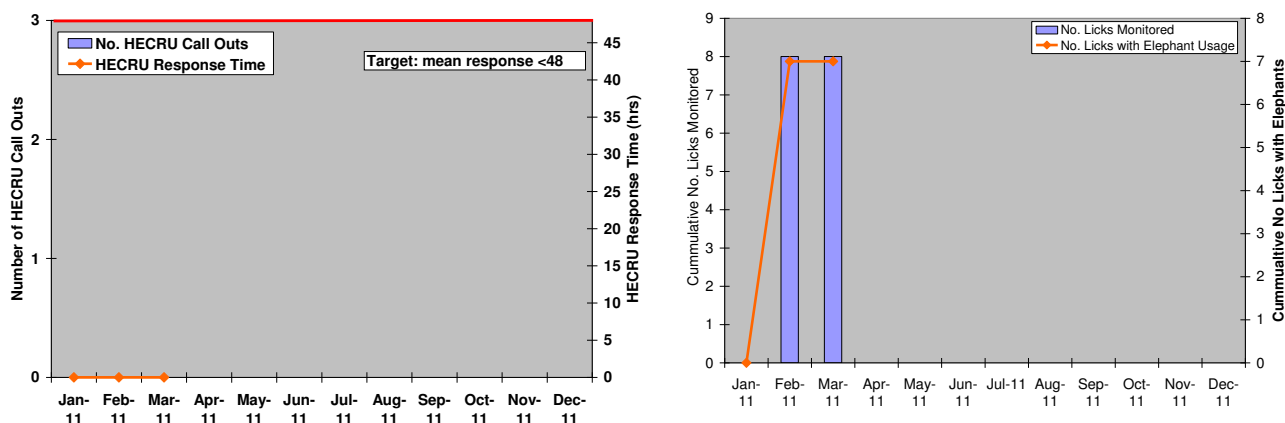
10. Biodiversity Management

10.1. Elephant Management



Activities during Quarter 1 include:

- A total of 104 HEC incidents over the Quarter.
- HEC incidents were predominately in the Thathod Area (91), with some HEC reported in the Thongkong-area (8) and on the Nakai Plateau (5). Three new villages in the Thathod area were affected by HEC.
- During Feb and Mar, the types of HEC incidents were crop and property (32) or property only (21), with few incidents involving crops only. The types of property being damaged are the buffalo fences and field huts that remain after the wet season rice has been harvested.
- There were no HEC Response Unit call outs during Quarter 1 of 2011.
- EMO and WMPA completed the artificial mineral lick replenishment and monitoring scheduled for Quarter 1 of 2011. Encouragingly 7 out of 8 mineral lick sites had evidence of elephant usage. There was also evidence of other wildlife using the mineral licks.
- EMO and Nakai DAFO attended the Human-Elephant Conflict Regional Workshop in Vientiane to share experiences and discuss on the suitable methodologies to mitigate HEC situation in Lao. Attendees included elephant experts from around Asia. EMO and Nakai DAFO also attended to elephant festival in Pak Lay, Sayaboury Province.
- Nakai DAFO held an annual meeting and presented a summary on 2010 HEC monitoring and mitigation activities:

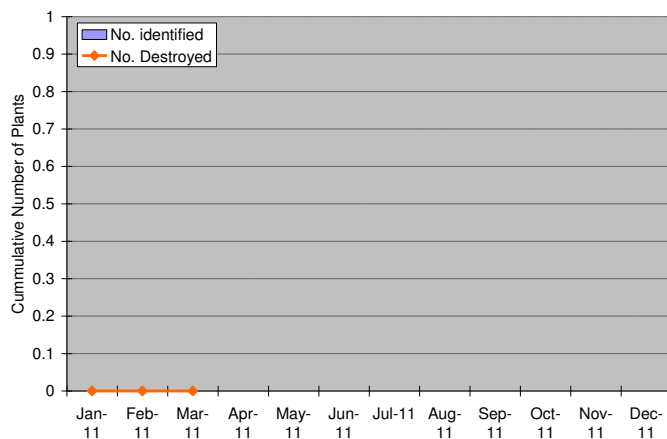


10.2. Wildlife Management and Monitoring

Activities during Quarter 1 include:

- Arrival of 10 camera traps to be provided to WMPA as part of NTPC's contribution to the camera trap survey of the Special Conservation Area.
- Development of the survey and design report for the wetland below FSL. Problems with the survey meant the elevations of the benchmarks were resurveyed and the catchment area also needed to be recalculated. Given the forecast for reservoir water level, it is unlikely that the wetland will be constructed in 2011.
- Completion of the fourth round of Environmental Education in all schools and villages on the Nakai Plateau. The report is under development.
- Rescue of the floating sedge mats on reservoir which are in danger of being stranded in dead trees and dried out as the reservoir water level recedes

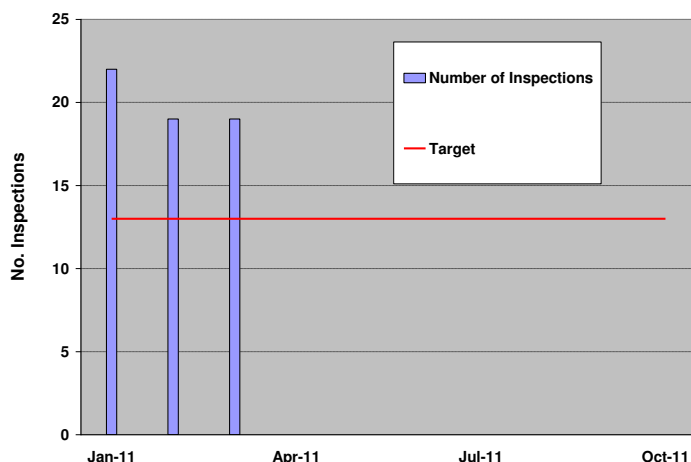
10.3. Invasive Species Program



Activities during Quarter 1 include:

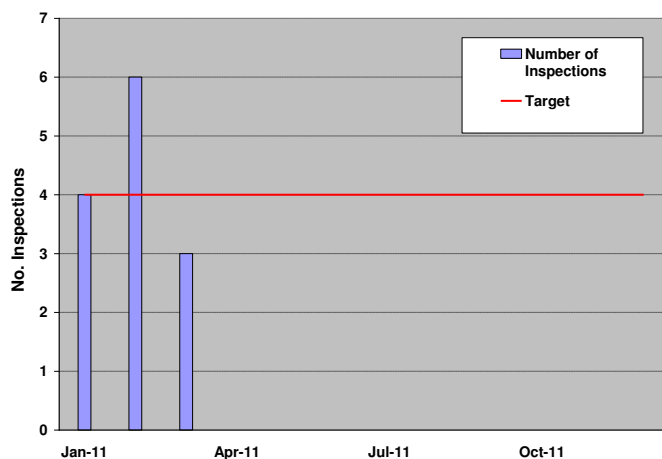
- No invasive species were identified or reported.

11. Site Inspections



- EMO conducted 60 environmental site inspections of NTPC sites.
- These site inspections have identified a number of non-conformant situations that are reported through the Online QHSE Incident Reporting System.
- The target number of site inspections of NTPC facilities was above target, primarily due to an increase in site inspections during the Power Station 200hr and 168hr outages.

12. Contractor Monitoring



- Monitoring of contractors working under AD, Assets, EMO and NRO is ongoing.
- Minor issues regarding waste and hazmat management continue to occasionally be identified. These issues are being managed through joint site inspections and liaison with the respective contract administrators.

13. CEMMP Documentation

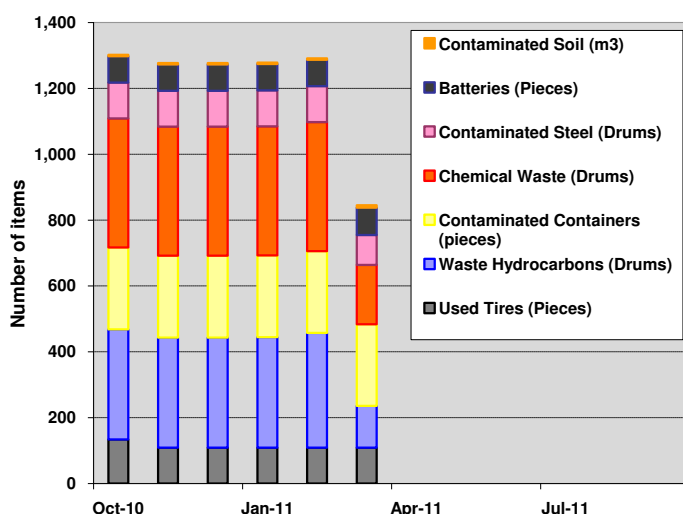
A review of the entire CEMMP commenced in March and will be completed in May 2011. Many EMS documents will be merged with HSMS documents to progress the integrated management system.

14. EMS External Audit

No external audits of the EMS were conducted.

15. Head Construction Contract Environmental Performance

15.1. HazMat Management



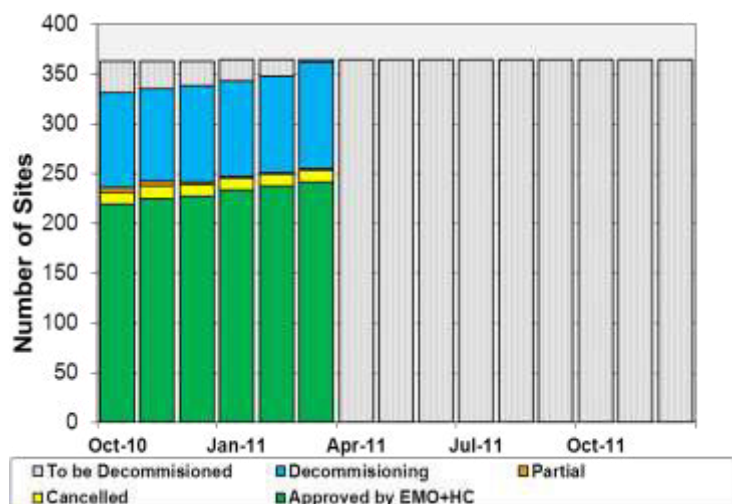
- A factory was approved as a repository for waste oil mixed with water. During this period 100 drums of oil-water mixtures were transferred to this facility. The transfer of the remaining waste oil-water mixtures is expected to be completed in April 2011.
- A further cause of reduction in the volume of waste hydrocarbon drums has resulted from a consolidation of many of the partially full drums into a lesser number of full drums.
- Additionally, the amount of chemical waste remaining was reduced as inspections inside the marked chemical drums showed that a number of the drums were in fact incorrectly labelled and contained waste hydrocarbons.
- Investigations into the disposal of the remaining HazMat waste in an industrial incinerator have progressed with the HC receiving a formal quote for the construction of a high temperature incinerator.
- Potential HazMat contamination remains a serious issue for a contractor's Main Camp and could affect the suitability of part of the site for transfer to GOL.

15.2. Waste Management

Contractor have negotiated an agreement with NTPC to dispose of the remaining general waste from the construction phase of the project in the NTPC waste cell. NTPC has been waiting for four months for this agreement to be finalized by contractor's management. NTPC has followed up with contractor's and Head Contractor management but have made no progress on the matter.

Two local shops in Savannakhet were identified as potential repositories of the remaining waste tires. These factories are suitable to receive rubber waste that does not contain steel.

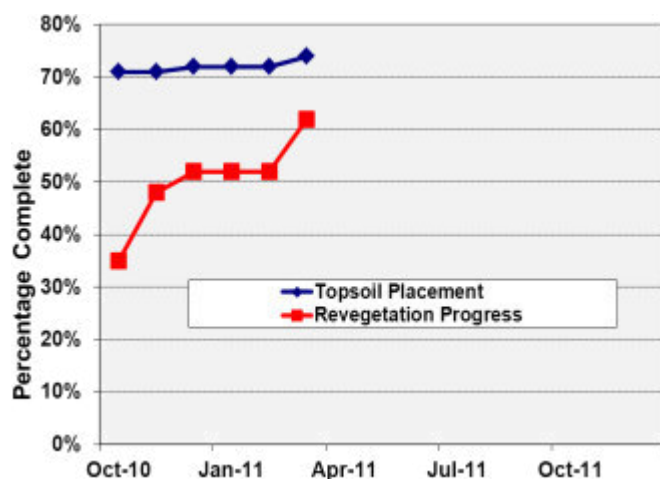
15.3. Site Cleaning and Rehabilitation Signoff Progress



Activities during Quarter 1, 2011 include:

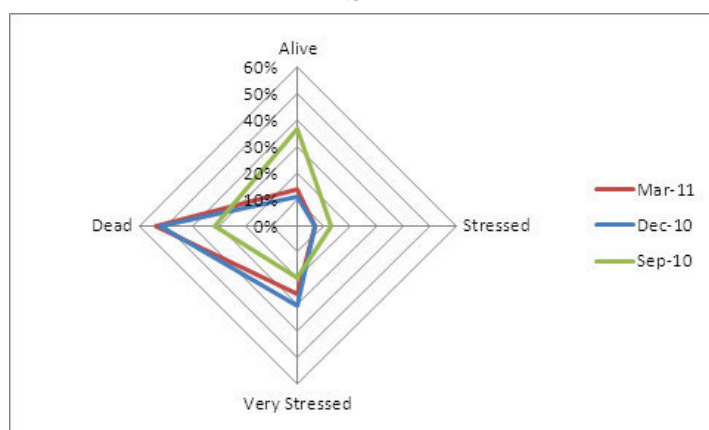
- 6 SCRCCs were signed.
- Sign-off rate has stagnated since the 2nd quarter of 2010 as most sites are now awaiting revegetation to become established prior to sign-off.

15.4. Topsoil and Revegetation Progress



Activities during Quarter 1 2011 include:

- A slight progress of topsoil placement and revegetation activities were observed. During the period, there was limited planting due to the likely low survival rate if planted during the dry season.
- Topsoil placement over 8ha (2% of total requirement) during the quarter.
- Revegetation has progressed by about 6ha (10% of total requirement) on construction disturbed land over the quarter.
- Contractors' JV is in the process of planning for the 2011 wet-season tree planting:
 - A nursery has been established at contractor's Main camp to provide seedlings; and
 - The drilling of planting holes has commenced.



A third survey of survival rate of revegetation occurred. The survival rate as a whole has not deteriorated further than what was observed during the December survey. However, this may be slightly misleading as the December study only focused on planting that occurred post September 2010, whereas the Quarter 1, 2011 study focused on the entire planted area.

15.5. Site Inspections



- Reduction in site inspections continues.
- Focus is now mainly on joint site cleaning and rehabilitation inspections.



Nam Theun 2 Power Company Ltd.

Nam Theun 2 Hydroelectric Project

Quarterly Progress Report Environment and Social Division

April – June 2011

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Executive Summary

Management

- **The Aide Memoire (AM) of the IFIs mid-term review of the DSP program** was officially released on the 23 May 2011. The AM provided important elements, findings and recommendations to plan the handing over of NTPC's Downstream support program to the Government Line agencies. The Aide Memoire further indicates the role and support of IFIs development programs to 5 districts of the provinces of Khammouane and Savannakhet. It is understood that IFIs will review their ongoing support programs and make necessary adjustments to further strengthen GOL's implementation capacity.
- **Downstream bridging phase:** A number of high level meetings and discussions were held to secure political and financial support by all stakeholders for the continuation of the Downstream Program until 2015 as follows:
 - 3 June: First Sub-steering Committee meeting of the Downstream Program aiming at:
a) clarifying the tentative outline of a Downstream bridging phase until end 2012 in which NTPC would provide additional funding beyond its legal obligations, b) highlighting IFIs funding agreements with GOL that foresee GOL funding of the DSP once the NTPC obligation of 16 MUSD are exhausted, c) presenting the budget planning and submission process for 5 DS districts and the RMU to Ministries of Planning and Investment and Finance and c) presenting a revised priority budget ensuring a smooth handing and taking over of key elements of the Downstream program.
 - 24 June: NTPC board meeting #40 approved the DSP bridging phase including an unconditional grant of 2.3 MUSD. The grant shall cover the full implementation of the main elements of the bridging phase until end 2012 such as: a) to directly compensate the remaining 67 mostly hinterland villages, which have not yet been compensated, b) to transfer key livelihood activities such as the Village Investment and Restoration Fund, technical livelihood support, water and sanitation and fisheries co-management to the relevant GOL agencies.

Note: DSP monitoring program will continue until 2015, independent from the 2.3 MUSD funding

- **Joint Planning workshop GOL/NTPC:** An important step to plan the gradual handing over of the Nakai Resettlement Program to GOL was taken with the Joint Planning workshop that was held on the 25 and 26 May 2011. The workshop included the main agencies of the Nakai district and representatives from NTPC E&S - NRO. The result of the workshop was a better understanding of existing plans of main stakeholders operating on the Nakai plateau and a common vision and milestones for the running GOL 5 years planning period which will last to 2015. Participants/stakeholders started working on a more specific work plan for the year

2011 and 2012. This plan requires further fine tuning and additional planning meetings will be organized in Quarter III.

- A Resettlement Committee meeting was held on 7 April with important resolutions on:
a) conversion of some remaining CA entitlements into Microfinance share capital b) call for additional meetings with Nakai district to accelerate the buffalo compensation c) agree to provide contracts to village extension workers on the plateau d) agree to nominate 1 GOL director in NPVFA board, e) agree to make a decision clarifying references made in the CA about households and family.
- Compilation and finalization of the AIP and preparation of Quarterly Progress Report. Revision B of the AIP was submitted on the 30 June 2011.
- Meeting between HPMU and Representative from MOH on the handing/taking over strategy process took place to agree on the preparation process and a first special task force meeting is scheduled by early July.

Monitoring Missions (external)

- LTA mission visited NRO, EMO and DS programs and managers participated in the LTA debriefing session on the 22 April
- IAG mission debriefing was held on 1 April with a strong focus on institutional lessons learnt from the NT2 project
- POE mission 18b presented findings during debriefing meeting on the 29 June with remaining concerns over: a) duration of the DSP transition phase, b) protection of reservoir fisheries and forestry c) sustainability of incomes in particular for second generation of resettlers, d) operation and use of the irrigation system, e) weak extension network and insufficient village and household participation when applying the cluster approach (Kum Ban Pattana)

Socio Economic monitoring (internal)

- The Quarterly Socio Economic Monitoring Report on Nakai resettlement villages have been shared with the POE and have earned appreciation and encouraging comments to build a constructive dialogue on the remaining challenges on the plateau. Initiated investigations on the QSEM results with special focus on the poorest village (Phonsavang)
- The Socio Economic monitoring team started to implement the round 6 of the Living Standard Measurement Survey based on a revised and improved survey design. The revised survey design, tools and training manuals were shared with the IFIs, the LTA and the POE for review and comments. The SE monitoring consultants implementing the LSMS arrived on

site and began the training on LSMS data collection for the consulting company enumerator team.

- The final draft reports of Quarterly Socio Economic and Food Consumption Monitoring were submitted by the consultants and are being finalized.
- Received final draft of Food Consumption Monitoring Report DS (update to December 2010)
- The consultant submitted a summary report for the usage by the EMO fishery biodiversity consultant regarding DSP and Nakai reservoir fisheries

Visits

- EDF Directors, 22-24 April
- Visit of the Environment Director of the EDF Sustainable Development Division accompanied by others.
- Visit by representative of the Rainforest Alliance to explore potential collaboration with the VFA organized by the WB to the VFA

Nakai Resettlement Office

- More than 50 key staffs from different departments of District and NTPC participated in the workshop in order to develop a common vision and goal for the development of the Nakai resettlement area from now to 2015, based on shared values, common working principles and trust.
- The criteria for allocation and management of DDZ and Additional Agricultural Land have been developed by the RMU/DWG PLUP team and officially endorsed by Nakai District Governor
- Compensation for dead buffalo and cattle is ongoing: the bank books of 237 HHs (out of the total 299 HH) have been collected to make bank transfers from RMU to entitled resettlers household
- 93 percent of compensation amount for paddy lands and fruit trees are paid to all re-settlers households of phase 1 and phase 2. The remaining group of 168 resettlers has either refused payment and filed a grievance or did not show up when they were invited for an individual consultation.
- 188 copies of grievances have been officially received during quarter I and NRO is currently negotiating an acceleration of the grievances procedures
- The estimate fish catch during this quarter is 114 tons (data of March to May 2011) corresponding of an estimate value 877 million Kip. 5 VFG (Village Fisheries Groups) operating their fish landing sites sold 26 tons of fish worth 271 million Kip. These VFGs collected 21.3 million Kip (7%) management fee of which 25% is given to the RFA (5.2 million Kip)
- Conducted the LSMS-R6 survey, interviewing 345 HHs on their social economic status

- Ongoing discussions on the use of SERF funds for use of erosion protection measures in Ban Khone Kaen and in Ban SopMa school
- 61 farmers are volunteers to produce vegetables during the wet season
- 734 of the 0.66ha plots (61%) are used for cultivation during this wet season. 9 model farmers are using DDZ area to grow vegetable or early maturity rice and 106 farmers are testing Para grass at the 538-536 masl level of the DDZ.
- To date, 14.7 ha of the pasture is developed by 61 hhs participating in the pasture development activities
- Completion of repairs made to irrigation systems prior to the end of the defects liability period. Formal documentation for handing over of the irrigation systems to the GOL is being prepared
- 15 of 16 planned gully dams have been completed and 684 of 736 granaries have been extended to the CA defined size
- 146 households (30% of the total 483 animal owners) have constructed their own cattle yards for keeping animals during the night time and to provide supplementary feeding.
- To date a total of 92 pig pens and 101 poultry pens have been constructed
- This quarter the log and debris team removed 579 m3 of log and debris from the reservoir

Project Lands

- Compensation payments made in Gnommalat and Nakai through RMU Invoice 22 and 23 (GML RAP 3 RNT Additional Land and RAP 2 Closure)
- Commencement of the consulting firm mission for the identification of suitable land to be developed into paddy fields for Nahao Villagers
- Coordination work ongoing with EMO for site cleaning and rehabilitation activities
- Coordination with the DSP on how to disseminate information to PAH regarding the additional compensation by PL for the impacts on common property (as part of the DSP VIRFs)
- Additional discussions with the Administrative Division for the demarcation of Concession Phase Project Lands
- Commenced the construction of the Gnommalat Tai irrigation system rehabilitation (8 ha)
- Coordination with KDP on compensation for additional land impacts of the Thathod irrigation system rehabilitation
- 10 Grievance cases remain open in Gnommalat, Mahaxai, Nakai, Xaibouli Districts

Downstream Program

- Active participation to the preparation of the DSP bridging phase, including a support to districts and RMU for preparing the GoL takeover plan and budget. It had also some discussions with Smallholders Development Project and ADB for assessing the overlap of target villages, implementation timeline and methodologies of both projects.

- Grievance Hearing. Grievances related to access issues for Ban Nahi, Veun, Nathan, Khamfeuung and Thahat (Mahaxai & Xe Bangfai districts) are determined as valid, at least in part. Ban Thakhor grievance was rejected.
- Khamkeut Grievances: 260 out of 989 cases were considered as valid. All complainants were notified and compensation for valid cases started. 85 appeals (on non-valid grievances) still pending and will be resolved in July.
- Khamkeut livelihood compensation: the delivery of compensation to Phase 1 to 5 Villages is fully complete. Compensation for Phase 6 (including valid grievances) is 87% complete.
- Riverbank Garden Compensation. 34 grievances from Nongbok District were declared valid during the last district level hearing. Payment for compensation under grievance was complete for all 269 valid cases from Mahaxai, Xe Bangfai, Xaibouli and Nongbok District.
- Erosion: Two riverbank observation missions were organized and a first report released. No significant erosion of concern.
- Fish catch monitoring: The second 6 monthly status report (covering until 30 April 2011) was issued as a draft. The first results indicate that: a) 2011 data suggests that both reported catch and CPUE (catch per unit of effort) are lower, but only small additional decline when compared with 2010 and b) Exact level of impact due to NT2 operations cannot be quantified, but ‘natural’ year-on-year change in catches observed before 2010, cannot explain observed catch decline. Long-term effects of NT2 operation remain unknown.
- Fisheries observations. Two observation missions were organized and a first report released.
- The completion report of the DS Socio Economic Survey 2009 was released.
- WASH: A full day workshop was conducted on 25 May 2011 with RMU, WB and five districts regarding water supply operation and maintenance programming / handover process. Plans are being finalized and full scale implementation will begin in July 2011.
- Livelihood activities related to rice intensification and flood mitigation:
- Following successful trials and seed multiplication DSP has organized a mass distribution of 40.6 tons of rice seeds of submergence tolerant variety to 1,791 HH in 86 villages for planting approximately 670 ha. Seed multiplication continues.
- A demonstration was set up for comparing dry season rice production using either fully natural Xe Bangfai water or Downstream Channel water. It appears quite clearly, within the limits of this small scale demonstration, that the source of water had no influence on the rice yield. These results have been documented for further reference.
- Xe Bangfai Livelihood/VIRF Phase 8. The consultations have started mid-June and VIRF will be fully established by the end of July in all target villages for Phase 8. The VIRF system was revised and is now a shareholder system where each household owns officially a share that is its Livelihood Restoration Allocation (LRA) transferred by NTPC. The system will be progressively installed in all 83 other villages with existing VIRF.
-

Public Health Program

- The sentinel surveillance and reporting on skin irritation in the XBF area revealed five cases by the end of June. The sentinel surveillance is shifted from a weekly to monthly schedule due to limited numbers of reported cases
- Backstopping mission by the Public Health Advisor (26Jun-9Jul-2011)
- Health Education and Awareness Program:
- General health promotion and prevention of HIV/AIDS/STIs in the project districts
- Mass campaign on community vector control in Khammouane Province and Khamkeut District of Bolikhamxay Province
- Trainings provided on the following topics:
- Stabilizing patients prior to patient referral for district hospital staff in collaboration with expert doctor.
- Refresher training courses for Village Health Volunteers (VHVs)
- Preparation of a one-month practical training program for internship of Family Medicine Doctors to NT2 area to Deputy Dean of University of Health Sciences
- Arrangement for the long-term training courses for district health staff sponsored under the EDF Sustainable Development Trophy (SDT) Award for three students
- Meetings were held and attended as follows:
- Met with the Director of Cabinet Office, MOH on the development of “NTPC Handing – MOH Taking Over Program”.
- Presented the NTPC’s Health Program to the Health Indicator Review and Unified MCH Form Development Workshop in Vientiane Province, supported by Ministry of Health and WHO
- Meeting with Deputy Dean of University of Health Sciences regarding internship of the Family Medicine internship to NTPC area
- Received and guided visitors groups as follows:
- EDF Directors mission to Sop On ICHC and Nakai District Hospital
- NTPC’s Public Relation Team to Nongbouakham ICHC for the “Successful Story of the Health Program”

Environmental Management Office

- Six Level III environmental incidents relating to HazMat and waste management were recorded in Quarter 2, 2011.
- The implementation of environmental training has improved over Quarter 2, with 133 NTPC staff and 169 contractors receiving environmental training.
- Turn-over event and localized fish kill (300 individuals observed) on the reservoir as heavy rainfall resulted in the destabilization of thermal stratification and low Dissolved Oxygen (1 mg/L) throughout the water column in the Nam On embayment.

