

3 LEGAL AND POLICY FRAMEWORK AND ENTITLEMENTS

3.1 INTRODUCTION

Involuntary resettlement is not new to the Lao people. Centuries of changing fortunes have seen villages and groups of villages forced to relocate to survive. What is relatively new is the need for people to relocate in order to make way for development of projects considered to be in the national interest, such as hydroelectric schemes.

The principles of protecting such project affected peoples are enshrined in the Constitution whereby the State promotes people's ownership of land and guarantees equality whilst both obliging its citizens to protect the environment and aiming to shift the economy from subsistence based to commodity based. Further legislation promulgates these principles and offers specific protection for those required to resettle as a result of hydropower schemes in particular under the Law on Water and Water Resources and the Electricity Law described below.

Due in part to the size of the Project and previous experience on other hydropower schemes a number of pieces of legislation have been introduced to deal specifically with the Project. This legislation guarantees rights to those people who are to be resettled as a result of the Project including their rights to land and forest. Furthermore, the National Assembly has approved the agreement under which the concession for the Project is granted to NTPC detailing, *inter alia*, the obligations of both NTPC and the GOL to the resettlers.

This chapter reviews each of these aspects of the legal and policy framework in Lao PDR that protects, compensates and to some extent restricts the rights of the resettlers as follows:

- review of national laws and legal instruments that are of importance to relocated people and the resettlement and compensation plan for Downstream Areas, including land and forestry rights;
- review of the national and Nam Theun 2 resettlement policies;
- review of the legislation that has been developed and approved specifically for the social and resettlement components of the NT2 project; and
- review of legal documents and policies that are not part of the usual national legislative framework including the Concession Agreement and the World Bank Policies.

3.2 NATIONAL LAWS AND LEGAL INSTRUMENTS RELEVANT TO RELOCATION

3.2.1 Introduction to the Legal Framework of Lao PDR

In 1975, the Lao People's Revolutionary party (LPRP) abolished the 1947 Constitution and all prior legislation. Much of the existing legislation, especially in the forestry sector, has been issued under the framework of the current Constitution (established in 1991). The current legal system can be described as a hybrid of a civil code and common law system, driven recently more by the need to adopt a large body of legislation, rather than by the capacity to implement the legislation.

The National Assembly¹, first elected in 1992 under five-year terms, has been an active legislative branch by passing nearly 50 comprehensive laws, each requiring issuance of implementing legislation by the Prime Minister, ministries and local authorities by way of decrees and regulations. Despite this growing base as a civil law structure, the legal system remains in an early stage, difficult to interpret, implement or enforce, especially in the natural resources sector.

Key legislation in the natural resources sector includes a Forestry Law and a Water Resources Law enacted in 1996, Electricity Law in 1997, an Environmental Protection Law enacted in 1999 and a Land Law first enacted in 1997 and amended in 2003. This legislation and its implementing regulations provide a legal foundation for the consideration of how resettlement is to be planned and carried out for a large hydropower scheme like NT2.

¹ The NA has the authority to initiate, review and pass laws as well as approve State budgets and socio-economic development plans, which have included annual timber harvest quotas. (Constitution, Ch. 4).

An overview of the pertinent articles contained in this legislation is provided below. Of particular interest is Article 28 of the Water Resources Law, which states that in the case of hydroelectric projects, the owners shall provide appropriate livelihoods for the resettled population and pay for this out of project funds. The Electricity Act, (Article 14 and 18), states that licencees shall pay compensation for any damage to private and/or public properties or rights caused by their project. Furthermore, MAF Orders 54 and 377 (1996) require that villagers receive compensation for resettlement due to infrastructure or development projects approved by the Government. Whilst this legislation provides guidelines specifically for resettlement it is also important to note that these laws also impose restrictions upon citizens generally with regard to their use of the country's resources. The resettlement policy will take into account these laws when planning guaranteed livelihoods for the relocation.

3.2.2 The Constitution (August 14, 1991)

The Constitution is the supreme legal document in Lao PDR and all other legislation must be consistent with its provisions. Some of the Articles have been implemented by laws and regulations, but none related to the rights of ethnic minorities have yet been interpreted by the Court system. Clearly ethnic minorities and all Lao citizens have the constitutional right to protect their customs, their land and their culture and to enforce such rights against the State if infringed upon.²

Article 8: All ethnic groups have the right to protect, preserve and promote their fine customs and culture. All acts of division and discrimination among ethnic groups are prohibited.

Comment: Since the resettlers of the Project are of a variety of ethnic groups, careful attention must be made to ensure that NTPC's resettlement policy takes account of the customs and culture of each group. This principle relates not only to ethnic minorities but to all citizens, irrespective of their sex, or social status as further described in Article 22.