- Significant increase in Human-Elephant Conflict in June in Thathod area, and one person injured during a Human-Elephant Conflict.
- The Invasive Species Program survey identified a significant number of Mimosa Pigra plants compared to the previous year.
- Wildlife AMC meeting held. Illegal activities continue to increase in the SCAs and the NNT NPA between the reservoir and the Dividing Hills. A number of AMC recommendations were made.
- Planting activities for the HC re-vegetation commenced in early May and initial good progress was made. However, given heavy rainfall in June and conflicts with rice planting season, there is now an increasing shortfall which will need to be addressed in the coming weeks. As of the end of June, 123 k planted compared to the scheduled target of 143 k.
- A definitive HazMat plan has been developed by the HC for the remaining HazMat from the construction phase stored at Gnommalat. EMO has reviewed the proposal, made some requests for minor alterations and is now awaiting the implementation of the plan.
- The inaugural EMS Management Review was conducted in May. Outputs from this review have been taken on board by EMO and the required changes to the implementation of the EMS will be made.
- The IMS Committee commenced monthly meetings in May 2011. It is hoped that this committee will assist in the roll out of the EMS under the integrated management systems framework.

Nakai Resettlement Office

1. Summary

- More than 50 key staffs from different departments of District and NTPC participated in the workshop in order to develop a common vision and goal for the development of the Nakai resettlement area from now to 2015, based on shared values, common working principles and trust.
- The criteria for allocation and management of DDZ and Additional Agricultural Land have been developed by the RMU/DWG PLUP team and officially endorsed by Nakai District Governor.
- Compensation for dead buffalo and cattle is ongoing: the bankbooks of 237 HHs (out of the total 299 HH) have been collected to allow transfers of cash transfers from RMU to resettlers' bank accounts.
- The compensation of paddy lands and fruit trees to all re-settlers households of phase 1 and phase 2 is reaching completion, except those who reject the compensation or those whom did not show up for their individual consultation.
- The estimated fish catch during this quarter was 114 tons (data of March to May 2011) corresponding to an estimated value of 877 million Kip. 5 VFG (Village Fisheries Groups) sold 26 tons of fish worth 271 million Kip at their fish landing sites. These VFGs collected management fee of 21.3 million Kip (7%) of which 25% is transferred to the Reservoir Fisheries Association (5.2 million Kip).
- Conducted the LSMS-R6 survey which includes interviewing of 345 HHs to assess their social economic situations and to compare with previous survey results.
- Ongoing discussions on the use of SERF for use of erosion protection measures in Ban Khone Kaen and in Ban SopMa school.
- 61 farmers are volunteers to produce vegetable during the wet season.
- 734 of the 0.66ha plots (61%) are used for cultivation during this wet season. 9 model farmers are using DDZ area to grow vegetables or short cycle rice varieties. 106 farmers are testing Para grass at the 536-538 masl level of the DDZ.
- To date, 14.7 ha of pastures are developed by 61 HHS participating in the pasture development activities.
- Repairs on the irrigation systems were made prior to the end of the defects liability period. Formal documentation for handing over of the irrigation systems to the GOL is being prepared.
- 15 of the 16 planned gully dams are completed and 684 of 736 granaries are extended 4 m2 ground surface.
- 11 additional cattle sheds and yard were built which brings the total number to 146. 30% of the total 483 animal owners have constructed their own cattle shed to keep animals during the night time and provide supplementary feeding.
- To date a total of 92 (+21) pig pens and 101 (+52) poultry pens have been constructed.

- The Log and debris team removed 579 m³ of log and debris from the reservoir which is 306 m³ lower compared to the last quarter.

2. Achievements

2.1. Infrastructures and mechanism for infrastructure maintenance

2.1.1. Reception & Hand over the complete infrastructure

Formal documents for handing over of the completed irrigation infrastructure have been prepared. The final inspection of all systems for post DLP (Defect liability period) was implemented together with the responsible GoL Committee.

The completed irrigation systems are ready to be handed over the Beneficiaries in each village and DAFO/GOL.

Officials from RMU, DWG, DAFO, District Finance, and Planning Offices are nominated to participate in the final inspection committee for the 16 constructed gully dams.

2.1.2. Situation of Pending infrastructures:

Gully dams

Gully dam construction commenced in April 2011, with total 16 dams and an integrated small spillway. To date 15 out of 16 planned dams are completed. The dam in Nam Nian could not yet be completed due to heavy rainfalls at the end of June. Remaining works will be completed in function of the weather conditions and reservoir water levels.

Granary extension

The extension of small and medium sized granaries to the required 4m² is ongoing. Out of the total 736 granaries, 684 granaries are completed. The remaining 52 units are expected to be completed within July 2011.

Fish landing

The fisheries team completed the consultation meetings with communities to identify the most suitable Fish Landing Sites in each village. Village authorities, Village Fisheries Group, Village Elders, Lao Women Union, Lao Youth Union and fishers participated in the meetings. The final selection of the fish landing site was discussed during the consultation. The consultation report is under preparation.

Compost bins

Following the selection of the suitable design of compost bins, the construction of compost binds is ongoing. Resettlers are provided with the materials and construct the bins by themselves, as indicated in the table below:

Name of Villages	No. H.H received materials	No. H.H made compost bin	Plan for distribution of materials to H.H
Total	48	13	101

	
Compost bin in Nongboua village	Compost made from crop residual

2.1.3. SERF mechanism for use for operation & maintenance

Support was provided to RMU in developing mechanism and procedures to operate the Social and Environmental Remediation Fund (SERF).

The first SERF payment to the SERF account is still available for payments of electricity bills caused by the irrigation system. Revisiting the SERF committee's composition was required by the POE and the design of suitable procedures and operational mechanisms to run the fund are in process.

The DWG identified the need to protect the school in B. SopMa from wave erosion and is preparing a design for approval by the RMU. The SERF will also be used to protect the village road and resettlers land from erosion in B. Khone Kaen.

2.2. Strengthening management and service provision of district and village organizations

2.2.1. Village Extension Workers operation (VEW)

NRO team has organized two trainings for all Village Extension Workers (VEW) and other District staff. The first training was on PRA training (Participatory Rural Appraisal) before implementing the Village Development Planning in each village. The second training focused on the safe application of chemical weed and pest control. The consultants from MAF provided training to the VEWs who assisted the trainings conducted in each village.

Monthly meetings are conducted by DAFO (25th of each month) for all VEW and cluster supervisors and NRO Agriculture team members. The agriculture team disseminated information and posters on appropriate fertilizer application for feed corn and upland rice cultivation.

2.2.2. On farm demonstrations and trials are set up in line with principles and methods of participatory research

Agriculture

On farm demonstrations

Following the harvest of dry season upland crops such as Corn, Bean, Rice and Stylo, the agriculture centers are preparing to grow vegetable in wet season. The center's staff distributed seedlings for perennial crops such as Leucaena, Citrus, Jatropha, Sesbania, and Litchi to Resettlers.

61 HH participated in the wet season vegetable production program.



Vegetable bed for wet season



Onion in Oudomsouk village

2.2.3. Trainings and exchange Visits for Resettlers and GoL staffs

A consultant was hired to train extension workers and farmers on how to use herbicide and pesticide safely: 428 participants including 349 women attended. A farmer exchange program on fruit tree plantation and upland crop cultivation is in preparation and will begin by early July.

2.2.4. Increase Capacity of district service providers

The RMU organized consultation meetings among DWG, DAFO, RFS, WMPA to resolve specific issues related to PLUP, compensation and illegal timber harvesting and general livelihoods development.

A workshop was organized in collaboration with District authorities and other stakeholders in Thakhek. The objective of this 2 day workshop was to develop a common vision and goal for the development of the Nakai resettlement area from now to 2015, based on shared values, common working principles and trust. More than 50 key staffs from different GoL departments and NTPC participated in the workshop. A series of planning meetings are scheduled in July and will further fine tune the five year plans for each sector.

2.2.5. Irrigation systems are functional and operated by Water User Groups

The use and operation of irrigation systems in all villages is monitored and the support to the water user groups (WUGs) throughout the dry season was ongoing.

2.2.6. Fisheries

Village fisheries groups (VFG) and the reservoir fishery association (RFA) are fully operational and Fisheries co management system is implemented

Supporting the implementation of RFA and VFG activities

The following activities were carried out by the Reservoir Fisheries Association Support Office, under the supervision of the Fisheries Team:

Fish Landing and Marketing Monitoring

Monitoring the fish landing sites helps to compare data from FCM (Fish Catch Monitoring) and direct fish landed at different landing sites on a monthly basis.

Table: *Summary of fish landing monitoring during April-Jun 2011*

Month	Number of landing sites operational	Total Quantity of fish landed (Tons)	Nos. of days Fish was landed (days)	Avg. Quantity of fish landed /day (kg)	Total value of fish landed (million Kip)	7% fee for VFGs (million Kip)	25% (of 7% VFG fee) for RFA (million Kip)
April	3	11,0	51	228	114	8	2
May	5	8,8	79	111	88	8,5	2
June	4	6,2	91	68	69	4,8	1,2
Total	12	26	221	na	271	21,3	5,2

The fish price varied between 8,000 to 25,000 kip/kg, depending on the fish species and the size of the fish.

Fishers Registration Activities

(No fisher registration was done during this reporting period)

Fisheries patrolling activities

Patrolling activity was carried out in collaborating with VFG, village security force and District police in order to patrol and control the illegal fishing activities reported by the villages/fishers. There are 56 cases (47 persons were outsiders) of illegal activities investigated during this quarter 2011. The violators were fined and lectured according to the rules and regulations. It was observed that most of the illegal cases were fishing in the protected area of the WMPA.

	April	May	June	Total
Total violators	11	25	15	56
Outsiders fishers without license	11	23	13	47

Procurement of boats for RFA and VFGs

11 boats with engines were delivered to VFGs. For the remaining 6 boats, there has been no progress on the wood supply by the VFA.

2.2.7. Implementing fisheries Co-Management plan

As per the Concession Agreement, NTPC is required to devise a sustainable Reservoir Management Program to secure income for entitled beneficiary fishing associations and gradually improve the fish stock. It also points out that the Co-Management is the method in which fisheries development and management is implemented.

The NRO has collaborated with RMU/DWG/PAFO for conducting the pilot fisheries-co management program in the Resettlement Villages.

The main aim is to develop the existing management structure into an effective and engaging co-management arrangement. The process of capacity building, awareness rising, consensus and trust building, stakeholder identification and engagement will need to be initiated.

There are 5 main steps to be followed in order for proper and sustainable management of the fisheries of the Nakai Reservoir:

- Step 1: Strengthen existing institutions
- Step 2: Develop fisheries management tools - improve access control
- Step 3: Strengthen co-management capacity of all stakeholders
- Step 4: Formulate a realistic and adequate funding strategy
- Step 5: Instill an adaptive management mentality at all levels of management
- Step 6: Develop effective and efficient monitoring capacity

Additional details on the steps and plan can be found in the Fisheries Co-Management Plan of the Nakai Reservoir and in consultant reports.

Quarterly update:

The implementation of the fisheries co-management plan has been divided into 3 phases: the first phase deals with the first three steps, with emphasis on training of all VFGs in 16 villages.

The trainings are focused on 3 main topics:

- At building on the understanding of adaptive management concepts and skills of the VFG
- At relating the concept of adaptive management to their roles as VFG
- At building relationships and cooperation with and amongst community members

5 main activities were conducted within the reporting period:

1. The completion of VFG Training and Community Workshops
2. Community Mapping activities
3. Government Workshop
4. Pilot Group Co-management Planning

5. Follow-up and Support activities

Results of trainings, consultation and follow up in the villages:

Remaining VFG training

Village	VFG participants	
	Male	Female
Nongboua Kham	3	0
Phonphanpek	1	0
Bouama	1	0
Phonsavang	3	0
SopOn	2	2
Don	3	0
Khone Kaen	2	0

Community Workshops

Process	Activities	April	May	June
Phase 1	Training for responsible of VFG	9 VFGs	7 VFGs	
Phase 2	Community Consultation workshop	159 participants (131 female) 3 villages,	222 participants (99 female) 6 villages,	Community mapping- 6 villages, 180 participants (116 female)
Phase 3	Follow up and support VFGs	5 villages, 147 participants (105 female)	6 villages, 31 participants (5 female)	

Government Agencies Workshops on Fisheries Co-management

A workshop was organized for GoL agencies on fisheries Co-management in order to build the coordination and cooperation system between Government Agencies and local authorities and also to present and inform the Government Agencies regarding the progress of the implementation of the fisheries co-management that carrying out since the beginning of the program. There are 8 participants from different government agencies of Nakai District and 6 core NRO staff.

Fisheries Co-management Planning Workshop for 6 Northern villages

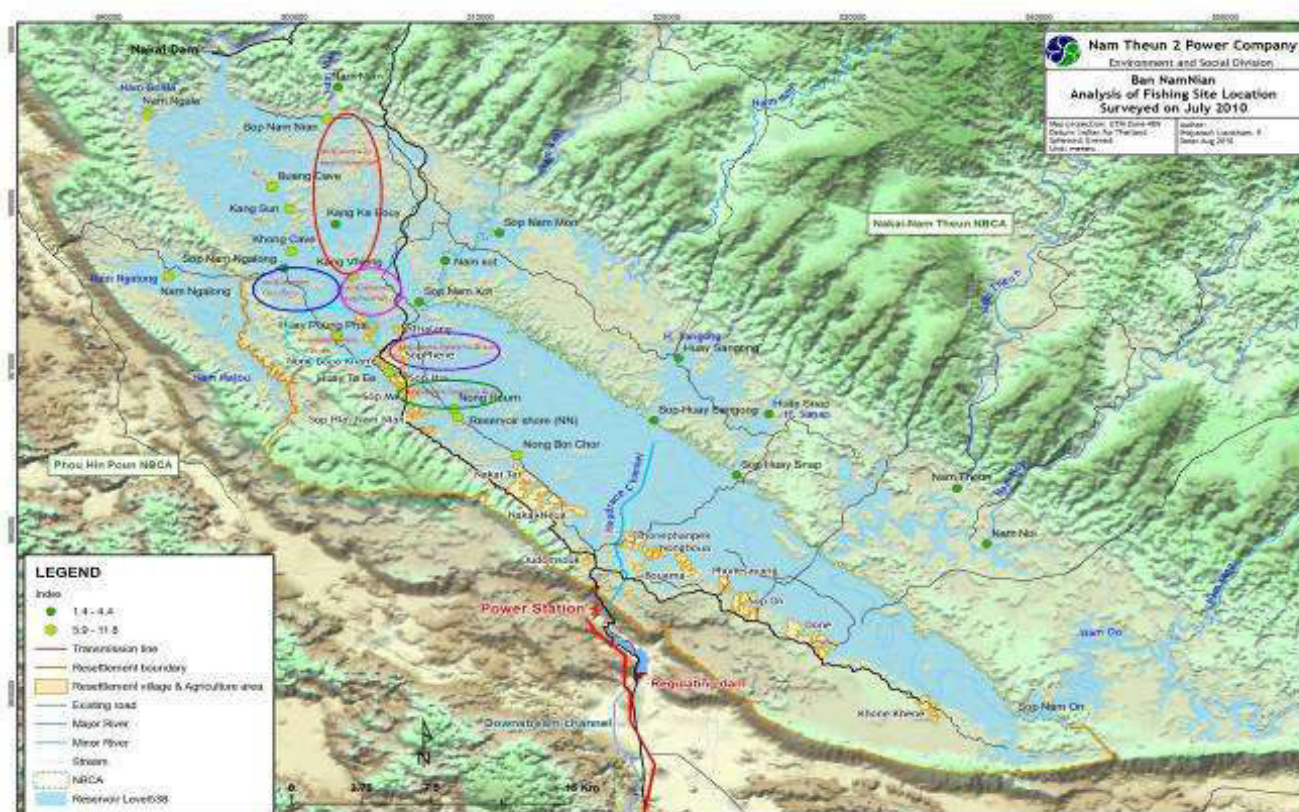
The workshop was conducted at Ban Nam Nian Village's Hall. The objectives of the workshop were:

- To provide the opportunity for the representative of each village to present the outcome of their village consultation on the selection of the location for fisheries management
- To discuss among the villages and make joint decisions on fisheries management location for each village.

- To discuss and agree upon on the key issues to control outsiders and define the timeline for the trial of management of the fisheries management sites.
- To discuss the responsibility of each party on village fisheries management

The workshop were attended by 30 people of which 21 are VFG members & village authorities (5 females) from 6 villages, 6 Representatives from DAFO, RMS, WMPA, VFA, RFA and 3 NRO staff.

Map 1. Showing the Fisheries Management areas of the 6 Northern villages



Organize Feedback Meeting Results to Communities

The meetings were organized in the 6 northern villages in order to disseminate the information and outcome of the consultation workshops to more audience, particularly fishers and villagers at the concerned villages to be aware what the management has agreed and decided. There were 107 participants in which 93 are members of VFGs (50 are female), 5 heads of village and 9 responsible of VFGs.

Notable results:

- Phonphanpek and Bouama Village participation was strikingly low yet the level of participation at Community Workshop was relatively high.
- High turnout in SopOn Village (77 participants)
- Three villages yielded below average participation. Done Village, in particular, had the lowest turnout.

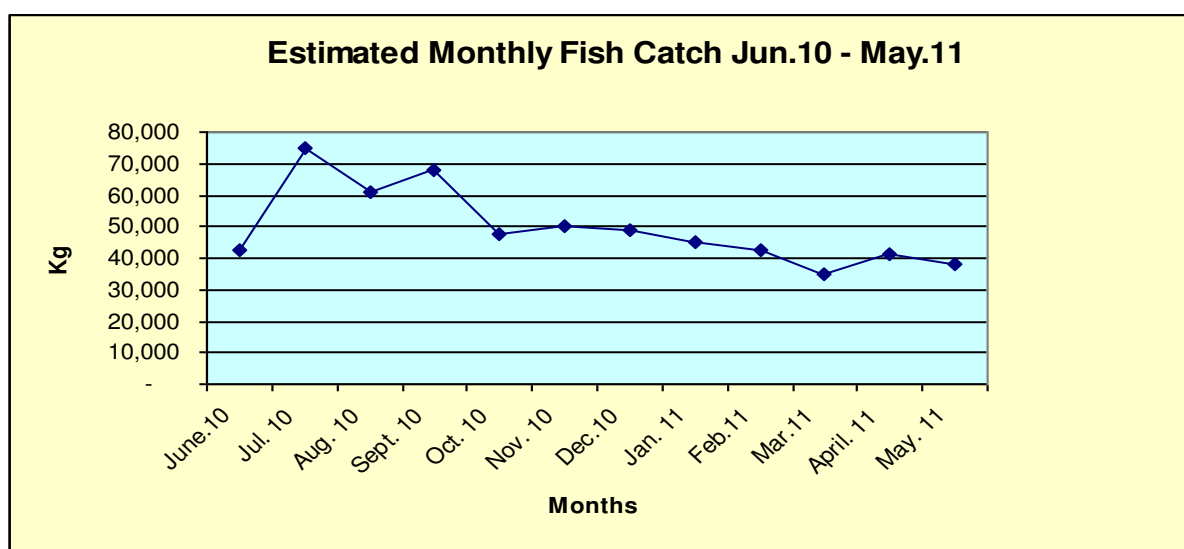
- The most noteworthy achievements were made by Sop Hia Village as they were able to discuss a plan of action in dealing with outsiders in considerable depth during the community consultations.
- Thalang villagers showed up but refused to voice their perspectives in protest to the legitimacy of the Nai Baan and particular VFG members.

2.2.8. Fisheries Monitoring and information collection

Fish Catch Monitoring

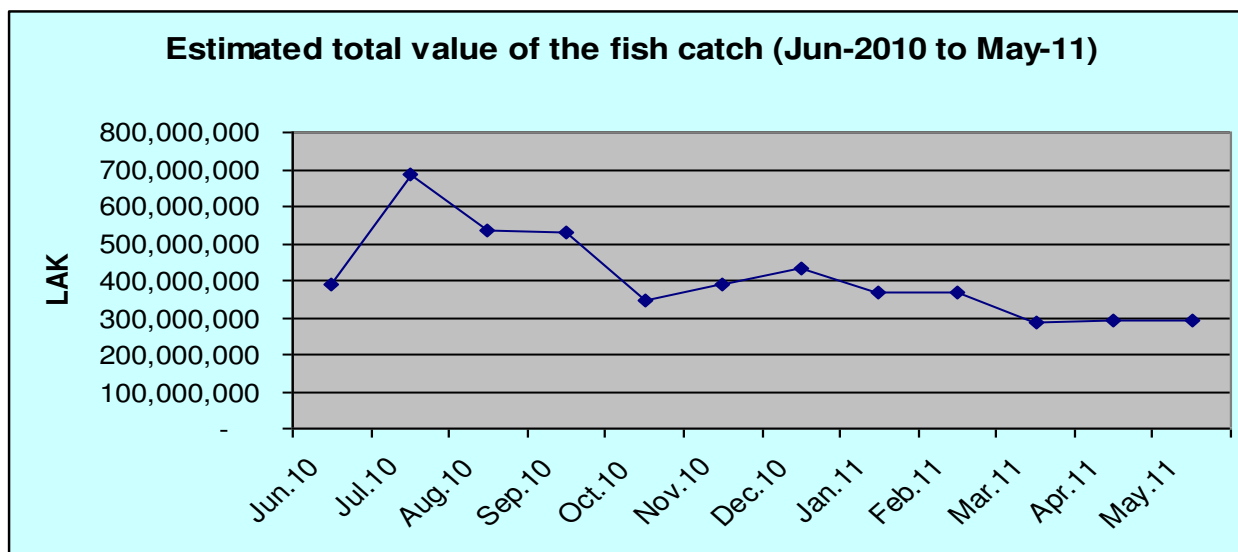
Average estimated Fish Catch and Value

The estimated fish catch of May 2011 was about 38 Tons, slightly less than the estimated catch of April 2011 (41 Tons). During the dry season 2010-11 (Oct/10 to May11) the fish catch ranged between 50 and 35 Tons/ month. Over the last quarter the estimated catch seemed to stabilize at 40 Tons per month.



The total value of fish catch for May 2011 was estimated about 292,800,000 Kip. Changes in the fish catch value are minimal over the last quarter due to an increase of the fish price.

Figure: Estimated monthly value of fish catch



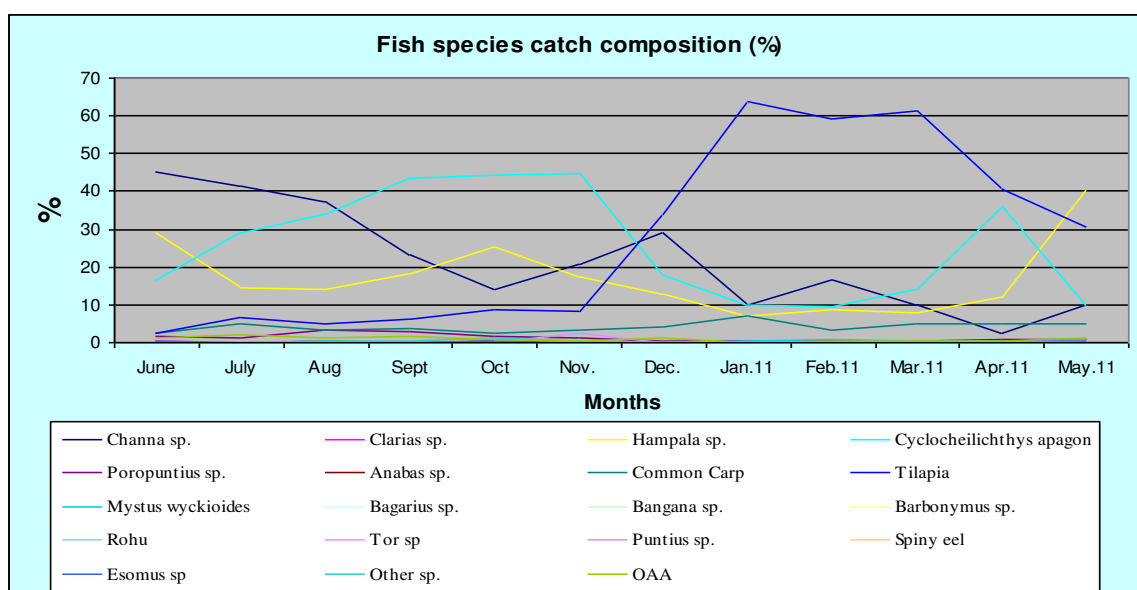
Fish Catch Distribution

The disposal of the fish catch remained stable over time.

Table: The fish catch disposal in the past 3 months

	April	May	June	Average
Sold (%)	78	80	76	78
Consumed (%)	18	17	19	18
Processed (%)	4	3	5	4

Fish Species Composition



Fishing Gear Use

The pattern of fishing gear used by the fishers in the Nakai Reservoir has not changed much from season to season. The main three fishing gears used are the Gill-net about 78% followed by hook and line about 10%, 1% lift-net and 11% of the different local made traps etc.

2.2.9. Fish stock assessment activities

Fish Larvae Survey

(This activities is carried out only 3 months/year from July to August)

Direct Fish Sampling Survey

The survey was conducted for 7 sites in the period from 9-20 June 2011. A slight modification was made to some of the sampling sites from the previous survey period, due to the drawdown of the water level of reservoir.

The total numbers of fish species found during this period of survey from the selected 7 sampling sites is 14 species, and the details species found in different sites are summarized as follows:

-Pa Soud (*Hampala macroledota*) was found at all seven sampling sites. Pa Soud was found to be most abundant at Nam Ngalong.

-*Puntius debris* and *Rasbora paviei* populations have declined from all the seven sampling sites. This is especially the case from Western and Eastern extremes of the reservoir, as compared to last survey in Feb - Mar 2011. Pa Pok (*Puntius debris*) and Pa Siew (*Rasbora paviei*) were not recorded in Nam Ngalong sampling site during the reporting period as compared to the survey in Oct – Nov 2010.

During this survey, we found some species that had not been found before at these sampling sites such as Pa Nai (*Cyprinus carpio*) at Vanghin (1) and Khonkhaenkhaio (2), Pa park (*Barbonymus gonionotus*) at Vanghin (1) and also Pa Lard (*Mastacembelus amatus*) at Reservoir shore (4) site and Thong Natamong (5) as well as Pa Bou (*Neodontobutis sp.*) at Vanghin (1). This could be due to the level of the reservoir at the time of sampling, as some areas were easier to access.

It was observed that gill-nets are not widely used during low water level; mainly because the fish are more difficult to catch as they may migrate to the deep pools and escape under bamboos debris.

Fishing Location Survey

The fishing location survey was carried out in the last week of March to early April 2011. The results of the survey can be summarized as follows:

164 sites have been identified as fishing locations within the reservoir and its creeks and tributaries, of which 44 are frequently visited by fishers. There are 6 fishing locations that are visited most frequently, namely:

Nam Xot confluence with reservoir:

- Nam Xot confluence with the reservoir
- Nam Ngalong,
- Houay Phoungtae confluence,

- Houay Sanap confluence,
- Nong Bor-chor,
- Khokuang.

The survey revealed that fishers prefer to fish in the reservoir (49%) than in creeks (20%), streams (17%) and rivers/tributaries (13%).

2.2.10. Support to government services include following programs

Education

Continued salary and food support program to Kindergarten School (April and May)

- Food support to 420 students of 15 kindergartens in resettlement village
- Support salaries of 22 assistant teachers of the kindergarten schools
- Continue to strengthen village student's parent associations

The annual school vacation in the Nakai resettlement area has started since 1 June 2011, with the new school year starting on 1 September 2011. During this school holiday, the food support program for kindergarten students and salaries support for 22 kindergarten teachers will be stopped and will continue again on 1 September 2011.

Social welfare and vulnerable household support

Food support program for 25 vulnerable households (34 persons including 32 adults and 2 children) was implemented in 12 villages.

UXO Clearance support

The NRO CD Team continued to visit each village in the resettlement area to collect information and discuss with the villagers to reinforce the UXO awareness and roving response. Several smaller UXO (bombies) and one 500 lbs. bomb were disposed of.

Gender mainstreaming

The gender mainstreaming activities are continued to be an integral cross cutting component of all of NRO activities. Strengthen Village Women and Gender Awareness has been raised at each appropriate occasion. Women and men actively participated in different activities, with women actively participating in all of NRO programs, especially livelihood activities.

Communication of technical issues through appropriate use of information, Education and Communication materials

Appropriate IEC materials were developed to communicate key messages to the Resettlers. This includes posters designed for Agriculture, IGASU, Gender and Compensation activities.

2.3. Compensation issues for impacted assets and land allocation

2.3.1. Compensation

Compensation for paddy lands and fruit trees Phase 2

Continue implementing HIC of Rice Fields and Fruit Trees Compensation Phase 2.

Details of progress are as table below:

Table Progress of Rice Field and fruit tree compensation:

	PHASE 1		PHASE 2		NOT IDENTIFIED**		TOTAL	
	NUMBER	KIP	NUMBER	KIP	NUMBER	KIP	NUMBER	KIP
Total Registered Cases	857		246		59		1,162	
Total Cases with Entitlements to compensation	710	4,420,654,500	193	1,361,081,000	59	23,269,500	962	5,805,005,000
Paid	666	4,347,626,500	128	1,040,862,000	-	-	794	5,388,488,500
Unpaid*	44	73,028,000	65	320,219,000	59	23,269,500	168	416,516,500
% paid out of entitlements	94%	98%	66%	76%	0%	0%	83%	93%

*Unpaid cases include those who refuse to accept the compensation and those who did not show up.

**Discussions are ongoing with the RMU and DWG on how to solve the cases where the current entitled household cannot be identified (59 Cases).

Compensation for died Cattle and Buffalos

Good progress has been made with the compensation program for lost cattle and buffalo. The district disseminated the compensation strategy in May, which was followed by the team collecting bank books to transfer entitlement of the Cattle and Buffalos Compensation: 237 out of total 299 bankbooks have been collected.

Cattle and Buffalo Compensation Progress					
NO	Village	Total Entitled HH	Bankbook Collected	Special cases	Did not appear for consultation
1	Thalang	5	4	1	0
2	Sop Phene	17	10		7
3	Nongbouakham	3	3	0	0
4	Sop Ma	16	10	2	4
5	Nam Nian	1	1	0	0
6	Nakai Tai	51	47	1	3
7	Nakai Neua	22	21		1
8	Oudomsouk	28	19		9
9	Phonphanpek	18	District is still in discussion with the entitled households		
10	Nongboua	13	13	0	0
11	Bouama	33	29	2	2

Cattle and Buffalo Compensation Progress					
NO	Village	Total Entitled HH	Bankbook Collected	Special cases	Did not appear for consultation
12	Phonsavang	16	10		6
13	Sop On	29	25	1	4
14	Done	44	42	1	1
15	Khone Kaen	3	3		0
Total		299	237	8	37

2.3.2. Participatory Land Allocation Process (PLUP)

The land use regulations and entitlement selection criteria for the use of the DDZ and Additional Agricultural Land have been developed and are officially endorsed by Nakai District Governor.

Other PLUP activities undertaken include:

- Ongoing verification of the proposed village boundaries, verifying the GPS coordinates and clarifying specific natural boundary points
- Surveying the actual area used as additional agricultural land and DDZ. This survey work is completed in 12 villages and was temporarily stopped due to heavy rainfall at the end of June
- Compiling and translating of PLUP and VDP documentation

2.4. Income generation options for Resettlers

2.4.1. Allocated Lands are used and managed according to principles of sustainability

61% of the 0.66ha plots are being used by farmers for crop production, such as growing rice, cassava, maize and other crops. The table below indicates the land use village by village, demonstrating that in the case of B. Thalung, the use of the 0.66 ha plots is low, compared to other villages where the majority of the plots are under better use.

Table: Farmers use 0.66ha plots in Wet Season 2011

No.	Name of Villages	No. of total 0.66ha plot	No. of plot preparing land	No. of plots growing	Remark
1	TL	78	9	9	3 hhs more than planned
2	SOP	57	11	7	
3	NBK	57	51	19	
4	SOH	39	36	25	
5	SOM	67	28	28	4 hhs more than planned
6	NAN	61	10	10	Including 9 Ahoe families
7	NKT	197	112	63	
8	NKN	94	29	23	

No.	Name of Villages	No. of total 0.66ha plot	No. of plot preparing land	No. of plots growing	Remark
9	ODS	8	2	2	1 hh more than planning
10	PPP	62	62	50	
11	NB	43	29	12	
12	BOM	74	64	50	
13	PSV	41	38	23	
14	SON	134	97	85	
15	DO	148	120	109	
16	KK	51	36	23	
	Total	1211	734 (61%)	538	8

2.4.2. Resettlers cultivate in DDZ during Wet Season

Rice and Vegetable in DDZ

9 households are using the DDZ for vegetable or short duration rice cultivation.

Growing fodder crops in the draw down zones (DDZ)

Para grass trial in DDZ in PSV Centre is growing well, reaching a height of 1.5 to 2m. The Para grass being grown in the 14 resettlement villages has a relatively low average survival rate of 30% as a result of overgrazing by buffalos and cattle.

The total number of households participating in Para grass plantation in the DDZ is 106 households, with the total area of 17,520 m² as demonstration plots.



The community pasture are heavily grazed by cattle

2.4.3. Resettlers livestock is managed based on assessed carrying capacities of improved fodder resources

Test suitable grasses for development pasture

Agriculture Centers produce seed and seedlings of selected fodder species and monitor demonstration plots of model farmers. The successful and suitable species are B. Ruziziensis, Stylo, B. brizantha, B. Hybrid (Mulato II), Paspalum, B. decumbens are suitable for pasture establishment and Napier for cut and carry systems. Para grass is suitable to grow in the DDZ, in water logged and swampy areas. Each of these forage species is easy to grow and highly palatable.

Leucaena (kathin) was planted along a demonstration plot as living fence and is growing well.

Develop cattle yard and pasture at individual HHs level

Cattle yards development:

	Up to April 2011	In April 2011	In May 2011	In June 2011	Total to date
Individual cattle yards built	135	3	2	6	146
Individual cattle still under construction				31	

Growing the elephant grass attached to cattle yards:

40 households participate in establishing cut and carry fodder crop gardens, planting a total of 7,500 m² with elephant grass.



Define and develop community pasture

The livestock team has worked with the large ruminants' owner group to define the areas that have native grass and can be further developed through sowing grass and legume species.

To date 61 households participating in the pasture development scheme have developed an area of 14.7 ha.

Improve cattle breeding

The plan to introduce 10 breeding bulls to different villages is postponed until the end of September 2011, due to an outbreak of Foot and Mouth Disease in the area (Nakai and Gnommalat). The District Authorities issued the notification for restricted movement of the live ruminants in the area which has prevented the import of the breeding bulls.

2.4.4. Provide animal health care services (vaccinate)

Large animal statistic and vaccination update

Since January 2011 to present, 196 heads of ruminants were vaccinated. In June only 37 cattle were received Hemorrhagic septicemia vaccine at Ban Don only. See detail in the following table.

Table: Statistics on large ruminants

Monitoring of Vaccination, Registration and Statistic of Large Ruminant 2011												
	Village name	Accumulated			Progress in June-11				Total up to date			
		No. of ruminants	Vaccinated	Registration	No. of ruminants	Nos. of Vaccinated	Nos. of Registration	Increase /Decreased	No. of ruminants	Vaccinated	Registration	Increased /Decreased
1	TL	62	13	36	61	-	-	(1)	61	13	36	(1)
2	SP	101	-	46	104	-	-	3	104	-	46	3
3	NBK	150	-	66	148	-	-	(2)	148	-	66	(2)
4	SH	59	-	40	56	-	-	(3)	56	-	40	(3)
5	SM	49	-	8	48	-	-	(1)	48	-	8	(1)
6	NN	42	-	21	42	-	-	-	42	-	21	-
7	NKT	543	18	80	556	-	-	13	556	18	80	13
8	NKN	68	31	39	65	-	-	(3)	65	31	39	(3)
9	ODS	198	-	111	208	-	-	10	208	-	111	10
10	PPP	148	-	21	149	-	-	1	149	-	21	1
11	NB	59	12	37	61	-	-	2	61	12	37	2
12	BM	150	19	24	156	-	-	6	156	19	24	6
13	PSV	47	19	7	47	-	-	-	47	19	7	-
14	SO	137	39	70	137	-	-	-	137	39	70	-
15	D	351	6	130	352	37	-	1	352	43	130	1
16	KK	164	2	53	161	-	-	(3)	161	2	53	(3)
Total		2,328	159	789	2,351	37	-	23	2,351	196	789	23
Percentage										8.3%	34%	1%

Poultry statistic and vaccination progress

Vaccination of poultry is ongoing. A total to 925 out of the 7,533 animals have been vaccinated.

Monitoring of Small Enterprise on Veterinary Services (SEVS)

Small veterinary service enterprises are established in each cluster of villages: Northern (SopMa), Southern (Ban Done) and Central (Oudomsouk).

The progress of SEVS is evident in the Central cluster of Oudomsouk and in the southern Ban Done where people use the services but in the Northern cluster at SopMa the service is not yet widely known and used by people. More attention should be provided on advertising the new services. Interestingly, people from Gnommalat also used the services of the center in Oudomsouk, to purchase medication.

2.4.5. Resettlers volunteer for semi commercial poultry and pig production

Support Pig and poultry's Pens construction

The support to the construction of pig and poultry pens is ongoing. A total of 93 households have been supported to construct a pig pen and a total of 101 households have been supported to construct poultry pens.

Animals breed improvement and production (pig, chicken) at the Centers

Production of quality animals for supplying to the Resettlers continued. The Resettlers will rear these animals at the family level and generate additional income.

Table: Production of small animal breeding at the Agriculture Centers

Animals		Year 2011						Total
		Jan	Feb	Mar	Apr	May	Jun	
Chicken	No. of eggs	220	307	269	234	184	181	1,214
	Nos. of chicks	90	61	192	49	75	97	569
Brood Stock of Egyptian's Chicken					60	-	-	60
Piglets		42	20	0	0	20	-	82

Small animal and poultry distribution to Resettlers

To date in 2011, 544 chicks have been distributed to 64 households and 61 piglets have been distributed to 31 households.

Model Farmer on Small Animals (Pig, Poultry) Breeding

Pig Breeding: There are 35 families doing pig breeding and having a total brood stock of 71 sows

Duck breeding: There are 19 families doing duck breeding and at present 127 brood stock and 408 ducklings are remaining in stock. 417 newly ducklings were produced in June.

Chicken breeding: At present, there are 48 families doing chicken breeding, having 393 brood stock and 690 chicks remain in the stock. In June, 428 chicks were produced.

2.4.6. Resettlers have been trained on Off-farm skills and apply these new skills

The IGASU team is regularly monitoring and following up income generating activities of Resettlers. Monitoring and follow up are focusing on Resettlers who got trained and were supported by IGASU on off-farm skill training and started up micro businesses in the villages such as: hair dressing, weaving, vegetable producer group and handicraft.

- 14 households established a fish processing group in Thalang
- 4 Resettlers improved their skills on hair dressing
- Training on fish gear knitting and mending to 15 Resettlers in 2 villages.

2.4.7. Resettlers are aware on how to access the markets for all Nakai products

Access to updated market information: Updated and disseminated market information on vegetable and fish prices to the Resettlers.

Organized fish trader meeting in April to review and clarify roles and responsibilities of fish trader group and committee and to discuss the quarterly acceptable fish prices based on the agreement between fish traders and village fishery group.

Market surveys:

A market survey on chillies was conducted together with a Resettler (who is currently growing chillies for commercial purpose) surveying different markets for the demand and prices of chillies, and facilitate the contact with vendors in Nakai and Gnommalat to build up business relationship.

Currently, there are 3 types of chillies selling in markets like Lao chilli, Thai chilli and red Thai chilli. Local consumers prefer consuming Lao chilli and red chilli to Thai chilli. The prices of chillies are presented in the table below:

	Types of chillies	Whole sales price in Nakai Market (Kip/kg)	Source of vegetable
1	Thai chillies	10,000	Nong Loum, Thakhek and Nakai resettlement villages
2	Lao chillies	12,000	Gnommalat, Thakhek
3	Red Chillies	12,000	Gnommalat, Thakhek



Lao chillies



Thai chillies



Red Chillies

Members of the weaving group displayed and sold their products in the event of celebrating the status of becoming a “cultural village” in Nakai Tai. To promote and increase awareness of Resettlers on local products in resettlement area, 2 weaving members from Sop Hia were brought to the celebration of cultural villages where they introduced their products to local people.

Linking producers with the market

The monthly recorded sale of vegetables by the vegetable production group is shown in the table below. The sale of vegetable is gradually decreasing since April, due to Resettlers concentrating on preparing and cultivating their 0.66 ha plots during the rainy season.

Table supported sale of vegetables by the vegetable production group

No	Month	Quantity (Kg)	Value (Kip)
1	April	270	1,340,000
2	May	83	632,000
3	June	58	505,000
	Total	411	2,477,000

Sale of woven products

The woven product producers in Sop Hia and Nam Nian have slowed down their production since April, due to labor allocation to work in the 0.66 plots and due to a price increase of cotton thread from 25,000 kip to 35,000 kip per kg.

Table: Reported 3 monthly sales of woven products.

Month	Amount in Kip	Remark
April	930,000	
May	N/A	Most of products were sold in the villages by themselves
June	753,000	Some woven products were sold in the village and some were sold in Exhibition in Nakai Tai village.
Total for 3 months	1,683,000	

Cotton seed distribution for weaving groups in Sop Hia and Nam Nian

Trials are ongoing with the production of cotton by 12 Resettlers of the 2 weaving groups, with each household receiving 1 kg of seeds. 2 types of cotton seeds were distributed: the local white seeds and a red seed variety. Resettlers will start planting in August 2011.

2.4.8. All the Resettlers have access to micro credits available at village level

Collection of the outstanding old village funds: The total collected amount is 228 million Kip and the remaining past due loans amount 33 million kip.

Sharing lessons learned with the DSP:

On several occasions NRO and DWG staff shared lessons learned and participated in several DSP-VIRF activities.

Design new micro credit management system

The conversion of outstanding entitlements into shareholder capital of the village microcredit scheme is finalized. An external consultant company will be contracted to assist with conducting a workshop with the DWG, LWU and RMU to finalize the rules and regulations for the new micro finance scheme, based on a shareholder system.

2.5. Strengthening the Management of the NRO

2.5.1. NRO to be fully operational and continues to be well managed

- Monthly coordinating meetings have been conducted under the supervision of the RMU and with the participation of the DWG, DAFO, RFS, and WMPA. Progress is reported and issues are identified and are addressed.

2.5.2. Socio-economic monitoring

QSEM:

Not scheduled this quarter due to LSMS data collection.

LSMS:

LSMS Round 6 data collection started with the training of the enumerators, supervisors, and data entry staff provided by a consulting company. Data collection started in May and completed in June. The M&E team conducted quality control checks and the database team set up a QA/QC system on the database. Double data entry is practiced, to ensure quality

LSMS Survey progress up to end of June:

Number of villages	Total HH for interview	HH interviewed	Quality control	Data entries	Follow up interview needed
14 villages (except UDS & PPP)	345	343	343	343	2

2.5.3. NRO data management

Data base team has set up a database to support the Irrigation team regarding the information on Water User Groups and facilitate the information on the different past and ongoing compensation processes such as paddy fields and fruit trees and buffaloes compensation.

Based on the request made by the District Governor, a 3 days training on database management was organized for different GoL agencies in Nakai District.

2.5.4. Log & Debris Management

Activities performed by Log & Debris team:

- The reservoir shores of Zone 2 and 3 of the reservoir were prioritized to capture stranded logs
- The L&D barges assisted the EMO AE lab team in data collection for the greenhouse gas emission research

Table: Quantity of log and debris collected during this quarter:

	April	May	June	Total
Log (m3)	25	17	19	61
Debris of logs (m3)	171	214	31	416
Debris of bamboo (m3)	0	0	101	101
Total (m3)	196	231	151	578



3. Outlook

3.1. Marketing and income generation

- Establish the revised micro finance system
- Conduct income generating management training for Resettlers who are interested in off-farm skills training and Resettlers already operated their micro businesses
- Organize study tour for wet season vegetable producers to visit market and buying seeds
- Follow up Indigo planting for indigo processing in Sop Hia village
- Prepare for woven products for Handicraft exhibition in Lao-ITEC
- Follow up cotton seed plantation in Sop Hia and Nam Nian

3.2. Agriculture:

- Monitor the use of 0.66ha plots and provide advice on cultivation
- Monitor the use of the DDZ and irrigated areas and provide advice on cultivation
- Identify model farmers and farm demonstration plots for experimentation and demonstration of best practices
- Continue support of compost bin construction through the support of materials
- Continue providing fertilizers to Resettlers who are producing crops on their 0.66 ha plots

3.3. Community Development

- Organize follow up meetings to harmonize and fine tune common work plans for 2011-2015
- Continue the support to implement the Village Development Plans
- Continue to implement Food Support Program to vulnerable families and pupils at the kindergarten (when they re-open)
- Continue to implement the UXO awareness program
- Continue to provide assistance in development of IEC (Information Education Communication) material to support NRO program
- Continue to support the RMU and District PLUP staff and consulting firm to implement the Participatory Land Use Planning Program at Nakai Resettlement Area.

3.4. Fisheries

- Continue implementing the Fisheries Co-management plan
- Continue Fish Catch Monitoring

- Follow up on the supply of remaining boats for the RFA and VFG
- Continue the consultations on finalizing the locations of Fish landing sites
- Support the fish release day
- Support the Ghost-net collection campaign
- Completed of fish landing site consultation

3.5. Livestock

- Continue vaccination program and the monitoring of the 3 newly established Small Enterprise on Veterinary Service shops
- Continue to support interested cattle owners on cattle yard construction
- Capacity building through Farmer to Farmers exchange visit
- Continue consultation with villagers for establishing of pasture development groups
- Continue the support to develop pastures in the DDZ and on community land
- Continue supporting Resettlers / model farmers on small animal and poultry's pens construction

3.6. Compensation and Grievances

- Complete compensation program phase 2 for paddy fields and fruit trees
- Complete the dead buffalo compensation
- Adjust the DSP Grievance policy manual to be suitable for use in Nakai and support the RMU to provide refresher training to the DGC and VFG on the grievance system

3.7. Socio-Economic Monitoring

- Start the analysis of the LSMS data
- Start round 2 of the QSEM data collection, Group discussion and Food consumption monitoring in villages

3.8. Irrigation:

- Complete Gully dams construction
- Organize the official Hand over of irrigation systems to GOL
- Complete the extension of granaries

Project Lands

1. Summary

- Compensation payments made in Gnommalat and Nakai through RMU Invoice 22 and 23 (GML RAP 3 RNT Additional Land and RAP 2 Closure).
- Commencement of the consulting firm mission for the identification of suitable land to be developed into paddy fields for Nahao Villagers.
- Coordination work ongoing with EMO for site cleaning and rehabilitation activities.
- Coordination with the DSP on how to disseminate information to PAH regarding the additional compensation by PL for the impacts on common property (as part of the DSP VIRFs).
- Additional discussions with the Administrative Division for the demarcation of Concession Phase Project Lands
- Commenced the construction of the Gnommalat Tai irrigation system rehabilitation (8 ha).
- Coordination with KDP on compensation for additional land impacts of the Thathod irrigation system rehabilitation.
- 10 Grievance cases remain open in Gnommalat, Mahaxai, Nakai, and Xaibouli Districts.

2. Management

2.1. Relations with other Departments/Divisions

2.1.1. PL and EMO coordination

Joint site cleaning and rehabilitation field visits in coordination with EMO. Details can be found in the EMO section of the QPR.

2.1.2. PL and DSP coordination

Project Lands participated in the Village Consultations for the establishment of the DSP VIRFs in 2 GML villages to explain the additional compensation due to common property impacts.

2.1.3. PL and NRO coordination

The Project Lands team works in close coordination with the NRO on various compensation issues carried out on the Nakai Plateau.

2.1.4. PL NTPC General Coordination

Definition of Final Concession Period Land Areas:

The project lands team participated in various coordination efforts and meetings on the definition of Concession Period Land Areas. Delimitation/marketing of Project Lands will commence following discussions with prioritization given to areas with a high risk of illegal occupancy.

2.2. GOL relations

- Coordination meetings with GML District Working Group and RMU to discuss compensation payments for RMU Invoice 22 and 23.
- Discussions with RMU on the finalization of the Common Property Compensation policy which were temporarily halted pending the future of the DSP VIRF system in GML.

2.3. Grievances

Grievance status: No new grievances received. 10 Grievances remain open. The breakdown per district is as follows:

District	TOTAL	Status		% Valid
		Closed	Open	
Gnommalat	559	554	5	27%
Mahaxai	71	68	3	37%
Nakai	33	32	1	45%
Xaybouly	2	1	1	100%
Khamkeut	19	19	0	21%
Kaisone	1	1	0	100%
Thakek	1	1	0	0%
XeBangFai	1	1	0	100%
Total	687	677	10	29%

Grievance status on a month by month progress of % of cases closed:

District	APRIL	MAY	JUNE
Gnommalat	99%	99%	99%
Mahaxai	96%	96%	96%
Nakai	55%	55%	97%
Xaybouly	50%	50%	50%
Khamkeut	100%	100%	100%
Kaisone	100%	100%	100%
Thakek	100%	100%	100%
XeBangFai	100%	100%	100%
Total	96%	97%	99%

2.4. Irrigation restoration (GML Thai Irrigation System)

Gnommalat Thai irrigation

Construction of the GML Thai irrigation system has commenced. Slight delays in construction are expected due to the heavy rains but the works are expected to be completed prior to September 2011.

Thathod irrigation system (left bank channel)

Several coordination meetings were organized with the KDP to determine the compensation of Households impacted through the construction of the left bank irrigation channel that will restore the Thathod irrigation system.

2.5. Unanticipated Project Impact (Ban Nahao)

2.5.1. Livelihood

Construction of an irrigation weir for supplementary irrigation for wet season crops

- Demonstration paddy and upland rice plots are ongoing.
- Cattle pen promotion for collection of manure to be used as fertilizer
- Continued activities for the demonstration garden through seasonal vegetable plant promotion. Continued small livestock raising and vaccination demonstration.

Land use Planning

- Commencement of the consulting firm mission for the identification of suitable paddy fields for Nahao Villager development. It is estimated that approximately 1.1Ha of paddy land can be distributed to each of the registered Nahao Households.

2.6. Monitoring

2.6.1. Livelihood related

Gnommalat District: Final Cash Livelihood Restoration Plan (FCLRP)

Project Lands has carried out the provision of special assistance in the form of rice and protein supplements to 1 Category 3 PAH whose livelihood restoration has not been achieved due to temporary illness. Monthly monitoring is being carried out to monitor the progress of this case.

3. Achievements

3.1. Compensation and RAP Closure

Completed RAP Closure Compensation for land impacts for all PAH in ALL RAPs.

Any additional land areas not included will have to be considered for compensation at a future date. In addition to this, additional land acquisitions (if any) may result in the need to carry out PL Concession Agreement obligations for an extended period which, besides having to extend PL closure, will also involve increased budget and staffing requirements.

Downstream Program

1. Summary

- DSP management has actively participated to the preparation of the *DSP bridging phase*, including a support to districts and RMU for preparing the GoL takeover plan and budget. It had also some discussions with Smallholders Development Project and ADB for assessing the overlap of target villages, implementation timeline and methodologies of both projects. Overlap so far remains very low.
- *Grievance Hearing*. Grievances related to access issues for Ban Nahi, Veun, Nathan, Khamfeuang and Thahat (Mahaxai & Xe Bangfai districts) are determined as valid, at least in part. Ban Thakhor grievance was rejected.
- *Khamkeut Grievances*: 260 out of 989 cases were considered as valid. All complainants were notified and compensation for valid cases started. 85 appeals (on non-valid grievances) still pending and will be resolved in July.
- *Riverbank Garden Compensation*. 34 grievances from Nongbok District were declared valid during the last district level hearing. Payment for compensation under grievance was complete for all 269 valid cases from Mahaxai, Xe Bangfai, Xaibouli and Nongbok District.
- *Erosion*. Two riverbank observation missions were organized and a first report released. No significant erosion of concern.
- *Fish catch monitoring*. The second 6 monthly status report (covering until 30 April 2011) was issued as a draft. The first results indicate that:
 - Fisheries for 2010 are lower than any previous year for which data is available; overall decline compared to baseline is approximately 35%.
 - 2011 data suggests that both reported catch and CPUE (catch per unit of effort) are lower, but only small additional decline when compared with 2010
 - Exact level of impact due to NT2 operations cannot be quantified, but ‘natural’ year-on-year change in catches observed before 2010, cannot explain observed catch decline
 - Long-term effects of NT2 operation remain unknown.
- *Fisheries observations*. Two observation missions were organized and a first report released.
- The completion report of the DS SES 2009 was released.
- *WASH*. A full day workshop was conducted on 25 May 2011 with RMU, WB and five districts regarding water supply operation and maintenance programming / handover process. Plans are being finalized and full scale implementation will begin in July 2011.
- *Livelihood rice activities*.
 - Following successful trials and seed multiplication DSP has organized a mass distribution of 40.6 tons of rice seeds of submergence tolerant variety to 1,791 HH in 86 villages for planting approximately 670 ha. Seed multiplication continues.
 - A demonstration was set up for comparing dry season rice production using either fully natural Xe Bangfai water or Downstream Channel water. It appears quite clearly, within the limits of this small scale demonstration, that the source of water had no influence on the rice yield. These results have been documented for further reference.
- *Xe Bangfai Livelihood/VIRF Phase 8*. The consultations have started mid-June and VIRF will be fully established by the end of July in all target villages for Phase 8. The VIRF system was revised and is now a shareholder system where each household owns officially a share that is

its Livelihood Restoration Allocation (LRA) transferred by NTPC. The system will be progressively installed in all 83 other villages with existing VIRF.

- *Khamkeut livelihood compensation*: the delivery of compensation to Phase 1 to 5 Villages is fully complete. Compensation for Phase 6 (including valid grievances) is 87% complete.

2. Management

2.1. Budget

- DSP provided support for preparation of presentation materials for NTPC Board #40 regarding the proposed 2012 bridging phase budget.

2.2. Relations with other Departments/Divisions

2.2.1. E&S(DSP) and OMD coordination

- DSP has begun preparations for 2011 wet season flood observation activities so that in the event of a flood event DSP can mobilize quickly to document conditions in target villages.
- DSP has organized staff to observe and document flood conditions during the flood event in late June - early July.

Establishment & operation of “atypical” notification system

- Meeting held on 24 May 2011 at the Power Station to discuss the atypical notification system with all stakeholders. Participants included GoL coordinators from all 4 concerned districts, provincial coordinators, RMU, NTPC-DSP and NTPC-OMD staff.
- The Atypical Water Level Change Notification System was not activated during the reporting period.

2.2.2. DSP and Project Lands coordination

- The Xe Bangfai Livelihood/VIRF Phase 8 includes 5 Gnommalat villages that will receive compensation from Project Lands for community asset losses.
- Full coordination was organized between DSP and Project Lands so that:
 - Budget for Project Lands compensation be available
 - Joint village consultation be implemented
 - Project Lands compensation is merged with DSP compensation in a single Livelihood Restoration Allocation (LRA) transferred by NTPC to the VIRF
- The same coordination will be organized in the coming months for villages where DSP needs to return to establish the VIRF with share system and Project Lands must provide compensation

2.3. GOL relations

- Admin / Finance team worked closely with RMU for consolidating the results of the district planning workshops as recommended by IFIs Mid Term Review (MTR) and for which GoL requested support.
- Two regular coordination meetings with RMU were held on 11 May and 9 June.
- Following a request from DAFO to DSP to support National Annual fish releasing day on 13 July 2011 with 50,000 fingerlings DSP management provided budget for buying indigenous species (Silver barb) only and fisheries team will organize the distribution.

2.4. Meetings / Missions

- Meeting was held with International Advisory Group (IAG) on 6 April.
- Support to LTA24 mission to DSP, including office discussion and field visit including boat trip from Downstream Channel confluence to Ban Pong (end of Upper XBF).
- Organized a field visit and briefing for an EDF mission in early May.
- DSP participated to the Regulating Dam / Nam Kathang Adaptive Management Committee (AMC) organized by the EMO.
- POE mission:
 - DSP participated in discussions held in Vientiane and Thakhek with the POE and organized field visits in the Xe Bangfai area.
 - DSP participated in debriefing meeting on 29 June in Vientiane

DSP bridging phase

- DSP management has actively participated to its preparation:
 - The results of the District “handover” workshops were reviewed and consolidated by RMU and DSP, and subsequently the district budget requests were sent to Vientiane in mid-April.
 - Several discussions held with the World Bank and ADB for finalizing the MTR Aide-Memoire
 - Prepare and participate to the Handover Sub-Committee meeting in Vientiane on 3 June
 - On 6 June E&S/DSP participated to a coordination meeting with Smallholders Development Project and ADB for assessing the overlap of target villages, implementation timeline and methodologies of both projects. SDP made early selection of target villages apparently in contradiction with ADB/SDP previous discussions. SDP agreed to some flexibility and agreed that a coordination meeting at provincial level could be organized by RMU for re-discussing the list of SDP target villages with provincial and district authorities of Khammouane and Savannakhet.

2.5. Grievances

Grievance status:

- ***Khamkeut grievance processing***
 - Total of grievance cases received from Khamkeut District level is 989. Of these, 260 have been determined to be valid, with compensation activities now ongoing.
 - Following Investigation on fisheries dependency and data analysis, two Grievance Hearings were held on 16 March 2011 and 1 April 2011. As per grievance hearing meeting of two groups - 989 cases, it can be summarized as 260 cases – valid & 728 – invalid (427 decided at the district & 301 decided by RMU/District/DSP meeting)
 - Forms G for individual complainants of all 989 cases (including those 427 cases decided by the district, 561 – submitted to DSP & 1 case from Pong village) were issued and individual complainants were notified between 4 and 13 May.
 - In addition to the 260 valid grievances, 85 appeals have been submitted from Khamkeut (from PAHs with grievances that were considered invalid). Investigations by DSP indicate that none of these cases are valid; a formal Grievance Hearing Meeting is expected to be organized in mid July 2011.
- ***Riverbank Garden – general***
 - Riverbank garden grievance period is now closed for all villages

- All investigations, notifications and payments are complete for grievances.
- The total riverbank garden grievances from all districts and villages is closed at 1,109 cases of which MHX-292 cases, 7 villages; XBF-200 cases, 15 villages; XBL-424 cases, 15 villages & NBK – 193 cases, 7 villages.
- 3 appeals (2 from Kuase and 1 from Yangkham – Xe Bangfai District) were received/registered/investigated/ evaluated. All three appeals have been determined as invalid. Notification to grievants still to be done in early July.
- ***Use Compensation Program - Grievance Processing - District Level Summary***
The table below summarizes the status of RBG grievance processing and compensation payment. More details per district are provided further below.

RBG grievance summary as of 30 June 2011

	Mahaxai Cluster 1	Mahaxai Cluster 2	Xe Bangfai	Xaibouli Cluster1	Xaibouli Cluster2	Nongbok	Summary
# of villages submitted grievance	3	4	15	7	8	7	44
# of Grievances	106	186	200	206	218	193	1,109
Grievance Hearing Meeting	2010	2010	6/1/11	14/2/11	15/03/11	6/04/11	
# of Valid Grievances	54	63	61	57	26	34	269
Form G signed (dates)	3-7/9/10	10-15 /11/10	24-28 /1/11	9-19 /3/11	17-23 /3/11	25 /4 to 9/05/11	
Registration data collection	17-18 /12/10	11-14 /1/11 & 20-22 /1/11	26-31 /1/11	10-15 /3/11	21/3/11	Completed 10/05/11	
Payment dates	23,25,28 /03/11	23,25,28 /03/11	Completed 25/04/11	Completed 29/04/11	Completed 7/06/11	Late June	
Notes / comments	Closed	Closed	Closed	Closed	Closed	Closed	

- *The balance of remaining grievance cases is at 96 cases as of 30 June 2011. It includes 88 individual appeals (3 RBG cases and 85 Khamkeut cases) and 7 community cases and 1 new individual case.*

Household (HH) & community grievances	Remaining cases as of 31 March 2011 (A)	New cases during reporting period (district level) (B)	Resolution ⁽¹⁾ during reporting period	Solved cases ⁽²⁾ (C)	Remaining cases at end of reporting period [(D)= A+B-C]	Further action needed for solved cases
RBG cases (1)	411	0	3	408	3	0 ⁽⁸⁾
Other HH cases (2)	989 ⁽³⁾	1 ⁽⁴⁾	1	904	86 ⁽⁵⁾	260 ⁽⁹⁾
Community cases (3)	3	4 ⁽¹⁰⁾	7	0	7 ⁽⁶⁾	0
TOTAL (1+2+3)	1,403	5	11	1,312	96⁽⁷⁾	260

⁽¹⁾ Means an action of investigation or grievance related data collection is carried out but no NT2 grievance meeting (DSP/RMU/Justice) is held yet. No final decision was made yet and accepted by grievant

⁽²⁾ Means the grievant has accepted the grievance decision. Further action may or may not be necessary.

⁽³⁾ 989 grievance cases under this category include 988 from villages of KKT Phase VI & 1 case from Ban Pong.

⁽⁴⁾ 1 new case is an individual grievance on access impact from a villager from Thahat village;

⁽⁵⁾ 86 remaining cases include 85 KKT appeals and 1 grievance on access of the villager from Thahat village;

⁽⁶⁾ Remaining grievance as of June 2011 are including 1- of Khoksavang (appeal – being dealt by NTPC GoL Relations), 1 of Xenoi, 1 of Thakhor; 1 of Nathan, 1 of Vern, 1 of Khamfeuung and 1 of Nahi

⁽⁷⁾ Final number of remaining grievances now is 96 cases of which 86 are appeals and 7 common and 3 RBG appeals.

⁽⁸⁾ No further action is required for RBG grievances – final decisions on appeals made; PAHs to be informed

⁽⁹⁾ 260 cases are Khamkeut valid cases, with compensation activities ongoing

⁽¹⁰⁾ 4 new cases are community grievance of Veun, Nathan, Khamfeuung and Nahi

2.6. Monitoring

2.6.1. Erosion related

Riverbank observations

- The eleventh field mission of riverbank observations was completed in late April 2011; the related report was finalized in late May.
- The twelfth field mission of riverbank observations was completed in mid-June 2011; the related report is under preparation and will be finalized in early July. Initial review of data indicates that erosion which could be of concern did not occur during the 2011 dry season 2011.

Site Specific Monitoring Program

- The activity was discontinued in late March as it is redundant with the photograph missions undertaken.

Xe Bangfai Cross Section Survey

- The first Xe Bangfai cross section survey after start of operations (C1885) was done from late January to early February 2011. The report preparation is ongoing. This work will provide the first set of data following NT2 operations beginning for use in quantitatively assessing erosion patterns after the start of operations.

2.6.2. Livelihood related

Fish Catch Monitoring (FCM1)

- Draft report for the “second six monthly status report” was prepared by the FCM1 technical backstopping consultant in mid-June. The report analyzes data available until April 2011. Finalization of the report is expected by mid-July 2011.
- The results indicate that since NT2 operation has started in early 2010 :
 - Fisheries for 2010 are lower than any previous year for which data is available; overall decline compared to baseline is approximately 35%.
 - There have been no reported fish kills associated with NT2.
 - There are no species that have disappeared from the fisheries.
 - Households participating in the DCL throughout all zones have caught between 120 - 250 kg less in 2010 than for previous years.
 - 2011 data suggests that both reported catch and CPUE are lower, but only small additional decline when compared with 2010.
 - The 2011 decline compared with 2010 values is slightly higher for hinterland villages and slightly lower for riparian villages.
 - Hinterland villages in Upper-Middle XBF are more impacted than riparian villages in the same fishing zone, mainly due to decline in mainstream catches.
 - Long-term effects of NT2 operation remain uncertain (migration & spawning, habitat changes and food availability).
 - Exact level of impact due to NT2 operations cannot be quantified, but ‘natural’ year-on-year change in catches observed before 2010, cannot explain observed catch decline.
 - It is too early to state whether fisheries are stabilizing; continued monitoring is required to understand / assess the true impact on ecosystem (as well as to be compliant with the CA).
- The 7th round of Fisheries Observations was conducted from 13-16 June 2011 and a draft report prepared during the reporting period. Expected to be issued mid-July.
- DSP and DWG have conducted Re-fresh trainings for 121 HH monitors from 30 villages in five districts with the aims of building awareness on FCM1 works, updating fisheries situations and reviewing data collection tools and methodologies.
- The FCM1 team has been busy for collecting all DCL (Daily Catch Logbook) data until 30 April 2011 as well as IHI data of 2010 for analysis by the DSP consultant for the next FCM1 6 month report.
- Sixth round of Xe Bangfai Fisheries Observations was done between 4 and 7 April 2011 and the report was issued.

Socio-economic survey

- The 2009 DS-SES Completion Report was finalized and issued.
- All activity for the 2009 DS SES is complete.
- Initial discussions held with the socio-economic consultant to begin initial planning for the DS SES 2012 survey, which is expected to start field data collection in January 2012. All preparations will need to be complete in 2011.

3. Achievements

3.1. Xe Bangfai Region

3.1.1. Community coordination

- During the reporting period, the update of village household lists by the Community coordination team was done in 16 villages. Currently 37 villages remain to be updated. HH list update was done completely in all target villages of Gnommalat and Mahaxai District.

Progress on Household List Update			
District Names	Target villages	Villages updated	Villages still to be updated
Gnommalat	22	22	0
Mahaxai	26	26	0
Xe Bangfai	34	20	14
Xaibouli	37	30	7
Nongbok	40	24	16
Khamkeut	39	39	0
	198	161	37

3.1.2. Riverbank Gardens Compensation Program

- Grievance Hearing on Nongbok District grievances held.
- Completion of registration ongoing valid grievances in Nongbok District and Xaibouli (Phase 2) District
- Registration and compensation calculations complete for valid Nongbok Grievances.
- Completion of grievance payments for all valid grievances in all districts.
- Archiving of documentation is complete for all non-grievance related compensation. In July / August grievance documentation will be archived with NTPC Document Control Centre (DCC) and district level summary reports will be finalized and transmitted to the relevant districts.

3.1.3. Irrigation pumps modifications

- Activity complete.

3.1.4. Access Restoration in Ban Khoksavang (GML)

- The issue is now being managed by the NTPC GoL Relations Department (establishment of a funding agreement). The appeal of Khoksavang village remains open until a final agreement is reached. No action by DSP during the reporting period.

3.1.5. Water gate rehabilitation

- Completion of repair work by the Contractor for initial defects identified during March inspection.

- Final inspection for all five gates rehabilitated was conducted in mid-June, which resulted in one defect being found (a minor leak for one gate). The Contractor has been officially notified and repair work is expected in July.

3.1.6. UXO Clearance

- DSP continues to provide UXO support for other departments / divisions. Support was organized for clearance of the “8 ha” irrigation scheme for Project Lands in GML. DSP has also organized UXO support for an EDF greenhouse gas mission in late May / early June.
- DSP is coordinating with OMD and H&S to collect information regarding the minefield located adjacent to the 500kV transmission line in Mahaxai District in preparation for implementing activities related to valid access grievance for Khamfeuung (Phanang / Pong area concerned by grievance is adjacent to the mine field).

3.1.7. Water supply / Sanitation

- Required scope of work: 550 boreholes required
- To date 550 of 550 boreholes constructed
- Work during the reporting period has focused on the replacement / repair of defective boreholes.
 - In the quarter 14 boreholes were drilled, of which only 7 were productive and
 - 2 boreholes were successfully repaired / redeveloped
- Construction of Platform, Hand pump installation: 15 HP which means to date 535 of 536
- Hand Pump installation: 16 hand pumps installed including all replacement/upgrade system.
 - Upgrade to Sand Filter 13 units
 - Platform type – A 2 units
 - Platform type – B 1 unit
- A full day workshop was conducted on 25 May 2011 between DSP, RMU and five districts regarding water supply operation and maintenance programming / handover process. The World Bank also participated in this workshop. No significant changes have been requested by participants to the proposed O&M program. DSP is currently finalizing detailed plans / materials and expects to begin implementation, jointly with GoL counterparts, in July 2011.
- Organized a 2-day training of trainer for District coordinators/Nam Saat, Provincial Nam Saat of Khammouane and RMU regarding water supply operation and maintenance program field training; the training was held in Xe Bangfai District on 8 – 9 June 2011; the results are reported separately in document ref code “NTPC-S-K14-12-03-000001A”.

3.1.8. Livelihood / aquaculture

- This quarter about 340 HH attended training and 1,465 HH attended a workshop or technical meeting, ~1,080 HH received extension material and ~950 HH received production inputs (see summary table in Annex).
- Four specific rice activities were included in the 2010 – 2011 dry season plan. They are supported by a rice specialist consultant from the RCCRC (Rice and Cash Crops Research Centre) in Vientiane. All 4 activities have developed normally without incident during the reporting period.
 - (1) Iron toxicity rice trial (repetition of the trial conducted last dry season).
 - (2) Increasing rice productivity in some ethnic groups’ villages (demonstration).

- (3) Rice production with two different sources of water (Xe Bangfai and Downstream Channel).
- (4) Multiplication of seeds of one submergence tolerant rice variety for mass and breeder seeds production.

3.1.9. Demonstrations

Iron tolerant rice varieties trial

- The trial (a repetition of the trial conducted in dry season 2009) has begun again in last dry season of December- January 2010-2011. The trial has involved 5 HH in 5 villages (list in table below). Five varieties (TDK5, TDK6, TDK7, TDK11 and RD10) are used for this experiment and two rates of fertilizer are applied (0 and 50 kg/ha of zinc fertilizer). The objective of this activity is to find out variety that can adapt and grow well with high concentrations of iron in the irrigation water in order to introduce tolerant variety to farmers in each ecosystem. Harvest was completed in all sites in mid of May 2011. Final report writing by the consultant is ongoing. The report is expected at the end of July.

List of farmers involved in the activity

No	Villages	Districts	Source of water
1	Navangneua	Nongbok	borehole
2	Pova	Mahaxai	Xe Bangfai
3	Mahaxai	Mahaxai	Xe Bangfai
4	Nakatang	Gnommalat	Nam Gnom
5	Boungbao	Gnommalat	Nam Gnom

Increasing rice productivity in “ethnic minority villages” (demonstration)

- **Rationale.** In 3 villages (Dang, Nakio, Somsanouk) of Mahaxai District with a large population of ethnic minorities rice shortage is a significant problem for most households because they have been using systematically the same rice varieties for several years, a major part of them being photoperiod sensitive rice varieties not adapted to the dry season: their production cycle is short but it brings very low yield. New rice varieties such as TDK-11, TDK-5 or TDK1-sub1 are new alternatives to improve rice production in this area in conjunction with a full package of intensive rice production technique.



Pictures: field trip on rice production in ethnic minority in Somsanouk village

- Objectives of activity are to (1) promote use of improved high yielding varieties in dry season and (2) demonstrate technique of growing rice to achieve maximum grain yield with optimum fertilizer application in order to increase rice productivity. Ultimately the goal of this activity is to increase the number of household being rice self-sufficient in these villages.
- The demonstration has involved 33 HH (Dang: 10 HH, Somsanouk: 7 HH and Nakio: 16 HH). 860 kilo of non-photoperiod sensitive rice varieties has been delivered (TDK-11). During growing stage, a study trip was organized for 3 villages (Dang, Somsanouk and Nakio) with 33 participants. The objective was to promote a new rice variety (TDK-11) which has performed much better than local varieties.
- The harvest was completed in mid-May 2011 in the 3 villages. The total production reached 27.1 tons with an average yield of 3.2 t/ha, higher than for traditional varieties. The harvest will be used partly as seeding material (R2), partly for household consumption. The final report will be released in July.

Rice production with two different sources of water (Xe Bangfai and Downstream Channel)

- **Rationale:** The water now available in the Xe Bangfai, mixing natural and NT2 water has in the past been noted by some villagers as of lower quality than before discharge started and therefore possibly affecting the rice production.
- A demonstration was set up for comparing dry season rice production using either fully natural Xe Bangfai water or Downstream Channel (DSC) water. The demonstration is installed in Nakio Village, Mahaxai District and involves 2 HH.
- Pumping from the Xe Bangfai is through the regular irrigation system of Nakio Village and a pumping system was installed in the DSC for pumping NT2 water.
- TDK11 variety was used for this demonstration (Table 6). This activity was implemented in the area of about 3,759 m² (1,935 m² for NT2 water and 1,824 m² for Xe Bangfai water). Seed was sown on 20/12/10 and transplanting was done on 18/1/11.
- The nitrogen fertilizer (Urea 46%) was applied two times (on 15/02/11 and 28/02/11). The activity has been on going well throughout the growing stage.
- Harvest was completed in mid-May 2011, both plots with data below:
 - With NT2 water – Surface: 1,953 m², the production is 623 kilo; yield 3.27 t/ha;
 - With XBF water – Surface: 1,824 m², the production is 582 kilo; yield 3.19 t/ha

- *It appears quite clearly, within the limits of this small scale demonstration, that the source of water had no influence on the rice yield.*
- A study trip on comparison of using NT2/XBF water for rice production was organized for farmers of 25 villages (5 districts). Ninety six people joined the trip including some representatives of PAFO, RMU, DAFO and DWGs. The objective of the study trip was certified impact the quality of NT2 water to irrigate for rice production. During the feedback session most of farmers agreed, from the field observations, that the rice which used NT2 water had been growing well and got the same yield (even a little more) than the one growing with Xe Bangfai water.
- The final report is under preparation and will be issued in July.

List of farmers involved in the activity

No	Seed sowing date	Transplanting date
1	20/12/10	18/1/2011
2	20/12/10	18/1/2010

Livestock

- After Livelihood team has provided regular technical knowledge/ on the job training as well as some teaching materials to the pilot farmers, some of these farmers have become good trainers on several livestock subjects. For the moment they can provide good lessons from their real experience to others farmers on the following subjects:
 - A villager (Hatxiengdee Village, Nongbok District.) is able to train on Forage planting (Guinea, Mulato, Ruzi and Stylo) and Forage seed production.
 - A villager (Navang Village, Nongbok District) is able to train on Feed processing (Mineral block, Urea rice straw treatment, Urea-Molasses Liquid to rice straw).
 - A villager (Kuase Village, Xe Bangfai District) is able to train on Silage.
- From end of May to early June 2011 they have implemented already 3 training sessions for VIRF livestock groups with participants coming from 2 villages of Gnommalat District (2 HH), 5 villages of Mahaxai District (21 HH), 1 village of Xaibouli District (7 HH), 1 village of Xe Bangfai District (5 HH) and 5 villages of Nongbok District (13 HH). Five DAFO staff and 4 DSP Juniors have joined the courses.



Explanation on Forage seed producing.



Training on feed concentrate (practice part)



Explanation on Silage production.



Explanation on Rice straw processing

Forages and other animal feed – Demonstration farms

Rationale

- In the traditional way of livestock raising cattle is usually left without much care and animal is provided with few feed of good quality. It is particularly a problem in dry season. Growing forage is not difficult and some farmers have even opportunities for producing forages in dry season.

Activities

- After some limited demonstrations in 2009 promotion of forage and animal feeding started really in April 2010 with 15 villages in 4 districts, 34 HH, and 3 HH in 3 villages were selected as pilot for demonstration. Promotion includes:
 - Production and use of mineral blocks
 - Forages plantation and use of cut and carry system (4 species)
 - Forages processing for silage
 - Rice straw urea treatment
- In early June 2011, a new forage variety (Napier grass) was received from Namxuang Livestock Research Centre (VTE). The 400 pieces were provided to 5 pilot farmers in 4 districts as Nongbok district 200 pieces for 2 households, Xe Bangfai district 80 pieces for 1 household; Mahaxai district 60 pieces for 1 household and Gnommalat district 60 pieces for 1 household. The aim of activity is to test a new variety for animal feeding in local environment before promoting its expansion.
- During this period, the livestock school for farmers was organized. Three training courses were organized in the Navang Village pilot farm which is used as livestock school for farmers of surrounding villages. Resource farmers were invited to be teaching on several subjects as forage planting, animal feed concentrate, mineral blocks. This is also an opportunity to develop marketing of livestock feeding material (forage seed, forage root stock or mineral blocks).
- 20 households of 6 villages, Nongbok District, have attended on the job training on forage planting, which they will do in this wet season. During the training, they bought 15.6 kg of 4 varieties of forage seeds from two villagers (trainers/ pilot farmer in Hatxiengdee). Moreover, both pilot farmers and trainers have produced mineral blocks for using by themselves or for selling at low price to all visitors.
- Training on Animal feed concentrate was organized for 18 farmers of 5 villages (first session). The training was conducted in Navang (pilot farm of the villager) with 3 resource

farmers from Kuase, Hatxiengdee and Navang being trainers. After the training, two farmers in Hatxiengdee and Navang have produced 39 mineral blocks and a tank of rice straw treated with urea (100 kg).

- Two training courses have followed; it was organized in Navang (pilot farm for cattle and goat farms) for 54 farmers of Gnommalat, Mahaxai, Nongbok and Xaibouli districts. The subjects of training were animal feed concentrate production and forage plantation. The trainers/resources people were the same pilot farmers.
- Training on mineral block was organized in two sessions in two villages, Navang and Hatxiengdee. 34 HH of 6 villages have participated. 40 mineral blocks were produced.
- 84 HH were identified for forage planting in this wet season 2011.



Pilot Farmer sells forage seed to household



Pilot Farmer sells Mineral block to household

Table: Farmers participation in forage planting in wet seasons 2010 and 2011

District	Village	2010		2011	
		HH	Area (m ²)	HH	Area (m ²)
Gnommalat	1			1	1,600
Mahaxai	5	12	9,883	22	19,283
Xe Bangfai	4	8	7,104	12	9,004
Xaibouli	3	4	9,750	28	30,750
Nongbok	3	10	14,264	21	32,520
	16	34	43,001	84	93,157

Kengsavang cattle farm:

- The farm owner has expanded his forage area more about 1,600 m². The success of this first forage grower in Kengsavang Village is having positive impact on other farmers in surrounding villages. The number of households involved has increased from 12 HH last year up to 23 HH for this wet season 2011.



Farm owner and his family are replanting forage by new technique (Kengsavang)

Kuase cattle farm:

- After one season of forage production, a new watering system was installed in his farm, with the equipment made of 12 sprinklers to supply water to pasture field. The aims are to (1) have more forage in wet season for silage production, (2) use the silage as complement feed in dry season and (3) improve the pasture field in dry season and increase its production. In total the farm had 16 heads of cattle at the end of wet season, 13 were sold and the farm owner got an income of 37,000 Baht.
- After selling cattle the farm owner has stored feed and improved his old pasture field to be ready to fattening cattle in next 2-3 months. There are also some plots of cassava as new additional feed in this wet season. This farm also became cattle farm school for farmers of surrounding target villages of Xe Bangfai to learn several subjects related to cattle raising.



Storing rice straw



Improving existing pasture by manure application

3.1.10. Village fund funded activities

Wet season rice 2011

- See in table below data related to borrowing for wet season rice production.

District/village	HH	Area (ha)	Borrowed from VIRF (kip)	Remark
Nongbok	907	2,000.5	752,750,000	
Samnadee	12	26.2	9,600,000	
Danepakse	37	49.2	29,600,000	
Danepakse	25	10.8	20,000,000	For vegetable production
Muangkhai	25	38.6	20,000,000	
Sorkbor	106	147.0	100,000,000	
Phakeetou	66	154.4	52,800,000	
Natai	55	146.9	44,000,000	
Sadeu	193	450.0	154,400,000	
Hatxiengdee	239	533.4	203,150,000	
Dongphakpheua	149	444.0	119,200,000	
Xe Bangfai	22		24,000,000	
Xenoi	58	93	85,000,000	Proposal for VFC under preparation
Kuase	33	26	20,000,000	
Mahaxai				No borrower
Gnommalat				Data not available
Xaibouli				

Mushroom culture

- The harvest was completed in May 2011 at the end of the dry season. Farmers say they will restart in the next few months.

Rattan plantation

- Eight Phanang HH completed plantation of 5,500 rattan seedlings in a new area of 3.3ha.
- Rattan plantation is also expanding to 3 villages (Hatxiengdee, Phakeetou, and Beungsantheung) in Nongbok District on 1 ha. The 9 HH, bought the seedlings produced by the DSP supported rattan seedling group in Ban Phanang (Mahaxai District). 1,620 seedlings were planted. No any issue for the moment.
- Study trip on rattan growing technique was organized for two days in Sepon and Champhone districts, Savannakhet Province. 28 participants were involved with villagers from Mahaxai, Xe Bangfai and Nongbok District, RMU, DAFO and DSP livelihood staff. The objective of the study trip was for farmers to see rattan growing technique in other area where rattan has been cultivated for long time as a cash crop and is now processed as an ODOP product.



Field visit of rattan plantation in Sepon and Champhone District

Rattan plantation in Phanang village - Mahaxai

No.	Village	Area (m2)	Seedlings	Remark
1	Phanang	3,000	500	Completed plantation in May
2	Phanang	6,000	1,000	
3	Phanang	9,000	1,500	
4	Phanang	4,000	600	
5	Phanang	6,000	1,000	
6	Phanang	3,000	500	
7	Phanang	800	100	
8	Phanang	1,500	300	
Total		33,300	5,500	

Rattan plantation in 3 villages of Nongbok District

No	Village	Area (ha)	Seedlings
1	Phakeetou	0.28	470
2	Phakeetou	0.09	150
3	Phakeetou	0.08	130
4	Hatxiengdee	0.16	270
5	Hatxiengdee	0.06	100
6	Beungsanthung	0.09	150
7	Beungsanthung	0.09	150
8	Beungsanthung	0.06	100
9	Beungsanthung	0.06	100
		0.97	1,620



Picture: Transportation of rattan seedlings



Picture: Rattan planting in Hatxiengdee village

Cattle rising

- No updated information is available.

Goat rising

- Following the setup of small scale demonstration goat farm and the organization of study trips a new goat farm was established in Navang Tai Village. It expands from a former demonstration farm. The goat pen was completed through a personal investment (about 4 million kip). The household now aims at raising the goats for regular marketing.
- The farm has now 9 goats including one buck. Forage plantation is starting this wet season.
- The farm is now becoming a place for study tour. During the quarter there were 72 visitors from 13 villages of Gnommalat, Mahaxai and Nongbok.



Visitors on study tour



Details of new goat pen

Handicraft

- Study trip was organized for handicraft groups in Vientiane for 5 days. There were 16 participants including farmers from 7 villages of 5 districts, RMU and LWU. The objective of the study trip was to improve their knowledge on product quality related to design, dyeing, pattern designing and product processing. There was also interest in looking for weaving tools and materials. Ten sets of weaving tools and 90 kg of cotton were purchased.
- After study trip in Vientiane of handicraft group, meetings with handicraft groups were organized in 4 districts, in 5 sessions with 63 women involved. The objective of the mission was to improve the capacity of handicraft group regarding quality product improvement, design, dyeing, to identify potential of trainer in the village, priority product to be produce, cotton fund group.
- During this period, handicraft groups in 6 villages of two districts were able to sell their handicraft products in Vientiane trade fair and the group earned 12 million kip. Two villages (Kengpe and Thakhor) have orders (200 scarves and 2 roll of materials for clothing making) from Savannakhet traders.

Aquaculture

- 83 HH in six villages of Phase 7 (Mouangkhai, Beungsantheung, Phonthan, Dongmakfai, Beunghuana and Xenoi village) have applied to use VIRF for fish culture activities. In the last reporting period DSP and DWG technical staff conducted a soil testing with HH and facilitated pond construction company to meet with VDC of Dongmakfai and Beunghuana village. Twenty five HH in Dongmakfai and Beunghuana village decided to not continue with pond construction because construction cost was too high (13,000 kip per m³ compared with last year price of 10,000 kip per m³).
- DSP and District technical staff conducted the M2 technical presentation to four villages of Phase 8 (Naphoktheung, Dongkasinh, Naoneua and Nathong) and will continue in the rest five villages in Gnommalat district.
- Thirty nine HH in village of Phase 1-6, namely Beungbouathong and Nakatang want to use VIRF for fish pond construction. Soil test has been done in both villages but HH in Beungbouathong have postponed pond construction to next season due to high cost of construction per m³. The pond construction for nine HH in Nakatang village was completed.

The fish culture bloomed in Hatxiengdee village, Nongbok district with fifty four HH that have used a second round of VIRF fund for their fish culture in 2011 season.

- **Pond sealing program.** DSP and DWG staffs have visited 115 HH who were involved in pond sealing program in 2010 season for evaluating the efficiency of the program. From a preliminary analysis it was found that 31.3% out of 115 HH had increased water availability in their fish pond after pond sealing project, 50.4% had a situation same as before and for 18.3 % of HH water availability had decreased from last season (which may have been affected by rainfall of 2010).

3.1.11. Contract farming

Wet season feed corn

Background.

- Feed corn has been promoted in DS target area since wet season 2008 in wet season, firstly as a demonstration activity. Although facing several important difficulties that first season showed promising results.
- Since 2009, wet season feed corn has started as contract farming activity (5 villages, 30HH, 7.9 ha, 16.7 ton production, sold 16.7 million). The trader came from Thakhek. The activity expanded in 2010 in 11 villages of 3 districts with 56 HH but was affected by the drought in early wet season. The trader this time came from Savannakhet.

2011 activities

- In 3 districts (Xe Bangfai, Gnommalat and Mahaxai) a steering committee aimed at taking over the role of facilitator for cash crop promotion was setup. The steering committee is composed of: Deputy District Governor, Head of DWG, Head of Financial office, Head of Commerce office, Head of Land Management office and Head/Deputy of DAFO.
- In total, 186 HHs from 21 villages have signed a contract with one of the two traders from Savannakhet and Mahaxai; the total surface planted is 47 ha. Seed varieties being used are VN-8960 (Xe Bangfai) and VN-10 (Mahaxai and Gnommalat).
- In June feed corn has been growing well because of good rain during the early stages of growth. In the last days of the month (28-29-30 June) there were continuous heavy rains in Khammouane Province, especially in Gnommalat area. Feed corn fields were flooded in all 10 Gnommalat villages with the most serious cases in That, Nongping, Phathoung, Nakatang and Phonsaed villages. The depth of flood in feed corn field reached 1 to 2 meters and lasted up to 3 days. In Mahaxai there was flooding as well; 8 HH in Somsanouk, Dang, Nakio and Pova had damages but less than in Gnommalat area. There was no flooding issue reported in Xe Bangfai District. Field staff is collecting the damages data; the traders were informed of the flood event and they have agreed to come and meet farmers one day.

List of villages growing wet season feed corn.

No	District/Village	HH	Seed (kg)	Area (kg)	Remark
Gnommalat					
1	Phathoung	10	31	1.93	
2	Gnommalat Neua	1	2	0.13	
3	Nongping	7	17	1.73	
4	Nafaimai	8	8	0.53	
5	That	3	7	0.46	
6	Kenglek	4	17	1.73	
7	Boungbao	10	19	1.26	
8	Naxok	2	3	0.30	
9	Nakatang	14	22	1.16	
10	Phonsead	12	18	1.20	
	Total Gnommalat	71	145	10.53	
Mahaxai					
11	Dang	2	7	0.50	
12	Somsanouk	18	75	5.00	
13	Nakio	24	93	6.20	
14	Pova	5	32	2.13	
15	Mahaxai	8	35	2.30	
	Total Mahaxai	57	242	16.13	
Xe Bangfai					
16	Thahat	21	75	5.00	
17	Thakhor	14	52	3.40	
18	Kengpe	3	70	4.80	
19	Kasee	12	59	3.90	
20	Kengkhaen	5	31	2.00	
21	Xenoi	3	21	1.40	
	Total Xe Bangfai	58	308	20.50	
	Total 3 districts:	186	695	47.16	



Picture: Feed corn planting in Mahaxai Village



Picture: Feed corn planting in Mahaxai Village

Value rice TDK-11 and TDK 8

- TDK-11 is a glutinous variety recently introduced and promoted in the target villages. Its main advantages are high yield, an attractive color, easy milling (few broken rice) and it is also tolerant to iron toxicity.
- Updated information reports that 814 HH from 12 villages in 3 districts (Mahaxai, Gnommalat, Xaibouli) made a contract with traders. The total area concerned is 893 ha.
- In Xaibouli District (5 villages: Kengphosee, Kangpa, Phakpheua, Somsaot and Phonthan) the millers group of Thakhek District provided about 56 tons of TDK11 and 6 tons of TDK8.
- In Gnommalat and Mahaxai District (7 villages: Dang, Somsanouk, Pova, Mahaxai, Gnommalattai, Houayyen and Boungbao) the millers group of Mahaxai District provided about 7.2 tons of TDK11.
- Some observations made in Somsanouk Village, where DSP demonstrated the use of TDK11 as a better option than traditional varieties, seem to indicate that the TDK11 seeds provided by the millers group are of lower quality than the seeds provided by DSP (coming from the RCCRC). This suggests that the millers group are not able to provide “certified” seeds of good quality.
- Harvest was completed in late of May 2011 in 3 districts and the total rice production reached 3,639 tons, with an average yield of 3.5-4.2 ton/ha. In Xaibouli, the trader bought the whole production from the farmers; in Mahaxai and Gnommalat, the traders have got back at least three times the amount of seeds provided and sometimes more (see tables below).
- Price was 25,000 kip/12 Kg in Xaibouli and 30,000 kip/12 kg in Mahaxai and Gnommalat. The total amount of rice sold is 3,285.6 tons that are worth about 6.86 billion kip.

Mahaxai	Villages	HH	Product/kg	Price(kip/kg)	Total	Remark
1	Dang	14	7.400	2,500	18,500,000	
2	Somsanouk	9	5.130	2,500	12,825,000	
3	Pova	18	11.000	2,500	27,500,000	
4	Mahaxai	12	9.000	2,500	22,500,000	
Total		53	32.500		81,325,000	
Gnommalat	Villages	HH	Product/kg	Price		Remark
1	GML Tai	15	507	2,500	1,267,500	
2	Houayyen	2	186	2,500	465,000	
3	Boungbao	20	1.476	2,500	3,690,000	
Total		37	2.169		5,422,500	

		District	Village	Households	Areas(ha)
		Nongbok	Beungsantheung	2	2.0
		Xaibouli	Khamsavang	4	5.0
			Dangsavanh	9	19.5
		Xe Bangfai	Kuase	1	1.0
				16	27.5
No	Xaibouli Village	HH	Area (ha)	Product for sale (T)	Income
1	Kengphosee	109	146.0	613.20	1,277,500,000
2	Kangpa	211	225.3	946.26	1,971,375,000
3	Phakpheua	161	250.0	1,050.00	2,187,500,000
4	Somsaat	145	75.0	315.00	656,250,000
5	Phonthan	98	77.8	326.76	680,750,000
Total:		724	774.1	3,251.22	6,773,375,000

Rice VND in dry season 2011

- 2 villages in Xaibouli were successful with rice for Lao Beer factory in dry season 2009-2010. The farmers continued the activity this dry season. The trader is from Thakhek rice miller group.
- Sixteen HH planted a total surface of 7.7 ha. The harvest was completed in late May 2011 with a total production of about 50 tons. The yield is quite high at 5-6 tons/ha. The price per 12 kg was 24,000kip.

No.	Name of villages	HH	Area (ha).
1	Phakpheua	10	3.7
2	Kengphosee	6	4.0
Total		16	7.7

Cassava production

- From the 2 companies, a trading import-export Company from Vientiane and a Cassava Processing Company that is settling in Gnommalat District, only this last one is going to finalize contracts with DSP target villagers.
- Villages finally involved are listed below.
- The last update data of cassava planting in wet season reports that 16 HH from 4 villages have planted a surface of 27.5 ha (see table below). For the moment cassava is in the growing stage.
- All sites have a verbal agreement contract with Thakhek trader and contract signature is scheduled in July.



Pictures: Cassava transportation and soil preparation in Beungsantheung village

3.1.12. Service provision

Rice dryer equipment and rice seed production

- The rice dryer equipment in Somsaat (Xaibouli District) is operational. Another rice dryer is operational in Kengphosee. The 10 HH rice seed production group in Somsaat has been active during this last wet season. Originally made of 10 farmers, the group lost 2 members but gained 4 others from Kengphosee, and Phakpheua Village (2 HH each). Five varieties were produced namely: TDK1, TDK1-sub1, TDK11, TDK8 and one Thasano variety during the last wet season.
- This dry season the seed production group extended to 2 more villages (Naphoktha and Beungxe). The total number of households involved is now 30 HH (Kengphosee – 8, Somsaat – 8, Beungxe – 9 and Naphoktha – 5).
- Finally 31 HH of 4 villages completed harvest from 16.74 ha. The total production reached 63.84 tons and 24.13 tons were sold to trader.

No	Production groups	HH	Area (ha)	Production (kg)	Yield (t/ha)	Production sold (kg)	Price per kg	Gross income (kip)
1	Somsaat	8	3.18	13,696	4.00	8,500	4,000	34,000,000
2	Kengphosee	8	3.50	12,232	4.06	6,630	4,000	26,520,000
3	Beungxe	9	7.00	29,060	3.70	8,000	4,000	32,000,000
4	Naphoktha	6	3.06	8,851	2.89	1,000	3,500	3,500,000
		31	16.74	63,839		24,130		92,520,000

Seed multiplication for Submergence tolerant rice

- On 18 Jan 2011 was conducted the workshop on submergence tolerant rice at PAFO with 80 participants including 36 farmers from 28 villages, PAFO Khammouane and Savannakhet, DAFO and DWG of 5 target Districts (Gnommalat, Mahaxai, Nongbok, Xe Bangfai, Xaibouli), NAFES, RCCRC, RMU, Xe Bangfai Seed Production Centre of PAFO Khammouane, KDP project and Khammouane District Governor. The objectives of the workshop were to (1) present and discuss the results of two years of submergence tolerant

rice trials in Downstream target villages and (2) present the seed production plan in dry season 2010-2011.

- The seed multiplication plan included 2 components:
 - A mass multiplication of seeds with a number of farmers scattered in all target districts. The seeds produced would be disseminated in a maximum of target villages with flood prone paddy field areas.
 - A multiplication for getting breeder seeds

A. Mass seed multiplication

- Thirty four households (instead of 29 initially recorded) from 18 villages in 5 districts were involved in multiplication of submergence tolerant rice (TDK1Sub1) in dry season 2010-2011 (refer to table in annex for details). The initial target of production was 25 tons.
- The activity has developed without major incident during the whole cycle. The rice was harvested throughout the month of May, sometimes in difficult conditions because of early heavy rains from mid-May.
- The total harvest was 40,597 kg from 11.94 ha. The lowest yield was 3.04T/ha, the highest was 5.51 T/ha and the average yield is 4.26 T/ha. The total harvest was bought back from the producers by DSP.
- DSP distributed then free of charge a total of 40,527.4 kg of seeds of TDK1 Sub1 to 1,821 HH in 86 villages of 5 districts:
 - 39,870kg provided to 1,732 households of 77 target villages in 5 districts where DSP is currently active.
 - 429.4 kg provided to 51 households of 8 target villages where DSP is not currently active with livelihood activities
 - 228 kg provided to 38 households in 1 non target village of Gnommalat District (Ban Hai, upstream on the Xe Bangfai)
- Official rice seed handing over ceremony was conducted for two sessions in Nongbok and Xaibouli districts in late May. The participants included District governors, PAFO, RMU, DSP manager and villagers of two villages. Khammouane television and NTPC Communications Department joined for these ceremonies. DVDs from the official ceremonies held on 2 June have been received from the Khammouane Television and forwarded to Communications Department.
- A study trip was organized at the Rice and Cash Crop Research Centre (RCCRC) in Vientiane on rice seed production in April. Participants included 35 farmers, from 9 villages, RMU, DAFO, and DWG. The main objective of the study trip was to provide additional knowledge on seed production (half day training in RCCRC).



Pictures: Purchase of seeds from a producer and handover of TDK1Sub1 seed ceremony in Hatxiengdee (Nongbok)



Pictures: Distribution of TDK1 Sub1 seeds to DSP target village households



Pictures: Study tour and training in RCCRC VTE

B. Breeder seed multiplication

- Breeder seed technology is usually done only in Research Centre. However, to ensure the sustainable use of submergence tolerant variety “TDK1-Sub1” in the commodities, the technique was introduced at the village’s level. The objective of the activity is to rehabilitate submergence tolerant rice variety “TDK1-Sub1” in order to maintain purity of the variety. The objectives of the activities are: (1) to produce high quality and quantity seed of the submergence rice tolerance varieties “TDK1-Sub1”, (2) building seed producers in the commodities and (3) increasing farmer’s income, especially for the seed producers.
- The activity was conducted this dry season in 6 villages of 3 districts with participation of 6 farmers (see list below). The target was to harvest four thousand panicles.
- At mid May 2011, all production sites were harvested with a total grain weight of 1,202 kg, average yield 4.8t/ha (the yield was between 2.2 and 6.5t/ha). All seeds produced by each farmer will be used in wet season 2011 for production of “foundation seeds”.

List of breeder seeds producers in dry season 2010-2011

No	Village	District	Number of panicles
1	Yangkham	Xe Bangfai	500
2	Naphoktha	Xe Bangfai	1,000
3	Hatkhamhieng	Xe Bangfai	500
4	Kengphosee	Xaibouli	1,000
5	Mahaxai	Mahaxai	500
6	Somsanouk	Mahaxai	500
	Total		4,000

C. Foundation seed multiplication in wet season 2011

- 5 HH in 5 villages (Mahaxai, Somsanouk, Kengphosee, Navangneua, and Phakeetou) were identified for R2 multiplication in this wet season. An area of 5 ha is expected to be planted with an expected approximate production of 15 tons.
- Seeding was done in June 2011 for all production sites and transplanting is expected to be done in July 2011. Seedbeds in Mahaxai and Somsanouk villages were flooded for 5 days from July 1 to 5 but with 100% of seedlings surviving the flood.

List of foundation seeds producers in wet season 2011

No	Village	District	Seed (kg)	Area (ha)	Sowing date
1	Kengphosee	Xaibouli	50	2	10/6/2011
2	Naphoktha	Xe Bangfai	20	0.5	15/6/2011
3	Navangneua	Nongbok	30	1	13/6/2011
4	Somsanouk	Mahaxai	30	0.5	6/6/2011
5	Mahaxai	Mahaxai	30	1	10/6/2011
	Total		160	5	

Rattan seedlings production

- Two Phanang seedling producers sold also 1,360 rattan seedlings to 3 villages in Mahaxai District including one non-target village and earned 4.080.000 kip (see below).

No.	Sale to village	Seedlings	Price (kip)	Total value (kip)
1	Nachan	160	3,000	480,000
2	Phonsaat	200	3,000	600,000
3	Phanang	1,000	3,000	3,000,000
Total		1,360		4,080,000

- These two HH in Ban Phanang have re-started a rattan nursery this wet season by using 3 kg of rattan seeds.

No.	Village	Seeding (kg)	Sowing date
1	Phanang	2	10 May
2	Phanang	1	13 May
Total		3	

Red pig breeding farms

- In May 2009 DSP provided support to the improvement of 5 small farms for (1) producing pure red pig breeders and (2) promoting half bred pigs by mating local sows by the red boar of these farms.
- DSP provided 1 red boar and 1 red sow from Champasak to each of these 5 farms.
- So far, only the Nongping farm (from 5 villages in 4 districts) has been re-organized. The status of other 4 farms is being evaluated. One clear issue lies with the poor survival rate of piglets. The objective is to establish and develop red pig breeding farms in each district for (1) supplying young red pig breeders and (2) providing mating by red boar to local sows for breed improvement. The process will start soon after team meeting which will be conducted on 22nd July.
- The Nongping (Gnommalat District) farm was reorganized for reaching the objective of being a red pig breeding farm.-Pig pen construction and watering system were completed. The herd is now made of 13 red and 5 native pigs. Next step is to construct some fence besides the pig pen and plant Stylo, Leucaena, Cassava and pigeon pea to supplement pig feeding.
- In June, one red pig group of 4 farmers from Thakhor and Somsaat (Xe Bangfai District) has visited Nongping red pig farm for exchange.



Use of local material for pigsty construction



Pigsty completed



New litter of piglets after improvement of housing/ equipment



Visitors from Xe Bangfai District. to study

Aquaculture extension

In this second quarter of 2011, service provision aquaculture activities have focused on (1) establish aquaculture information systems and extension material production (2) training farms establishment and (3) support to HH seed producers.

- ***Extension material.*** DWG technical staff has prepared the posters for M2 technical presentation and also produced 32 additional Aquaculture information boards for 23 additional villages.
- Printing company has completed the 4,800 sets of aquaculture extension materials. DSP will distribute to DWG for their future aquaculture extension in the coming months. Record book will be developed for collecting contact details of HH receiving extension materials for future evaluation. DSP will request DAFO of each district to provide some space or room where storage all of extension materials can be secured on the long term.
- ***Training farms.*** These „training farms“ will be used as aquaculture training place for DAFO and used as demonstration farms of integrated farming. Fisheries team and DWG technical staff continued preparation to construct nine aquaculture training farms in DSP intervention areas (Gnommalat Neua, Mahaxaitai, Nongbone, Beungxe, Hatkhamhieng, Houayhair, Manilad, Navangneua and Dongsagam village. Materials distribution was done in June and construction works are expected to complete in next quarter.
- ***Fingerlings production.*** In this quarter, sixteen seed producers from 13 villages produced approximately 328,500 heads of common carp fry, 210,250 heads of catfish, 460,000 heads of silver barb and 248,000 heads of tilapia (a total of approximately 1.25 million fingerlings). Breeding activities will continue in the next quarter.

- As HH seed producers in Gnommalat could not start fish breeding due to KDP project improvement work to Thathod's irrigation systems, DSP has supported DAFO office, Gnommalat district, to produce fish fry during this season. DAFO office has assigned technical staff, build temporary house for guarding and fish pond fencing. The common carp and silver barb breeding were done and sale has started to target HH in Gnommalat district.
- Fisheries team has developed a recording book for regular recording of fish breeding indicators, investment cost, fish fry production and their distribution of all seed producers in this growing season. This information will be used for analyzing individual fish breeding performance.
- During the quarter coordination with various government organizations and private sectors in border province was pursued for increasing the autonomy of the aquaculture inputs supply network. A study trip in Thailand border provinces (Mukdahan, Nakhon Phanom) is scheduled in July 2011.

3.1.13. Fisheries Co-Management (FCM2)

- After DSP organized two workshops of Houay Saypay Fisheries Management in Xe Bangfai District and Nam Oula Fisheries Management in Mahaxai District and developed fisheries management regulations for both water bodies, DSP, DWG and village clusters conducted the village consultations for sharing and coming up with their consensual agreement. Five hundred forty one (541) villagers from 20 villages attended these activities. The fisheries regulations were finalized and then approved by both district governors.
- Every concerned village requested GOL partners to back up the village authorities in enforcing the fisheries law and to support them for establishing eight fisheries conservation zones (deep pools). Head of DAFO requested DSP to arrange a fisheries law announcement meeting at Mahaxai district.
- That workshop was organized in June in Mahaxai district for disseminating the new National Fisheries Law for GOL partners (30 persons), DAFO technical staff (20 persons) and Community Fisheries Management committee members from all FCM2 targeted water bodies and village authorities (47 persons) from 27 villages of five districts. The Director of the Livestock and Fisheries (DLF) and Department staff presented the Livestock and Fisheries Strategy, the existing fisheries co-management in Lao PDR and the fisheries law. The workshop also included a site visit to Nam Oula tributary.
- The masters of IEC materials (2 community fisheries posters) were completed by the artist on 1 June 2011 and the format of both of them will be finalized for production in the next quarter.

3.1.14. VIRF

- Expansion of VIRF activities to 9 villages of phase 8 is 78% completed. The VIRF system used is the modified one that includes a share system (see below).
- Phase 7: The percentage of HH participating to VIRF is now 26.25% (from 0% at the end of previous quarter).
- Phase 1-6: At the end of the second quarter the percentage of HH participating to VIRF is 76.75%, a slight increase from end of Q1 2011. Increase has been slightly higher for poor households than for other categories.

Evolution of participation between Q1 and Q2 2011 for Phases 1-6

	Number	Increase	%
Total Households	9,520		
Total HH participating end Q1 2011	7,257		76.2
Total HH participating end Q2 2011	7,307	50	76.8
Total poor Households	2,239		
Total poor HH participating end Q1 2011	1,294		57.8
Total poor HH participating end Q2 2011	1,325	31	59.2

- More complete VIRF access data are summarized in Annex 2.
- On time repayment (OTR) falls from 69.4% at the end of Q1 to 60% now due to recent decrease in Nongbok and Xaibouli districts. On a one year period the average figure remained stable passing by a high in last March: Nongbok and Mahaxai are stable, Xe Bangfai and Gnommalat have increased and Xaibouli (that was the highest with 77% in June 2010) has decreased down to 62%.
- On time repayment data are plotted in Annex 3.
- **Setup of share system**
 - The consultancy for preparing the setup of the share system in VIRF has started on 25 May. A workshop with district / RMU representatives to explain the system is organized on 10 June.
 - Upon recommendations of the consultant the updated VIRF regulations were finalized on 2 July through extensive discussions DSP/RMU and the Khammouane Governor Decree authorizing them was issued on 4 July.
 - The new VIRF system is being established in all 9 villages of phase 8 in early July.
 - The new VIRF system will be progressively introduced to 83 villages of phase 1-7; most villages (65) will need a single re-training (5 days) on the revised accounting system with share records. Remaining ones (18) must receive 2 5-day training courses on the VIRF by-law and the revised accounting.
- **Ban Dang VIRF embezzlement.**
 - Dossiers related to the wrongdoer submitted to the justice court. The schedule of judging by the court is to be identified. Up to now there is no information from RMU
 - The wife of wrongdoer requested for release of her husband on bail of 3,000,000 LAK with promising instalments of reimbursing 300,000 LAK per month against 120,000,000 LAK embezzled. But the villagers disagreed with the proposal.

3.2. Khamkeut Region

3.2.1. Phase 1 to 5 Activity

- 2,840 HH are entitled to compensation and all of them were already provided compensation.

3.2.2. Phase 6 Activity (final phase)

- Compensation for Phase 6 villages is provided only to select HHs (not all HHs as in Phase 1-5).
- Main options selected for Phase 6 (820 HH) are grass cutting machines (351 HH), various types of land development (33 HH), weir construction (3 HH), pumps (56 HH), cattle (117

HH), goat (71 HH), pig (45 HH), animal pens (56 HH) and catfish in tank (44 HH), pond (7 HH). Twenty four HH selected small shop and 1 HH moved out from village. It was removed from database, now there are 819 HH in phase VI.

- The purchase of animals for 89 HH and small shop for 21 HH are the main remaining activities.
- The status as of 30 June is summarized in the table below.

Status	As of 31 March		As of 30 June	
	Number of HH	Percentage / status category	Number of HH	Percentage / status category
Fully complete	543	66.2%	709	86.57%
Mostly incomplete	242	29.5%	89	10.87%
Not yet started	35	4.3%	21	2.56%
Total	820	100.00%	819	100.00%

3.2.3. Phase 6 Activity (grievance related)

- 260 valid cases in 9 villages are concerned.
- The three consultations steps were conducted in all villages with valid grievances.
- Feasibility check was conducted for all households with valid grievances.
 - Crop harvest machine 118 HH
 - Water pump 17 HH
 - Animal raising 27 HH
 - Animal pen 89 HH
 - Fish culture 9 HH
- Procurement of inputs is well advanced.

3.2.4. Community activities

- Community activities are complete in 24 of 25 villages. It is ongoing in the last village. Due to rice plantation final school improvement in Ban Pakha was postponed to August. Equipments (iron sheets and nails) were provided to village authority.

3.2.5. Other

- n/a

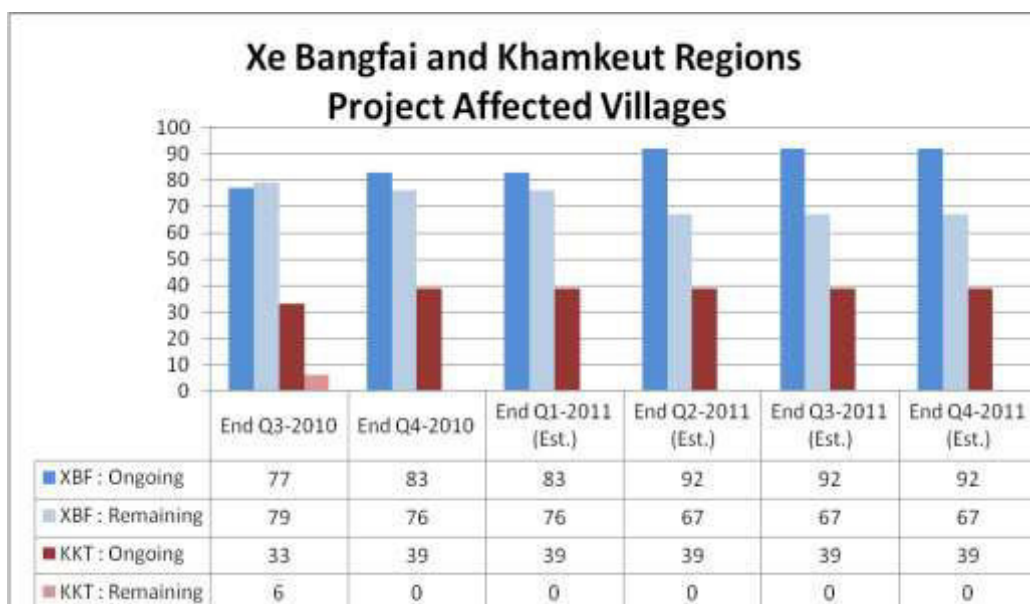
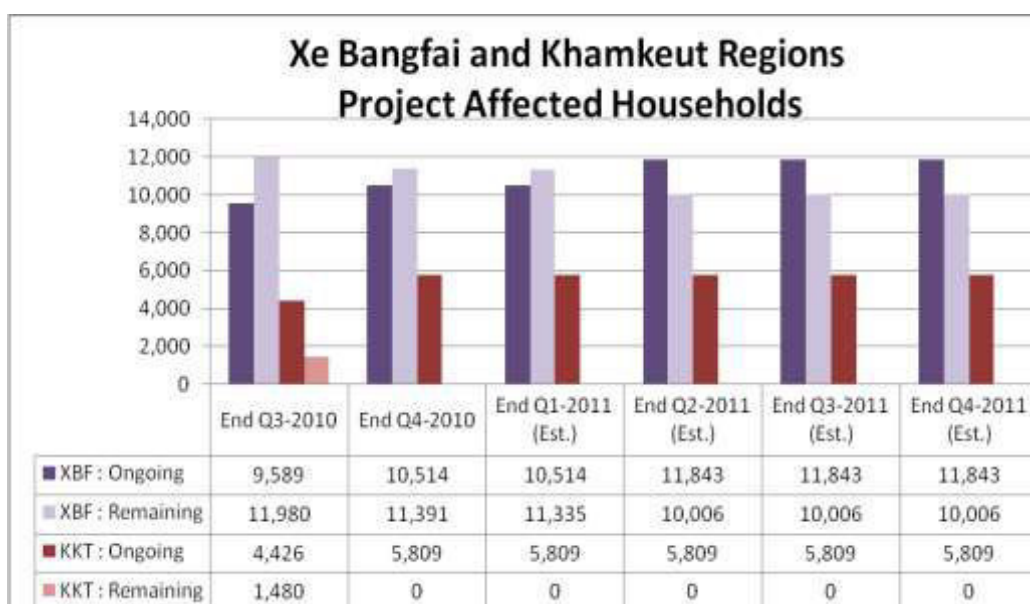
3.3. Nakai Reservoir Watershed Region

- No update. Fish catch monitoring is ongoing.

3.4. Village Summary

As of the end of March 2011:

- *No change from last quarter.* The total number of villages is now 159 in Xe Bangfai and 39 in Khamkeut.
- Following the inclusion of villages affected by backwater in the Upper Xe Bangfai (upstream of Nam Gnom confluence) and the results of the hinterland villages fisheries dependency analysis, the classification of the Xe Bangfai villages has been reorganized to more accurately reflect the various zones.
- DSP has livelihood related activities ongoing in 92 Xe Bangfai villages (~11,850 HH concerned) after the start of Phase 8 in June and 39 Khamkeut villages (~5,800 HH concerned).
- Household list has been updated to date in 161 out of 198 villages of Khamkeut District and Xe Bangfai area.
- For Khamkeut villages it must be noted that not all households of the Phase 6 villages are receiving compensation (refer to Grievance section). The original number of eligible households was 820 out of 2,569. One household has moved out and following resolution of grievance cases 260 households were added. There are thus 1,079 households in Phase 6 receiving compensation.
- The AIP 2010-2011 included a Xe Bangfai Phase 8 to start in quarter 1 of 2011. Following recommendations of the IFIs MTR priorities have been revised. Phase 8 has started in June and Phase 9 due to start in quarter 2 was definitely cancelled.
- The final number of Xe Bangfai villages that receive livelihood compensation with the support of a VIRF is thus 92 villages. The remaining 67 semi-riparian and hinterland villages are not included for compensation within the DSP 16 MUSD.
- Following decision of the NTPC BOD to provide additional funding in 2012 and discussions with GoL and IFIs, the 67 remaining semi-riparian and hinterland villages will receive compensation between late 2011 and late 2012. There is however not yet plan that can forecast a number of villages being compensated in Q4 of 2011.
- The graphs below include these revisions as well as some adjustments due to update of households lists.



4. Analysis and discussions

4.1. Management

DSP bridging phase

- Following the decision of the NTPC BoD to fund the bridging phase in 2012, DSP management initiated steps and arrangements with stakeholders.
- Externally:
 - DSP is starting discussions with RMU for organizing the handover, e.g.:
 - RMU supported by DSP will organize a workshop with concerned stakeholders for looking at ways to institutionalize the production of submergence tolerant rice seeds in the targeted provinces

- RMU supported by DSP will organize a workshop with concerned stakeholders for trying to get a better overlap of DSP and SDP target villages
 - RMU and DSP will update and fine tune the proposed District takeover plans elaborated in March 2011. DSP/RMU will continue discussions with each of the districts and with IFIs support projects (SDP, KDP).
 - An overall strategy and 5 joint DSP-District operational plans shall be ready before the end of September. Such plans will cover the period of October 2011 to December 2012, e.g. the extension period of DSP as well as the next fiscal year of the GoL (Oct 2011 to Sept 2012).
 - These plans will be consolidated into the DSP/AIP of 2012.
- A number of challenges lay ahead and should not be underestimated due to a number of factors are beyond the control of DSP such as:
 - GoL has not yet approved a handover budget for RMU and the districts to fund the takeover plans
 - The level and timely support of ADB funded Smallholders Development Project to the different DAFO's for taking over DSP activities remains uncertain and the current level of common target villages between DSP/SDP is currently low
 - The support of the World Bank funded Khammouane Development Project to the districts (DAFO mainly) for taking over some DSP activities is not finalized. The preparation of the KDP extension is expected to start in July and the effective starting date of the revised KDP component #3 is likely to start by early 2012.

Grievance

- All grievances related to Riverbank Garden are complete and for the Khamkeut livelihood compensation grievances are virtually complete. No difficulty is expected.
- Grievances related to access issues were processed and in most of the cases these have been validated and technical solutions have to be worked out and implemented at the onset of the next dry season

4.2. Xe Bangfai

Fisheries status

- After the FCM1 interim report and the various fisheries observations reports earlier this year the second six monthly status report prepared in June confirms that the fish catches reported by the monitors in 2010 continue to decline. 2011 data suggest only small additional decline when compared with 2010.
- Long-term effects of NT2 operation remain uncertain (migration & spawning, habitat changes and food availability) and monitoring will continue to understand / assess the true impact on ecosystem (as well as to be compliant with the CA).

Riverbank garden

- Although some appeals are still possible until mid-August, the program of compensation is considered as complete. Documentation is now being finalized and transferred to DCC.

VIRF/Livelihood

- DSP has commenced Phase 8, the last phase that includes the setup of a VIRF and the organization of a full livelihood support for households. Livelihood and Fisheries teams will focus their efforts on the 9 villages of Phase 8 and the 6 villages of Phase 7 (with currently low access to VIRF) in the coming months.

- DSP has made a major effort for the promotion of the submergence tolerant rice variety prior to the wet season and will continue these efforts for trying to institutionalize the production of seeds of good quality during the handover process.

WASH

- Some further repair and improvements of boreholes / pumps are still ongoing but the focus now is shifting to the setup of the O&M system and handover of works / spare parts for the coming months.

4.3. Khamkeut

- Late 2010 the slow progress in Phase 6 grievance processing had alerted the DSP management that has increased support for the district to process the grievances faster from the beginning of the quarter. All grievances were investigated by late March and notification to complainants made in late April early May. Compensation has started and is now expected to be complete at the end of July.
- Closure of the Khamkeut office is confirmed to occur by the end of 2011.

5. Outlook

5.1. Management

- Riverbanks observation; the thirteenth field mission for riverbank observations is scheduled in late September 2011.
- The second 6 month Fish Catch Monitoring Report (required by the CA) will be released by the end of July. The report will cover the available data collected until 30 April 2011 in all 3 DSP zones (Xe Bangfai, Khamkeut, and Upstream of Reservoir).
- The next round of Xe Bangfai Fisheries observations is scheduled in August.
- DSP bridging Phase: see previous section 4.1.
- Following initial discussions, resources for designing / planning for the DS SES 2012 will be organized in the next quarter and it is expected that the consultant will start preparation in September.

5.2. Outputs

- Full riverbank garden documentation (including grievances cases) will be complete by the end of August 2011.
- New VIRF system (with shares) will progressively be put in place from August 2011 and completion is expected in the last quarter of 2012.
- DSP will be active (VIRF/livelihood activities) in all villages of Xe Bangfai Phase 8 before the end of the Quarter #3.
- All remaining compensation (outside grievances) for Phase 6 villages in Khamkeut will be delivered around the end of July.
- The last compensation for valid grievances in Khamkeut (260 cases) will be delivered around the end of the July.

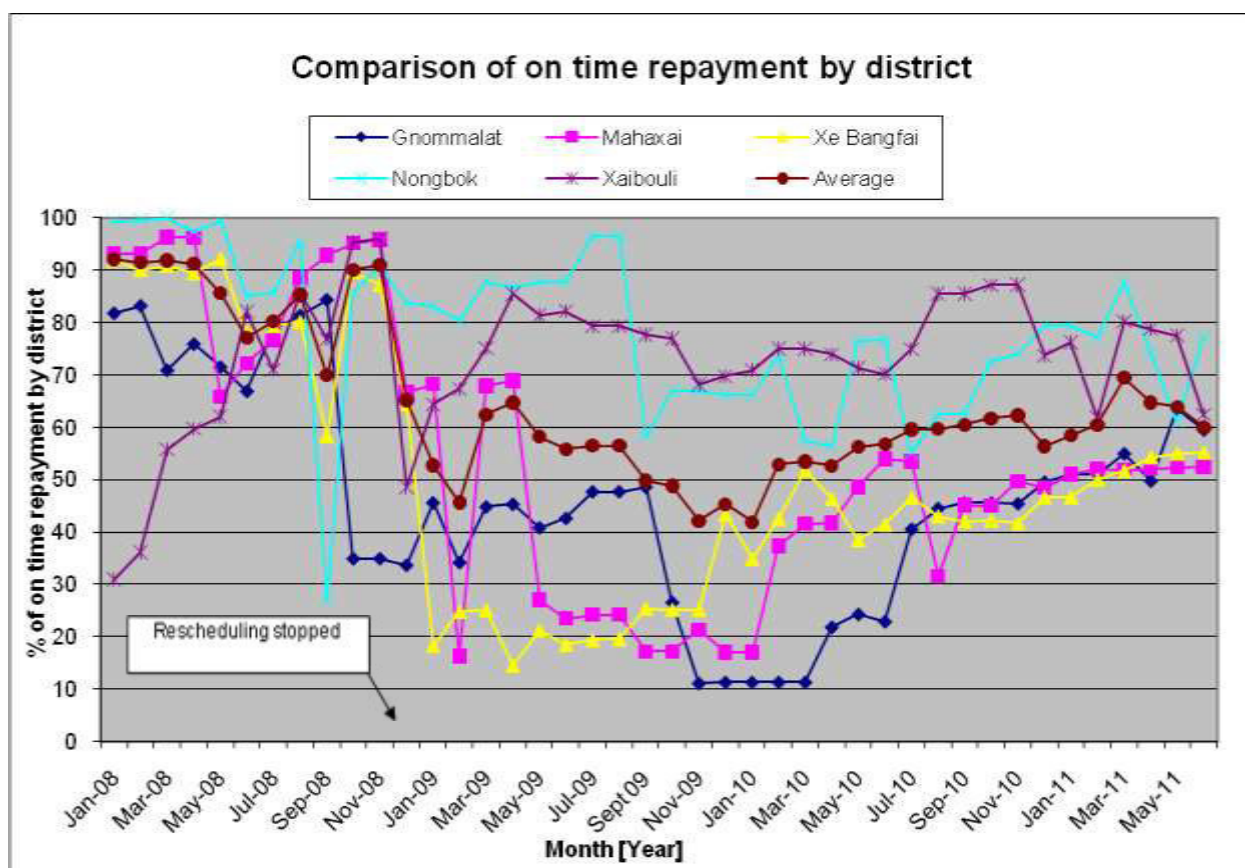
6. Annexes

1. Participation of HH to VIRF per Livelihood Phase at the end of the quarter

Phase	Number of villages	Current total HH	Total participating to VIRF	% of HH participating to VIRF	Total poor	Poor participating to VIRF	% of poor participating to VIRF
1	20	2,514	2,018	80.27	505	319	63.17
2	20	1,723	1,238	71.85	326	186	57.06
3	5	818	717	87.65	206	146	70.87
4	16	2,164	1,892	87.43	285	228	80.00
Total 1-4	61	7,219	5,865	81.24	1,322	879	66.49
5	8	1,007	648	64.35	458	220	48.03
6	8	1,294	794	61.36	459	226	49.24
Total 5-6	16	2,301	1,442	62.67	917	446	48.64
Total 1-6	77	9,520	7,307	76.75	2,239	1,325	59.18
7	6	918	241	26.25	145	12	8.28
Total 7	6	918	241	26.25	145	12	8.28
Grand total	83	10,438	7,548	72.31	2,384	1,337	56.08

Remark: Actual figures of phase 7-total HH is 918 instead of 915 previously reported (corrected on 7th Jul 11).

2. Evolution of VIRF on time repayment per district



3. Number of Households having received Livelihood support during the quarter

<u>Activities</u>	Training	Workshop / Meeting	Extension material	Production Inputs
Demonstration				
Agriculture	42	66	150	
Livestock	17		12	
Handicraft				
Aquaculture				
FCM2				
Others				
Sub-total Demonstration	59	66	162	0
VIRF funded				
Agriculture	9	57	8	71
Livestock	57		170	55
Handicraft		67		
Aquaculture		263		
FCM2				
Others				
Sub-total VIRF funded	66	387	178	126
Contract farming				
Agriculture	184	48	62	
Livestock				
Handicraft				
Aquaculture				
FCM2				
Others				
Sub-total Contract Farming	184	48	62	0
Service Provision				
Agriculture	20	234	679	823
Livestock	11	15		0
Handicraft	0	0	0	0
Aquaculture				0
FCM2	0	715	0	0
Others	0	0	0	0
Sub-total Service Provision	31	964	679	823
Grand total	340	1,465	1,081	949

4. Downstream of Nakai Dam (Khamkeut District) – Livelihood compensation

<i>Last update</i>	<i>30 March 11</i>	<i>by:</i>		<i>Planning completed</i>		<i>Compensation Completed</i>		<i>Change since (specify date)</i>		<i>Notes / Comments</i>
Phase	DSP Start date	# villages	# PAHs	# villages	# PAHs	# PAHs	# PAHs	# PAHs	# villages	
Phase 1	Mar 08	1	107	1	107	107				
Phase 2	Oct 08	5	647	5	647	647				
Phase 3	Oct 08	4	325	4	325	325				
Phase 4	Sep 09	9	1,053	9	1,053	1,053				
Phase 5	Feb 10	6	708	6	708	708				5 HH remaining were completed in this Quarter
Phase 6	Aug 10	10	1,079*	10	1,079*	714				Compensation still ongoing for 365 HH
THPC/THXP	Jun 10	4	400	4	400	400				
Total	n/a	39	4,319	39	4,319	3,954				

Note:

1. “Compensation completed” indicates material input provided; however technical assistance still on-going for all phases
2. “Planning completed” indicates village level consultations have been completed and PAHs have selected preference for compensation
3. (*) 819 HH from the start plus 260 HH with valid grievances added in May 2011.

5. Farmers involved in mass seed multiplication of TDK1Sub1 rice during the dry season 2010-2011

NO	Date	Village ID	HH ID	Village Name	Quantity	Unit cost	HH Payment (kip)
1	17/5/2011	43	3147	Naphoktha	990	3,500	3,465,000
2	17/5/2011	43	3155	Naphoktha	1,460	3,500	5,110,000
3	17/5/2011	43	3241	Somsaat	2,550	3,500	8,925,000
4	17/5/2011	43	3153	Naphoktha	510	3,500	1,785,000
5	17/5/2011	46	2468	Yangkham	750	3,500	2,625,000
6	17/5/2011	46	3022	Yangkham	720	3,500	2,520,000
7	17/5/2011	46	2922	Yangkham	1,590	3,500	5,565,000
8	19/5/2011	44	14011	Somsaat	1,454	3,750	5,452,500
9	24/5/2011	46	2327	Yangkham	2,430	3,500	8,505,000
10	24/5/2011	48	3777	Tonhaen	870	3,750	3,262,500
11	25/5/2011	59	18320	Hatxiengdee	1,420	3,500	4,970,000
12	25/5/2011	60	14295	Kengphosee	1,260	3,750	4,725,000
13	26/5/2011	19	4599	Somsanouk	300	4,000	1,200,000
14	26/5/2011	22	2005	Mahaxai Neua	1,530	4,000	6,120,000
15	26/5/2011	10	21	Nongping	860	3,500	3,010,000
16	26/5/2011	10	84	Nongping	450	3,500	1,575,000
17	26/5/2011	8	24430	Gnommalattai	2,820	3,500	9,870,000
18	28/5/2011	8	24484	Gnommalattai	160	3,500	560,000
19	28/5/2011	10	79	Nongping	353	3,500	1,235,500
20	28/5/2011	7	25125	Gnommalat Neua	180	3,500	630,000
21	28/5/2011	26	1756	Pova	1,500	3,500	5,250,000
22	29/5/2011	44	14070	Somsaat	364	3,750	1,365,000
23	29/5/2011	118	23209	Phonthan	426	3,750	1,597,500
24	29/5/2011	44	14046	Somsaat	1,073	3,750	4,023,750
25	29/5/2011	60	14219	Kengphosee	800	3,500	2,800,000
26	29/5/2011	60	14226	Kengphosee	760	3,500	2,660,000
27	29/5/2011	60	14272	Kengphosee	700	3,500	2,450,000
28	29/5/2011	60	14218	Kengphosee	1,610	4,000	6,440,000
29	31/5/2011	66	26153	Samnadee	800	3,500	2,800,000
30	31/5/2011	66	26158	Samnadee	2,040	3,500	7,140,000
31	31/5/2011	69	513	Navangneua	3,860	3,500	13,510,000
32	31/5/2011	58	25400	Phakeetou	1,157	3,500	4,049,500
33	31/5/2011	58	25448	Phakeetou	1,230	3,500	4,305,000
34	31/5/2011	58	25412	Phakeetou	1,620	3,500	5,670,000
					40,597		145,171,250

Public Health Program

1. Summary

- 2nd meeting with the Ministry of Health was conducted in July to further develop a “NTPC Handing – MOH Taking Over Program” resulting in setting up of a special task force, defining a road map and advancing on the handing/taking over strategy which is scheduled to be complete by December 2011
- The sentinel surveillance and reporting on skin rash in XBF area revealed five cases by the end of June. The sentinel surveillance is shifted from a weekly to monthly schedule due to low numbers of reported cases
- Backstopping mission by the Public Health Advisor who reviewed the Public Health Program, attended various meetings, took part in the development of NTPC Handing – MOH Taking Over Strategy, wrote and reviewed various reports
- Health Education and Awareness Program:
 - General health promotion and prevention of HIV/AIDS/STIs in the project districts
 - Mass campaign on community vector control in Khammouane Province and Khamkeut District of Bolikhamxay Province
 - Trainings provided on the following topics:
 - Refresher training courses for Village Health Volunteers (VHVs)
 - Basic knowledge of applying E-mail and internet
 - Stabilized patient prior to patient referral for district hospital staff in collaboration with expert doctor.
 - Preparation of a one-month practical training program for internship of Family Medicine Doctors to NT2 area to Deputy Dean of University of Health Sciences
 - Arrangement for the long-term training courses for district health staff sponsored under the EDF Sustainable Development Trophy (SDT) Award for three students
- Meetings were held and attended as follows:
 - Met with the Director of Cabinet Office, MOH on the development of “NTPC Handing – MOH Taking Over Program”.
 - Presented the NTPC’s Health Program to the Health Indicator Review and Unified MCH Form Development Workshop in Vientiane Province, supported by Ministry of Health and WHO
 - Meeting with Deputy Dean of University of Health Sciences regarding internship of the Family Medicine internship to NTPC area
 - Conducted Quarterly Meeting with health staff at health center and district levels
 - Received and guided visitors groups as follows:
 - EDF Directors mission to Sop On ICHC and Nakai District Hospital

- NTPC's Public Relation Team to Nongbouakham ICHC for the "Successful Story of the Health Program"

2. Management

2.1. Human Resources

- The number of NTPC Health staff and backstopper remains unchanged during the reporting period. The Public Health Advisor visited the program during 26 June to 9 July 2011.
- The following training sessions were held for the health workers at all levels:
- Refresher training courses for Village Health Volunteers (VHVs) in Nongbouakham and Sop On areas
- Support three out of 10 trainees for long term training courses under the EDF Sustainable Development Trophy (SDT) Fund to the outstanding staff as follow:
- The Mahaxai Health Facilitator for an 18-month course on Public Health in Vientiane He was dedicated to coordinate with HPMU since the project started in mid-2005 up to present.
- Staff from Provincial MCH Section for a 24 month course on Internal Medicine in Savannakhet. He assisted PHO and HPMU team on MNCH Program since the mid-2005.
- Trained DHO and HC staff in Nakai and GMLT on basic knowledge of applying E-mail and internet
- Conducted training sessions on stabilizing patients prior to patient referral for district hospital staff in collaboration with expert doctor.
- Preparation and submission of a one-month practical training program for internship of Family Medicine Doctors to NT2 area to Deputy Dean of University of Health Sciences and doctor from Khammouane PHO
- Attended Approved Driver Training in RNT

2.2. Relations with other Departments / Divisions / Institutions

- HPMU and EMO Coordination:
- Assisted in carrying out Monthly Sentinel Surveillance of skin rash in Xe Bangfai area by GoL health and HPMU team. Water Quality Control by EMO and AE Lab team.
- Accompanied Expert and AELab teams on snail investigation in the DS area; expert confirms the secaria hypothesis as main cause for the skin irritation episode in 2010
- Conference call with EMO and Public Health Advisor on increased mercury level in the potable water
- HPMU and IP Lao and PHO Collaboration:
- Attended PHO-IP-NTPC monthly coordination meetings
- Supporting the mass campaign of community vector control in all districts of Khammouane and Khamkeut District of Bolikhamxay Province
- Reviewed and commented on IP Annual Report (2010-2011)

- Reviewed the Quarterly Report Jan-Mar 2011 of IP Lao
- Review monthly report of IP Medical Officer
- Assisted PHO in preparing the training program and submitted to IP
- Met with IP Epidemiologist expert on IP-HPMU collaboration work
- HPMU, Swiss Tropical and Public Health Institute (STPHI) and Emerging Pathogens Institute, Florida University – a joint publication preparation in its final stages

2.3. GOL Relations and Interactions

- NTPC health team works in close collaboration with GoL Health Sector by providing technical advice through meetings, on the job training, feedback sessions and comprehensive supervision
- Carried out the mass campaign of community vector control in the Khammouane Province and Khamkeut District
- Communication with MOH on further development the NTPC Handing and MOH Taking Over Strategy as well as to prepare for the next meeting and site visit in July 2011

2.4. Meetings organized and attended

- Conducted maternal mortality meeting with provincial and district hospitals and the health center staff
- Conducted the review meeting with the district health supervisors
- Attended and presented the Health Program in the Excom Meeting
- Met with doctors from Cabinet Office, MOH on the development of the NTPC Handing and MOH Taking Over Strategy
- Attended and presented the NTPC's Health Program to the Health Indicator Review and Unified MCH Form Development Workshop in Thalath, supported by Ministry of Health and WHO
- Met with and shared the NTPC's Health Program with Deputy Dean of University of Health Sciences and Doctor from Khammouane PHO
- Conducted Quarterly Meeting with PHO and DHO from Khammouane and Bolikhamxay Provinces. Followed by handing over eight used laptops received from EDF ADP Branch to the project health facilities in the meeting
- Met with Subject matter expert and internal expert on the preliminary findings of the snail study in the downstream area
- Sharing information of NTPC's Health Program with the Plan International consultant
- Attended the Joint Planning Workshop between Nakai Resettlement office and Nakai district for the period 2011-15
- Assisted the DHOs and HCs in four districts in carrying out the participatory health center quarterly meetings in each locality
- Briefed the progress of the Health Program with the POEs
- Shared information on the Health Impact Assessment (HIA) with a the MSc student – Ministry of Public Works and Transport

2.5. Awareness and Health Education

- Carried out mass vector control campaigns in full collaboration with district, provincial and IP completed in all districts of Khammouane Province and Khamkeut district of Bolikhamxay Province
- In-house film development of health related films on the danger of smoking for the No Tobacco Day in the project areas
- Procured and distributed of impregnated bed nets in the project villages under the co-funding between village contribution funds and HPMU for 1/3 and 2/3 of the total budget respectively
- Health education on diarrhea and drowning prevention in the resettlement villages
- Awareness and Health Education on the prevention of STIs/HIV/AIDS within on site clinic for the service women in four district municipalities
- Carried out the World No Tobacco Day in the project districts

2.6. Health Service Delivery Development

- Comprehensive primary health care support was provided to the ICHCs through the monthly maternal, newborn and child health (MNCH) clinics in all project villages. The quarterly reviews were carried out in May 2011. The review's result show improvements in nutrition status of children under five in the resettlement area (see annex 2)

2.7. Monitoring

- The sentinel surveillance and reporting on skin irritation revealed five cases by the end of June 2011. The reporting will be shifted from a weekly to a monthly frequency due to limited numbers of cases
- Accompanied Expert and AELab teams on snail investigation in the DS area, he confirms the secaria hypothesis as a main cause of the skin irritation episode in 2010
- Completed the mass campaign on community vector control in all districts in Khammouane Province and Khamkeut District in collaboration with IPL
- Assisted Nakai health staff to carry out the quarterly review of Maternal and Child Health clinics in Nakai plateau.
- Regular support in supervision to all health facilities in four project districts
- Assisted in carrying out monthly MNCH clinics in the target villages
- Assisted in carrying out the quarterly review of maternal, newborn and child health clinics in the resettlement villages
- Analyzing and reporting of the toilet use survey conducted within the resettled community
- Rearranged and updated the health data sets for each health facilities
- Site visit of , Public Health Advisor who joined the following activities:

Site visits to the health facilities in Nakai, GMLT and Mahaxai Districts

- Met with the Director of Cabinet Office, MOH on the development of “NTPC Handing and MOH Taking Over Strategy Program”

Attended IP-PHO-NTPC monthly meeting and reviewed and commented to the IP Annual Report and

- Feedback on the progress of the health program and advised on further improve the quality of health status of target population
- Various key meetings were held as follow: CEO, E&S Director, POEs, Director of Malaria Centre, MOH Chief Cabinet, Lao-Lux Development Project, NRO team, Khammouane Nursing-Midwifery School, NTPC Medical Advisor and Deputy Dean of University of Health Sciences

2.8. Site Visit

- Accompanied the EDF Directors mission to Sop On ICHC and Nakai District Hospital
- Met with Deputy Chief of Cabinet, MOH and E&S Director on the development of NTPC Handing and MOH Taking Over Strategy
- Accompanied NTPC's Public Relation Team to Nongbouakham ICHC to document selected "Success Stories" of the Public Health Program
- Accompanied the WHO and National Water Supply and Sanitation staff to the health centers in Nakai and GMLT.

2.9. Reports and Publications:

- Finalization of Downstream Health Survey and the Utilization of Toilet Survey in the resettlement area

3. Achievements and impacts

3.1. Human Resource Development

- A process of NTPC Handing and MOH Taking Over Strategy is being developed with the Province and Ministry of Health and it is expected to be completed by the end of the year.
- Further strengthening of GoL capacity building through regular meetings, on the job trainings and comprehensive supervision of health staff.
- The capacity of health staff is further strengthened and is reflected in the positive changes on people's health which is measured through specific health indicators and reported on a quarterly and 6 monthly basis.

3.2. Awareness and Health Education

- Knowledge on health issue was gained through regular health education sessions on the prevention of common diseases to general population during the outreach program and on the prevention of STIs/HIV/AIDS to the high risk group
- Completed the community vector control campaigns in full collaboration with district, provincial and IP completed in five districts and ongoing in another five districts

3.3. Health Service Delivery improvements

- Increasing of health service delivery within health facility and in the community

- Capacity of health staff was further strengthened. This is reflected in the wider range of services made available at the district health center and community levels which includes full primary health care functions
- The monthly MNCH clinic was held in 93 villages.
- The quarterly review of MNCH clinic was held in 16 resettlement villages. Full list of children under five and their nutrition status was shared with NRO team, village authorities and Nakai health staff in order to improve collaboration and support on this matter from the stakeholders.
- The attendance rate of MNCH clinic of under five year old children was 72% of total under five Graph 1.
- Knowledge on health issue was gained through regular health education sessions on the prevention of common diseases to general population during the outreach program and on the prevention of STIs/HIV/AIDS to the high risk group
- Overall, the health program is running smoothly as planned.

3.4. Surveillance and Monitoring

- Continuous monitoring of the health facilities in order to improve the quality of the health services and the health information system. Vital information like births and deaths as well as other health indicators to be collected and computerized. Followed by the feedback sessions to each health facility through regular supervision visits.
- Supervision visit to the health centers and DHOs
- Assisted Nakai health staff to carry out the quarterly review of Maternal and Child Health in Nakai plateau. Nutrition data analysis of children under five in the resettlement areas
- Followed up the monthly MNCH clinics in the project area
- Review and updated the birth, death and family health files from the health facilities.
- Carried out the mass campaign on community vector control in all nine district of Khammouane Province and Khamkeut District of Bolikhamxay Province. Report is under preparation.
- The sentinel surveillance and reporting on skin irritation revealed five cases by the end of June 2011.
- Accompanied subject matter expert and AELab staff to XBF, NB, XBL and MHX on snail study
- Finalization of the survey and report on the utilization of toilet use in the resettlement area

3.5. Collaboration with Other Institutions

- HPMU and IP Lao and PHO Collaboration:
- Attended PHO-IP-NTPC meetings
- Supporting the mass campaign of community vector control in all districts of Khammouane and Khamkeut District of Bolikhamxay Province
- Reviewed and commented on IP Annual Report (2010-2011)
- Swiss Tropical and Public Health Institute, Basel, Switzerland and Emerging Pathogens Institute, University of Florida, Gainesville on the preparation of manuscript for publication

4. Analysis and discussions

4.1. Management

- Overall health program is running smoothly as planned.
- First Handing Over Strategy Workshop with the ministerial, provincial and district officials on 29 March 2011.
- The Task Force has not been set up and the TORs has not been drafted due to time consuming of the senior health officials
- 2nd meeting planned as schedule in July 2011 – to identify Task Force, TORs, Road Map and training program
- Sharing of the Initial Health Checks and Survey data from IP Laos remain pending.

4.2. Financial Report

The Health Program budget has been managed as planned.

4.3. Outlook for July to September 2011

Management:

- Overall, the health program is running smoothly as planned.
- Preparation of the AIP for 2012 and 2013 with the Financial team
- Working on the NTPC Handing – MOH Taking Over Strategy
- 2nd meeting with MOH, PHO and DHOs and site visit to the project area:
- Setting up the Task Force and defining of respective TORs
- Developing of road map
- Identifying the training program
- NTPC Health team will service the group in finalizing the strategy
- Assist the health staff at Health Centre and District to prepare the annual budget
- Preparation of the one-month training in Nakai plateau for internship of the Family Medicine, University of Health Sciences.
- Update of births, deaths and nutrition status of children under five data for review of findings in improving the health planning and capacity building

Meetings:

- District quarterly meeting
- PHO-IP-NTPC monthly coordination meeting:
- PHO and DHO to share information and updates as well as to provide feedback

- Collaboration with the Family Medicine, University of Health Sciences in expanding the NTPC Health Program to the non-project area of GMLT District, particularly the Comprehensive Integrated Outreach Program

Trainings:

- On the job training to health staff at all levels as required
- Conduct medical training for district hospital staff in collaboration with expert doctor.
- Train health center and district staff on how to conduct the focus group discussion with the villagers
- Collaboration work with the Family Medicine, University of Health Sciences:
- Train health center staff in the non-project of GMLT on Comprehensive Integrated Outreach Program
- One-month internship of the Family Medicine students in Nakai plateau

Awareness and Health Education Program:

- Support in awareness campaign on the World No Tobacco Day (WNTD) in the project districts
- The prevention of sexually transmitted infections (STIs) including HIV and AIDS among the high risk group like service women in the district municipalities
- The prevention of other preventable health conditions through the monthly maternal, newborn and child health clinic
- Follow up of the Vector Control Campaign Program in Khammouane Province.

Health Service Delivery Development:

- Monthly maternal, newborn and child health clinics in all target villages.
- Quarterly MNCH review in Nakai plateau in August 2011

Surveillance and Monitoring:

- Continuous health monitoring through district health service and outreach program
- Monthly sentinel surveillance of skin rash in the riparian villages along Xe Bangfai river
- Reviewing of family health files, birth, deaths and other health indicators in all target villages in four districts
- Supervision visits to the health facilities
- Continuous health monitoring through district health service and outreach program
- Monthly sentinel surveillance of skin rash in the riparian villages along Xe Bangfai river
- Reviewing of family health files, birth, deaths and other health indicators in all target villages in four districts
- Supervision visits to the health facilities
- Follow up of the Vector Control Campaign Program in Khammouane Province and in Khamkeut District in collaboration with PHO-IP Lao

- Report writing of the Community Vector Control Campaign Program in collaboration with IP and Khammouane PHO

Publications and Reporting:

- Publications on the NTPC health program are under the preparation in close collaboration with STPHI and Florida University.
- Reports of the DS Health Survey
- Posting NTPC Health Program document in the MOH Website

5. Annexes

Table 1: Summary of training, meeting, health education sessions, integrated outreach/ MNCH program and FCMP activities since May 2005 to 30 June 2011

No.	Activities	April-June 2011		Cumulative (May 2005 - June 2011)		Remarks - Attendance rates
		No. of sessions	Participants	No. of sessions	Participants	
1	Training at community level	0	0	118	2,941	59.7% are female
	Training at health center and district level	1	11	197	2,512	56.4% are female
2	Meeting at community level	9	314	120	4,287	44.2% are female
	Meeting at district and provincial level	0	0	316	6,168	41.9% are female
3	Awareness and Health Education Program	12	235	1,981	175,704	57% are female
4	Monthly Maternal and Child Health Clinic	95		4,863	95 clinics per month	

Graph 1: Attendance Rate on Growth Monitoring of children under five by health facility in September 2000 to May 2011

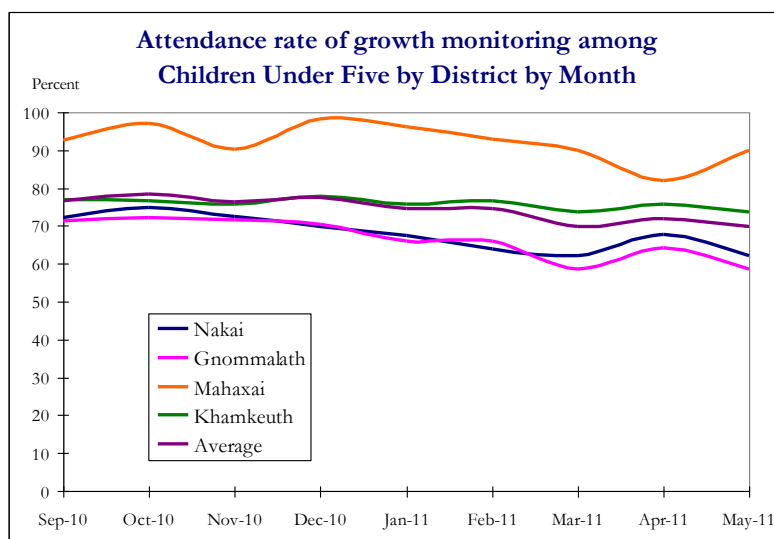
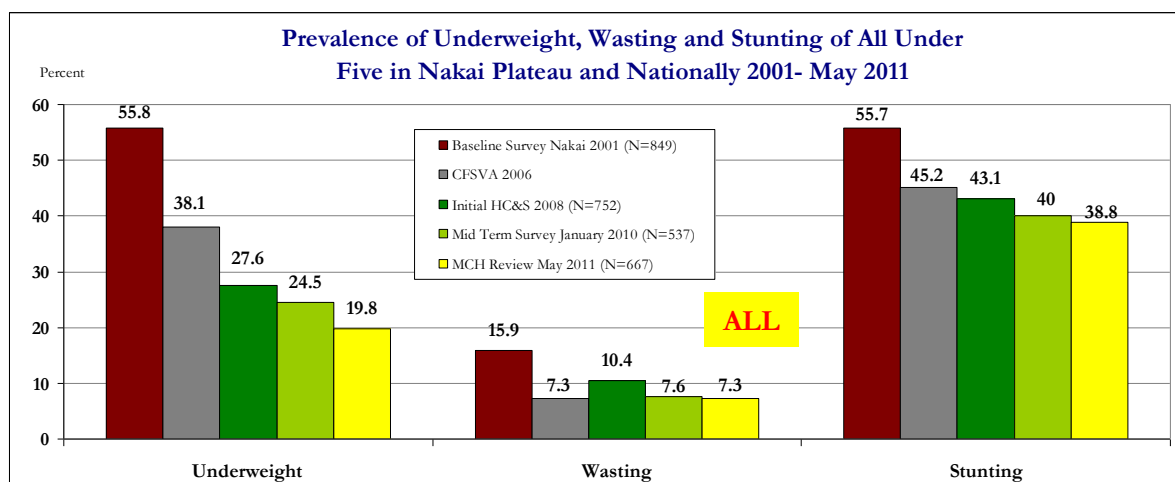


Table 2: Attendance rate of Children Under Five in Quarterly Review of children under five in May 2011 in the resettlement villages

No.	Village	Total	No. of attendants	Attendance rates (%) May/2011
1	Thalang	71	50	70.4
2	Sopphene	10	6	60.0
3	Nongbouakham	46	35	76.1
4	Sop Hia	28	21	75.0
5	Sopma	43	24	55.8
6	Namnian	42	33	78.6
7	Nakai Tai	132	56	42.4
8	Nakai Neua	48	25	52.1
9	Oudomsouk	312	165	52.9
10	Phonephanpek	53	40	75.5
11	Nongboua	32	25	78.1
12	Bouama	38	29	76.3
13	Phonesavang	36	28	77.8
14	Sop On	75	43	57.3
15	Done	92	60	65.2
16	Khonekaen	27	27	100.0
Total		1,085	667	61.5

Graph 2: Nutrition status of children under five in the resettlement area, May 2011



- Table 3: Numbers of Outpatients, Inpatients and bed occupancy rates by the health facility in October 2010 and May 201

		Nakai DH	GMLT DH	MHX DH	KK DH
Number of OPD patients	Oct-10	556	316	358	351
	Nov-10	501	144	278	518
	Dec-10	379	177	261	731
	Jan-11	425	204	319	1011
	Feb-11	377	417	329	568
	Mar-11	463	326	267	700
	Apr-11	551	376	320	603
	May-11	582	437	282	1124
Number of IPD patients	Oct-10	49	103	36	700
	Nov-10	35	94	32	798
	Dec-10	26	103	24	672
	Jan-11	39	90	39	249
	Feb-11	52	146	52	700
	Mar-11	55	119	43	341
	Apr-11	73	136	48	412
	May-11	58	99	91	1057
Bed occupancy rates	Oct-10	17.8	27.4	23.2	85.1
	Nov-10	13.5	28.4	21.3	87.4
	Dec-10	12.7	28.4	15.5	71.5
	Jan-11	16	21.7	24.5	63.8
	Feb-11	23.3	36.7	26.7	79.9
	Mar-11	24.9	33.3	21.9	63.2
	Apr-11	34.0	38.2	21.3	80.2
	May-11	27.3	28.4	22.6	91.1

Environment Management Office

1. Summary

- Six Level III environmental incidents relating to HazMat and waste management were recorded in Quarter 2, 2011.
- The implementation of environmental training has improved over Quarter 2, with 133 NTPC staff and 169 contractors receiving environmental training.
- Turn-over event and localized fish kill (300 individuals observed) on the reservoir as heavy rainfall resulted in the destabilization of thermal stratification and low Dissolved Oxygen (1 mg/L) throughout the water column in the Nam On embayment.
- Significant increase in Human-Elephant Conflict in June in Thathod area, and one person injured during a Human-Elephant Conflict.
- The Invasive Species Program survey identified a significant number of Mimosa Pigra plants compared to the previous year.
- Completion of the final survey of the wildlife senior ecologist, with management recommendations under preparation.
- Wildlife AMC meeting held. Illegal activities continue to increase in the SCAs and the NNT NPA between the reservoir and the Dividing Hills. A number of AMC recommendations were made.
- Planting activities for the HC re-vegetation commenced in early May and initial good progress was made. However, given heavy rainfall in June and conflicts with rice planting season, there is now an increasing shortfall which will need to be addressed in the coming weeks. As of the end of June, 123 k planted compared to the scheduled target of 143 k.
- A definitive HazMat plan has been developed by the HC for the remaining HazMat from the construction phase stored at Gnommalat. EMO has reviewed the proposal, made some requests for minor alterations and is now awaiting the implementation of the plan.
- The inaugural EMS Management Review was conducted in May. Outputs from this review have been taken on board by EMO and the required changes to the implementation of the EMS will be made.
- The IMS Committee commenced monthly meetings in May 2011. It is hoped that this committee will assist in the roll out of the EMS under the integrated management systems framework.

2. General

The report summarizes activities undertaken during Quarter 2, 2011 under the Company Environmental Management and Monitoring Plan being implemented within an Environmental Management System framework.

3. EMS Internal Audit

The Environment Management System Audits commenced in Quarter 2, 2011. Four audits were conducted covering the following aspects of the ISO 14001 Environmental Management Systems Standard:

4.1 General Requirements

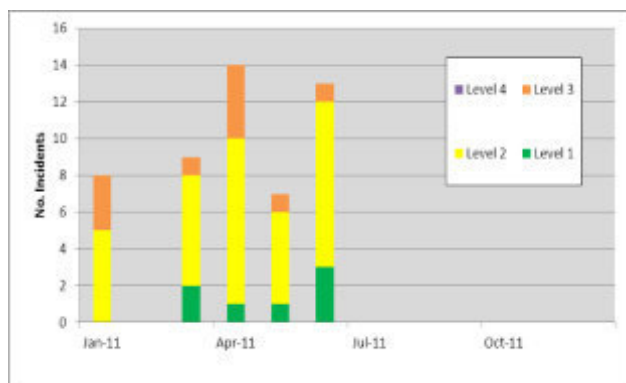
4.2 Policy

4.3.1 Environmental Aspects

4.3.3 Objectives Targets & Programs

- Some key findings from these audits are as follows:
- Some staff lacked awareness of NTPC's Environmental Aspects;
- The Environmental Policy was not easily accessible for NTPC staff;
- Some work areas do not have defined environmental Objectives and Targets; and
- In the document that assesses the status of the 2010 Objectives and Targets, there was no reason provided as to why some of the 2010 Objectives and Targets were not achieved.
- EMO is currently addressing these findings and working through the issues to improve performance.

4. Incident Reporting



Most of the Level II incidents reported in Quarter 2, 2011 resulted from non-conformances and hazards identified during the roll out of the Haz Mat handling and waste segregation scheme at project facilities and residential sites.

34 environmental incidents were recorded in Quarter 2, 2011.

6 environmental incidents were deemed to have Maximum Reasonable Outcome (MRO) Level III. These incidents are as follows:

Leaking oil-contaminated water from the HazMat waste storage area at the Power Station.

Inadequate HazMat waste storage area at one contractor.

Poor waste management at the wooden guesthouse.

Poor hazmat management at Ban Nong Boua boat area.

Inappropriate disposal of clinical waste from RNT.

Inadequate bunding at the RNT diesel storage facility.

5. Corrective & Preventative Actions

During Quarter 2, 2011, Corrective Actions progressed for a number of the reported Level III environmental incidents including:

The hydrocarbon contaminated waste that was causing leakage of oil contaminated water at the Power Station main HazMat storage area was moved to a temporary storage area at Gnommalat landfill;

The draft design of a new HazMat storage area for the Power Station has been developed and is awaiting construction;

The HazMat management at one of the contractor camp was addressed and corrective actions implemented;

The Waste and HazMat management at the NTPC Boat Ramp and Wooden Guesthouse has improved following implementation of corrective actions;

Meetings have been held with PAM regarding the improvement of the diesel storage facility at RNT; and

A solution was developed to send the clinical waste from the RNT clinic to Thakhek hospital for incineration in an appropriate facility.

6. Environmental Improvement Plan

The 2011 Health, Safety & Environmental Improvement Plan was developed during Quarter 2, 2011 and is currently in the approval and sign-off process. Progress against this plan, once approved, will be reported in the next report.

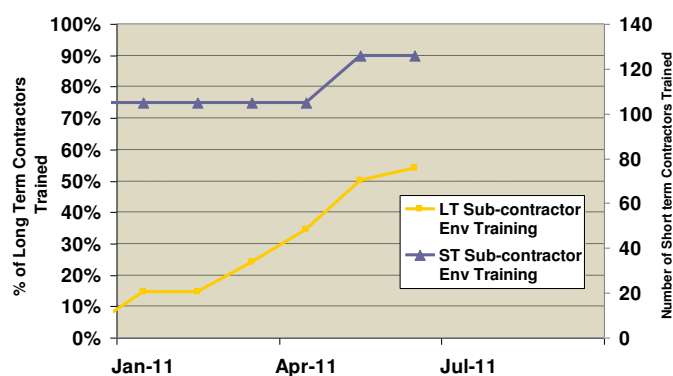
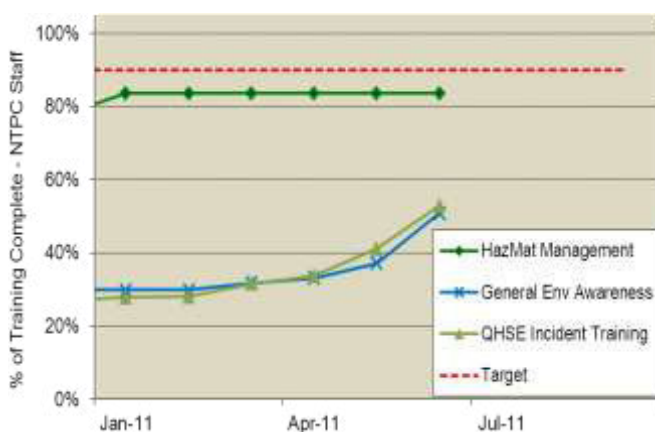
7. Environmental Training

Improvement in the progress of Environmental Training Activities during Quarter 2. includes the training of:

68 NTPC staff on QHSE online incident reporting system;

65 NTPC staff on General Environmental Awareness;

169 Contractors on various environmental issues; including training on general environmental awareness and waste separation.



8. Waste Management

An “at source” waste separation system at NTPC’s non-industrial and industrial sites continued to be implemented Quarter 2, 2011. Training of NTPC employees, residents and contractors continues to support the roll out of this new system.

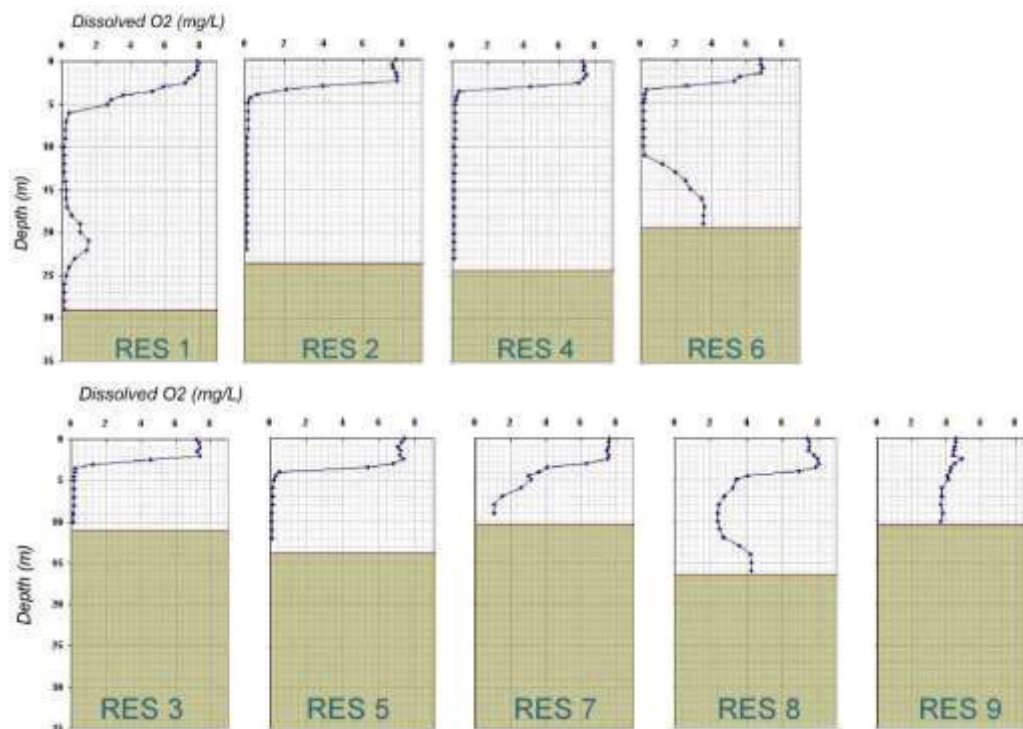
9. Hazardous Materials and Contamination Control

As previously reported the HazMat storage facilities at the Power Station are insufficient and new facilities have been designed to address these issues and are now awaiting construction.

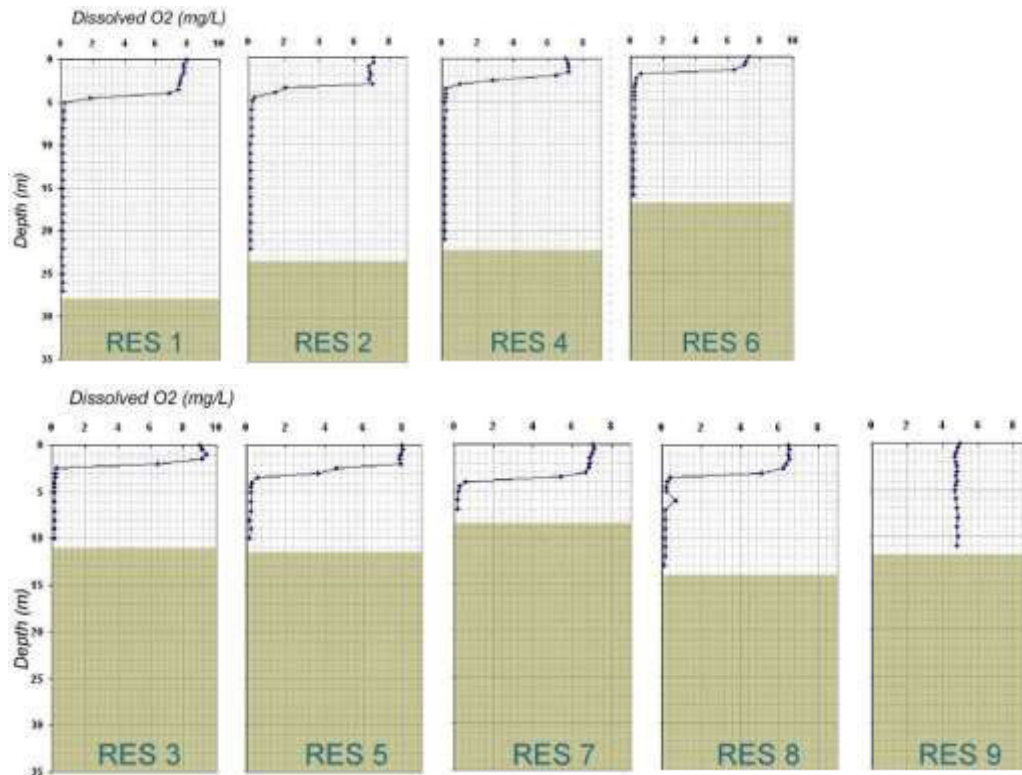
10. Water Quality Monitoring

10.1. Reservoir

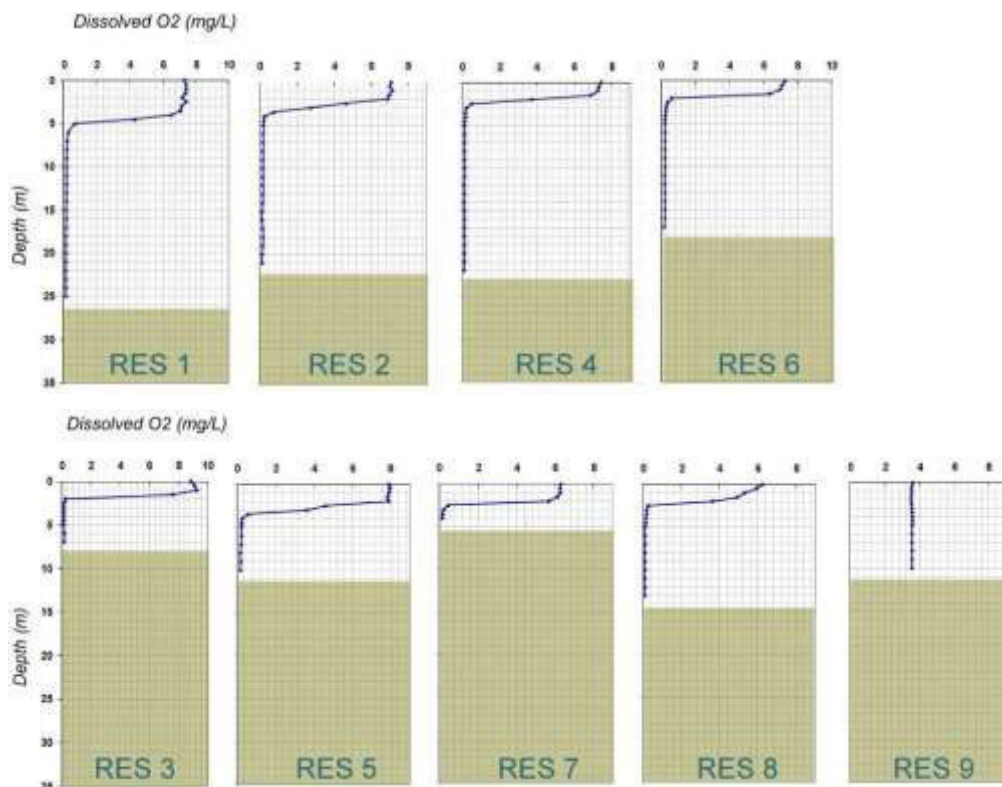
April 2011 Reservoir Dissolved Oxygen Profiles

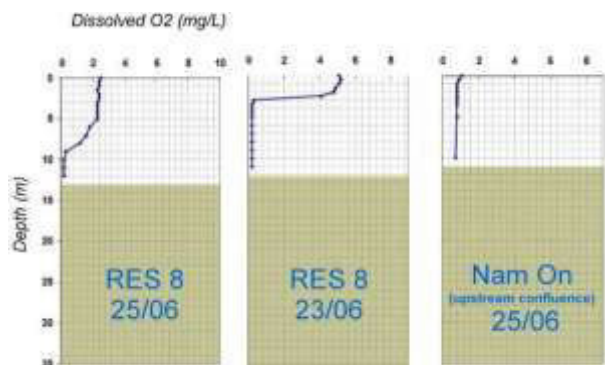


May 2011 Reservoir Dissolved Oxygen Profiles



June 2011 Reservoir Dissolved Oxygen Profiles





Turn over even in late June.

April 2011

- The reservoir is now thermally stratified with high surface Dissolved Oxygen (6-8 mg/L) in general becoming anoxic at a depth of 4-6m. Underflows (cooler, oxygenated tributary water oxygenating the bottom of the reservoir) are observed at RES 6 and RES 8.
- The water column at the Intake has remained relatively homogenous with medium concentrations of Dissolved Oxygen (3-5 mg/L) entering the Intake. Concentrations are less than measured in previous months which reflect the strengthening of thermal stratification across the reservoir and anoxic conditions at depth.

May 2011

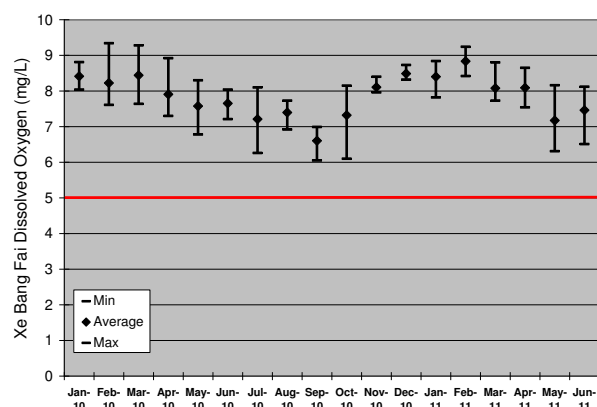
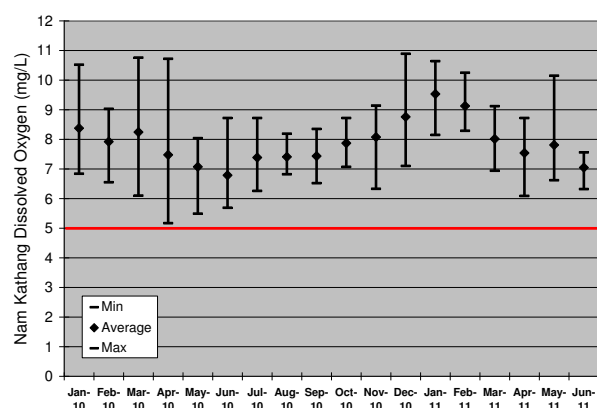
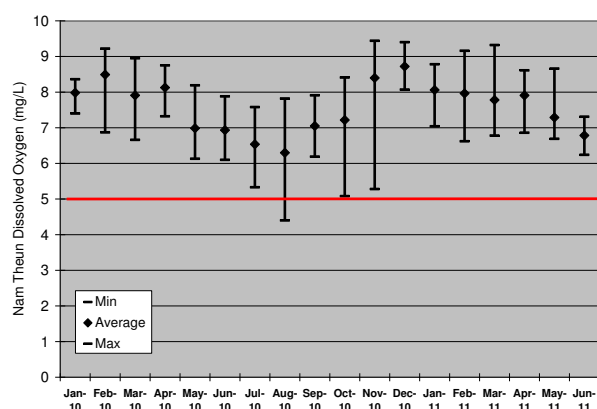
- The reservoir shows a stable thermal stratification during the entire month. The thermocline is located from 3 to 5 meters at all monitoring sites.
- High surface Dissolved Oxygen (6-8 mg/L) in general becoming anoxic at a depth of 4-6m.
- The water column at the Intake has remained relatively homogenous with medium concentrations of Dissolved Oxygen (from 4 to 5 mg/L within the whole month) entering the Intake. Concentrations are less than measured in previous months which reflect the strengthening of thermal stratification across the reservoir and anoxic conditions at depth.

June 2011

- During early to mid-June the reservoir was thermally stratified with a thermocline at 3-5m. There was high surface Dissolved Oxygen (6-9 mg/L) becoming anoxic at a depth of 3-6m. The water column at the Intake remained homogenous with medium concentrations of Dissolved Oxygen (approx. 3 mg/L) entering the Intake.
- In late June, heavy rainfall and high catchment runoff resulted in destabilization of thermal stratification in the Nam On embayment of the reservoir; the water column became relatively homogenous with low Dissolved Oxygen (1 mg/L) throughout the entire water column (see Nam On graph on 25/06). The decrease in Dissolved Oxygen resulted in a localized fish kill with approx. 300 dead fish observed by the WQ team in the Nam On embayment. Further into the main body of the reservoir, at RES8, thermal stratification weakened and surface Dissolved Oxygen decreased from 5 mg/L on 23/06 to 2.5 mg/L on 25/06, but the water column did not turn anoxic. At the Intake (RES9), Dissolved Oxygen decreased from 2.6 mg/L on 23/06 to 1.9 mg/L on the 25/06. Dissolved Oxygen in the downstream rivers remained above the Guideline during this event.

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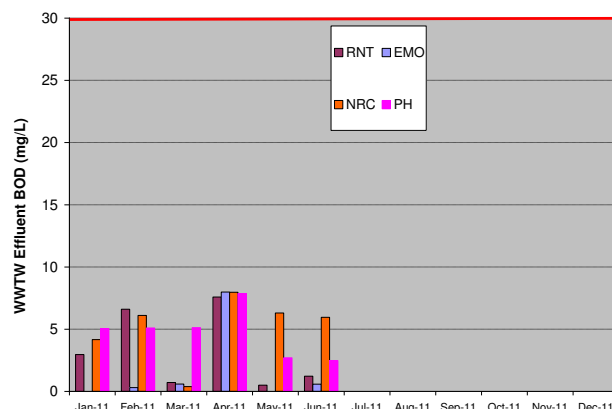
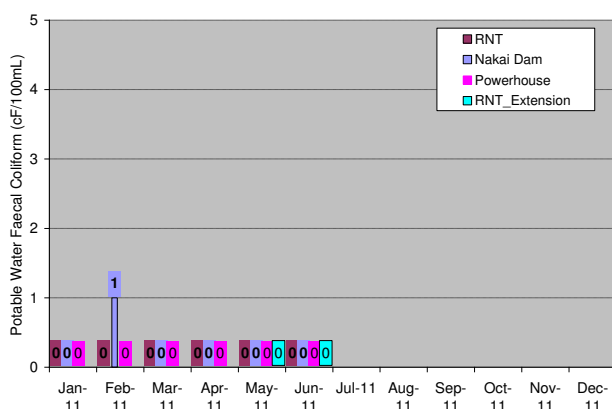
10.2. Downstream



Key WQ results related to Project releases:

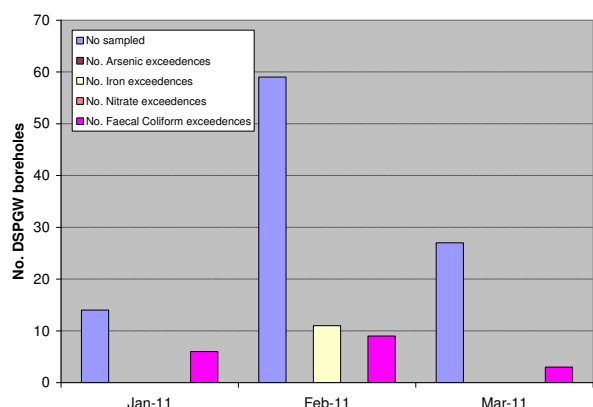
- During Quarter 2, Dissolved Oxygen remained above the Guideline for all downstream rivers (Nam Theun, Nam Kathang, and Xe Bangfai).
- During Quarter 2, BOD and COD exceeded the GOL Standard in Nam Kathang, Nam Gnom, Nam Phao, Nam Theun, and Xe Bangfai; including the upstream control on Nam Theun and Nam Kathang. It is believed that the new GOL Standards for BOD and COD may be too stringent because rivers in the Project area exceed the Standard in the baseline scenario and upstream control.
- No Project related exceedences of the Guidelines.
- Some laboratory results for June 2011 are still pending and will be reported in the subsequent report.

10.3. Facility



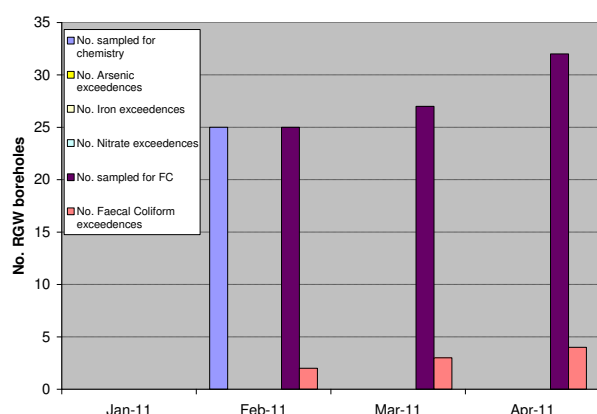
- Potable Water Supply:
- During Quarter 2, there were no exceedences of the Faecal Coliform Guideline (0 cF/100ml) for the Nakai Dam, Power Station or RNT Potable Water.
- Mercury was below the Guideline for the RNT Potable Water; however, follow-up investigations had identified high levels in boreholes surrounding RNT. Investigations by EMO confirmed that the Field Blanks were also contaminated which may indicate the contamination was due to sampling and/or preservation rather than contaminated boreholes, and previous results should be discounted. Investigations still underway with revised sampling method and new preservation solution.
- During April 2011, Aluminium exceeded the Guideline for the Power Station Potable Water.
- During April 2011, Color exceeded the Guideline in the Nakai Dam Potable Water.
- During April 2011, Turbidity exceeded the Guideline for both RNT and Power Station Potable Water.
- During May, Residual Chlorine exceeded the Guideline in the Nakai Dam Potable Water.
- Some laboratory results for June 2011 are still pending and will be reported in the subsequent report.
- Waste Water Treatment Works:
- During Quarter 2, there were no exceedences of the BOD Guideline for RNT, NRC, EMO and Power Station Waste Water Treatment Works effluent.
- In April, COD exceeded the Guideline in the effluent from RNT.
- In early April, Faecal Coliform exceeded the Guideline in the effluent from RNT and the Power Station. In response, adjustments were made to the Chlorination unit dosing system, and Faecal Coliform levels were within Guidelines in late April. However, in May Faecal Coliform exceeded the Guideline again in the effluent from RNT and the Power Station. The system will be adjusted in response.
- In May, Ammonia in effluent from RNT and Power Station exceeded the GOL Standard (2 mg/L). However, the pH was less than 8 so Ammonia concentrations are not deemed to be significant and remained below the Guideline for pH 7 at those temperatures.
- Some laboratory results for June 2011 are still pending and will be reported in the subsequent report.

10.4. Groundwater



Downstream Program Groundwater:

- No sampling event for water chemistry or Faecal Coliform conducted during April or May 11.
- Laboratory results for June 2011 are still pending and will be reported in the subsequent report.

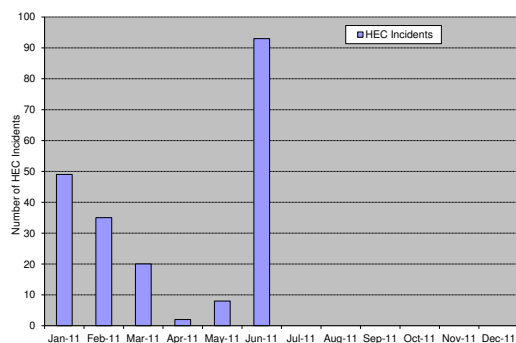


Resettlers' Groundwater:

- No sampling event for water chemistry conducted during April or May 11.
- In April 11, 32 boreholes were sampled for Faecal Coliform, with exceedences in 4 boreholes.
- Laboratory results for June 2011 are still pending and will be reported in the subsequent report.

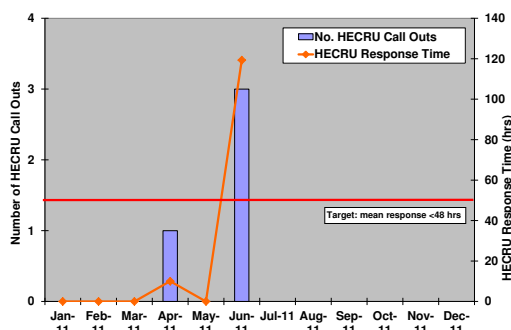
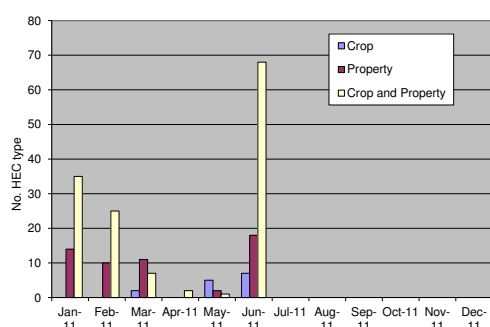
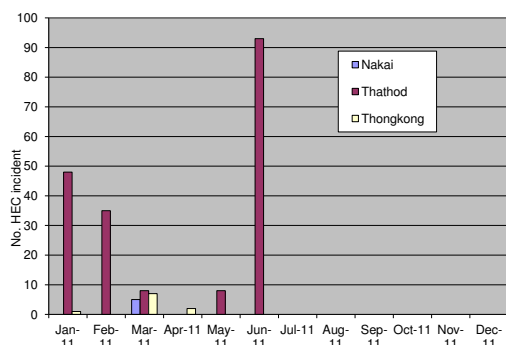
11. Biodiversity Management

11.1. Elephant Management



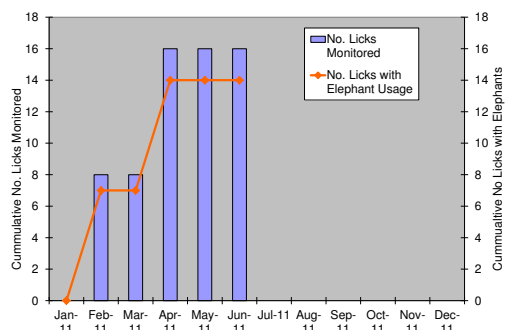
Activities during Quarter 2 include:

- A total of 103 HEC incidents over Quarter 2, with a significant increase in June 2011. The majority of the HEC were in the Thathod area and to crop and property.
- One person was injured during a HEC in the Thathod area. NTPC and DAFO assisted with transfer to hospital.
- There were no reports of HEC incidents on the Nakai Plateau, and only 2 HEC in Thongkong



area during Quarter 2.

- In response to the increase in Thathod area, DAFO conducted additional HEC mitigation and HEC Response Unit training in the Thathod area, including 41 households from Soung village.
- 4 HEC Response Unit call outs from a group of 24 famers over Quarter 2. The call-out in April was responded to by DAFO within 14-hour after incident and within the target of 48 hours. However, the average call out time for June was over 100 hours which exceeds the target time. The delay in DAFO responding to the requests for assistance is due to heavy rainfall and access difficulties along the Thathod-Nadan valley during that period.
- WMPA completed the artificial mineral lick monitoring scheduled round 2, 2011. Encouragingly 7 out of 8 mineral lick sites had evidence of elephant usage. There was also evidence of other wildlife using the mineral licks.



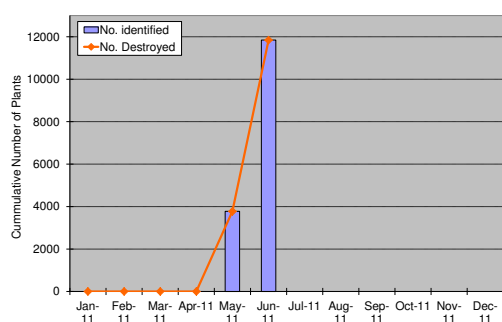
11.2. Wildlife Management and Monitoring

Activities during April 2011 include:

- Rescue of the floating sedge mats on the reservoir which are in danger of being stranded in dead trees and dried out as the reservoir water level recedes.
- Activities during May 2011 include:
- Senior wildlife ecologist final survey to assess wildlife use of the reservoir and Special Conservation Areas (SCA). The field observations were provided to the Wildlife AMC.

- The ichthyologist expert commenced the Post-impoundment Fish Biodiversity Survey which focuses on fish species of high conservation value. The survey had to be stopped and postponed to 2012 due to poor health of the consultant.
- Wildlife Adaptive Management Committee meeting, participants included: senior ecologist, WMPA, RMS, EMO and NRO. The main observation was that illegal activities continue to increase in the SCAs and the NNT NPA between the reservoir and the Dividing Hills. The main Wildlife AMC recommendations were:
- Not to increase the number of boats on the reservoir;
- WMPA to facilitate an independent review of their patrolling resources and methodologies;
- GOL not to extend the deadline for removing buffaloes from the SCA, and to put out to tender a contract for the cull of the remaining buffaloes with a percentage of the profit paid into village development funds;
- NTPC not to proceed with the construction of the wetland below Full Supply Level, and instead focus on other habitat improvement activities;
- Nakai District to further investigate poaching incidents and their market chains, and break these markets for illegal timber and wildlife (including illegally caught and landed fish);
- NTPC and DAFO to increase the frequency of the invasive species survey and eradication.
- Activities during June 2011 include:
- WMPA approved EMO to use land at behind its residential camp to plant Chinese Swamp Cypress.
- EMO inspected an artificial wetland above FSL (A01) that had been breached by illegal timber poachers. EMO plans to repair the dyke before peak wet season.

11.3. Invasive Species Program

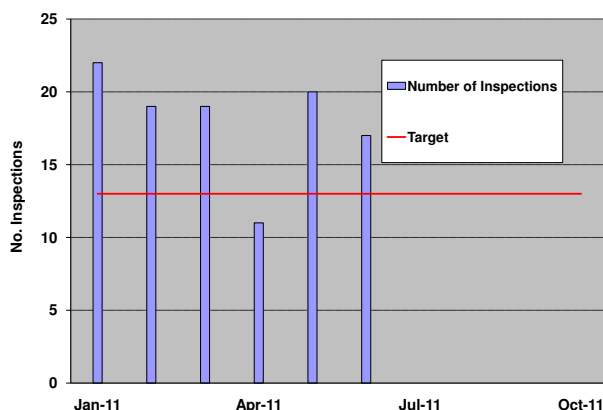


Activities during May 2011 include:

- The 2011 Invasive Species Survey and Eradication were conducted by EMO, DAFO and EMU.
- > 3500 of Mimosa Pigra plants were identified and destroyed. This was a significant increase in the number of plants identified compared to the previous years.
- 7 Water Lettuce (Pistia) were identified and destroyed from a guesthouse pond and not in the reservoir.
- Wildlife AMC recommended an increase in the frequency of invasive species survey and follow-up eradication.
- Activities during June 2011 include:
- EMO; DAFO and EMU continued the survey and eradication.

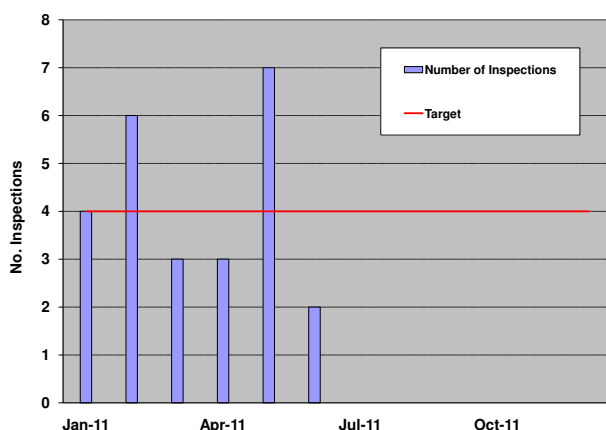
- > 8000 of Mimosa Pigra plants were destroyed. Most of these were young plants and had not seeded.

12. Site Inspections



- EMO conducted 48 environmental site inspections of NTPC sites in Quarter 2 2011.
- The number of inspections did not reach the target in April due to the Lao New Year.
- These site inspections have identified a number of non-conformant situations, mainly related to waste management and ineffective Haz Mat handling, that have been reported through the Online QHSE Incident Reporting System.

13. Contractor Monitoring



- Monitoring of NTPC contractors is ongoing.
- Issues regarding waste and hazmat management continue to be occasionally identified. These issues are being managed through joint site inspections and liaison with the respective contract administrators.
- The variability in the number of contractor inspections relates to the variable schedule of the work being conducted on a month-to-month basis.

14. CEMMP Documentation

A review of the entire CEMMP was conducted during Quarter 2, 2011 and has been modified in response to LTA comments and results from the EMS Management Review. Many EMS documents have now been merged with HSMS documents to progress towards an integrated management system.

15. EMS Management Review and IMS Committee Meeting

- During Quarter 2, 2011 the first IMS/EMS Management review was conducted. The main actions that came out of this review are as follows:

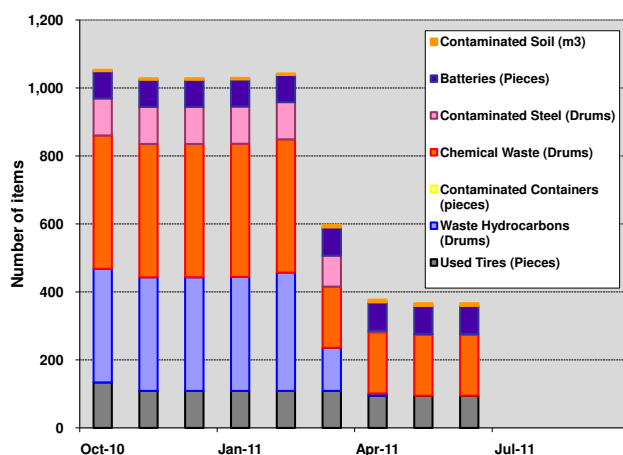
- Merge the Health & Safety Policy and the Environment Policy into a HSE Policy and distribute to Excom for Review;
- Reformat the Legal and Other Requirements Register in conjunction with the NTPC legal department in an attempt to make it more operationally functional;
- Distribute the 2011 HSE Objectives and Targets to the Excom for review;
- Improve the attendance rate at IMS training sessions;
- Incorporated HSE requirements into the bidding stage of the contract process to improve contractor uptake of NTPC's HSE requirements; and
- Organize an environmental emergency drill with AD and OMD to improve preparedness for an environmental emergency.
- All of these required actions were discussed at the first IMS committee meeting held in May 2011 and progress is being made to address them.

16. EMS External Audit

No external audits of the EMS were conducted during Quarter 2, 2011.

17. Head Construction Contract Environmental Performance

17.1. HazMat Management



During the quarter, EMO developed a potentially contaminated sites register to record the locations of poor hazmat management observed during the construction phase. This register will be used in the event that any issues are observed as sites are handed over to GOL.

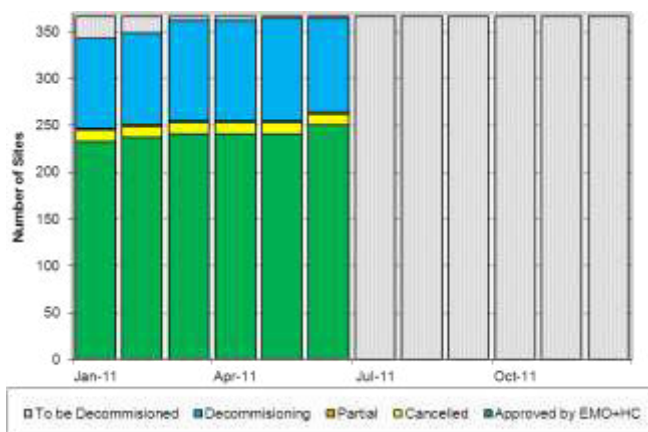
- The HC proposed a solution for the remaining HazMat waste. This solution included:
- The creation of concrete slabs made from the remaining Sika products, glass and fluorescent tubes, and small volumes of contaminated soil; and
- The creation of a medium term storage facility for other HazMat waste.
- NTPC has reviewed the proposal provided feedback to the HC regarding its suitability. NTPC is now awaiting implementation of the plan.
- There is now a disposal or storage option for all the contractor's Hazmat waste remaining at Gnommalat.
- During the Quarter EMO conducted some independent testing to verify the level of contamination of the soil in the Landfarm. This testing showed that the soil was still heavily contaminated and required further

management, despite contractor's JV tests showing the soil to have low levels of residual contamination. NTPC has formally requested the HC to continue managing the landfarm facility until the hydrocarbon contamination of the soil has been reduced to below 170 mg/kg.

17.2. Waste Management

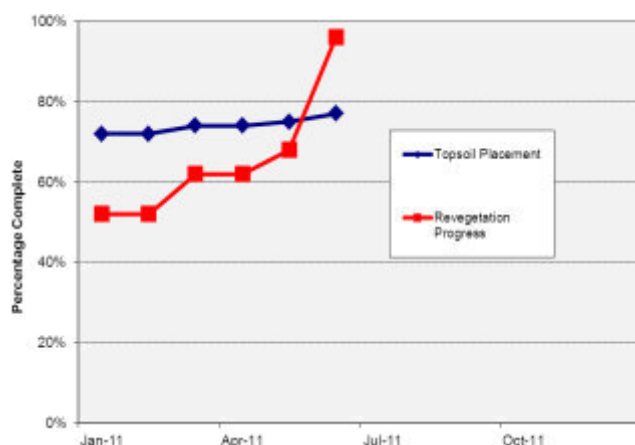
The sub-contractor JV have negotiated an agreement with NTPC to dispose of the remaining general waste from the construction phase of the project in the NTPC waste cell. NTPC has been waiting for over six months for this agreement to be finalized by sub-contractor JV management. NTPC has followed up with sub-contractor JV and Head Contractor management but have made no progress on the matter.

17.3. Site Cleaning and Rehabilitation Signoff Progress



- Nine SCRCC were signed during Quarter 2, 2011.
- Most sites are still awaiting revegetation to become established prior to SCRCC sign-off. It is envisaged that a large number of these sites will undergo sign-off in September-October 2011 following the establishment of vegetative cover.

17.4. Topsoil and Revegetation Progress



Additionally, NTPC has observed that many of the trees being planted are juvenile. This is likely to cause a low survival rate of the plants and may result in the

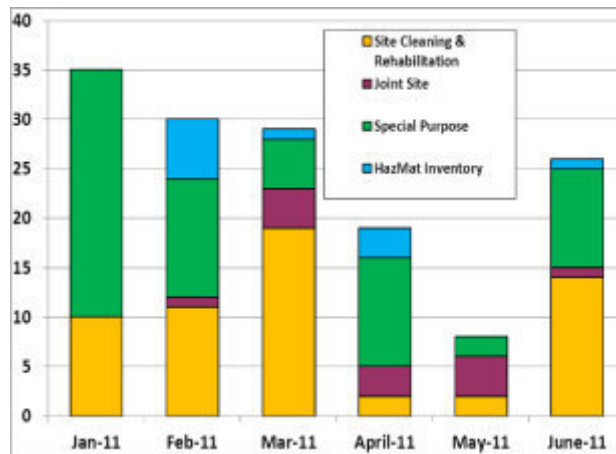
Activities during May 2011 include:

- 13 Ha of topsoil placement was recorded by EMO Quarter 2, 2011. Topsoil placement and/or rock removal activity is expected to increase in September, following the completion of tree planting activities.
- 91 Ha of tree planting was observed by EMO on construction disturbed land during Quarter 2 2011.
- The sub-contractor JV started planting for the 2011 wet season in the first week of May 2011 and has progressed broadly in line with the schedule provided to NTPC in March 2011. However, in mid-late June the planting

need for many areas to be replanted.

progress slowed and planting is now 1-2 weeks behind schedule.

17.5. Site Inspections



- Reduction in construction site inspections continued during Quarter 2, 2011. Almost all inspections are now focusing on rehabilitation.