Article 13: The economic system objectives are the expansion of production and to transform the subsistence economy into a commodities economy.

Comment: Whilst the customs and cultures must be maintained, Lao PDR is a developing country in need of foreign investment and currency that the Project is to provide. At a micro-economic level the Project must look to provide the resettlers with the means of moving beyond subsistence living.

Article 14: The state protects and promotes all forms of state collective and individual ownership.

Article 15: As for the land, which is owned by the national community, the state ensures the right to use, transfer, and inherit it in accordance with the law.

Comment: Whilst the land in the Lao PDR is the property of the national community, individuals may acquire property rights akin to ownership. Where families are to be moved from their own land it is an important principle of the NT2 Resettlement Policy that the resettlers shall be granted permanent rights of ownership to the new land to the extent possible under Lao Law.

Article 17: All citizens must protect the environment and natural resources: land, underground, forests, fauna, water sources and atmosphere.

Article 22: Lao citizens, irrespective of their sex, social status, education, faith and ethnic group are all equal before the law.

Article 27: Lao citizens have the right to freedom of movement and residence as restricted by law.

Comment: For example, (i) the State must approve the use of all land, individuals are not permitted to 'squat' as further described under the Land Law below and (ii) the relocation of people from one province to another is regulated by and permission must be granted from the Ministry of Public Security. In addition, the freedom of movement must not be to the detriment of others, particularly current dwellers of an area or current resource users of an area, and thus the necessity to ensure Nakai resettlers are not unduly infringed upon by new

² The Articles of Law in this chapter are an English summary of the provisions - they are not direct quotations. The English translations of the laws themselves are attached in Appendix C and D.

immigrants, and that local peoples are not unduly affected by, for example, construction camp followers..

Article 28: Lao citizens have the right to lodge complaints and petitions and to propose ideas to relevant state organizations in connections with issues pertaining to the rights and interests of collectives or of their individuals. Complaints, petitions and ideas of citizens must be considered for solutions as prescribed by law.

Comment: This principle is incorporated into the NT2 resettlement process in two main ways (a) through consultation process, both prior to resettlement and during resettlement, and (b) the implementation of various grievance procedures.

3.2.3 Land Legislation

3.2.3.1 The Land Law (revision of 21st October 2003)

The Land Law is the key legislation covering the rights and procedures regarding the framework for tenure, access, use and management of land, including forestland, by villagers and other parties within the NT2 watershed and resettlement areas. It is based on the Land Law of 1997 with minor amendments. PM Decree 3 and MAF Instruction 822 implement provisions of the Land Law regarding the allocation and zoning of forestland within village boundaries, Decisions of the Ministry of Finance (996, 997 and 998) govern land titling whereas PM Decree 150 governs land tax issues.

See Articles 70 and 71 below, MAF Orders 54 and 377 and the Electricity Law for sections governing the right of villages to just compensation for the taking of land by the State for the public good.

Article 3: Land within Lao PDR is the property of the national community (as stated in the Constitution, Article 15) for whom the State is the uniform central administrative representative throughout the Country and individuals . . . are assigned to effectively use the land . . . (only non-forest land held in private title or land held under a long-term lease can be transferred).

Article 5: The State protects the legal rights and benefits of those who have effectively received the right to use land including the right to transfer it.

Article 6: Individuals . . . have the duty to preserve land in good condition.

Article 7: Individuals or organizations are prohibited to squat on the land, the use of land must be approved by the State.

Article 13: The State authorizes Lao citizens to lease state land for a maximum period of thirty (30) years. Such lease may be extended on a case-by-case basis.

Article 17: The State may authorize individuals to use agricultural land:

- for growing rice and raising aquatic animals not to exceed two hectares per one labourer in a family;
- for fruit orchards and vegetable farming not to exceed three hectares, respectively, per one labourer in a family.

Article 18: The district may grant the right to use agricultural land within its administration.

Article 21: The State authorizes individuals to use forest lands (defoliated or degraded) not to exceed three hectares per one labourer in a family.

Article 22: The district . . . may grant the right to use forest land within its administration (DAFO administers land use allocation in coordination with Lands Office).

Article 43: Land registration is to certify the legal use of land to individuals and organizations.

Article 63: The right of an individual to use land shall terminate when . . . (2) the State takes back the land in the public interest. (however, the landholder is entitled to just compensation for the taking by the State – see Article 70 below, MAF Orders 54 and 377 and the Electricity Law).

Article 65. Term of Lease or Concession of Land

For specific economic zone and special economic zone, the maximum lease or concession term of the land shall not exceed seventy-five (75) years and may be extended on a case by case basis by approval from the National Assembly.

Leases or concession of land area over ten thousand (10,000) hectares must be approved by the National Assembly.

The determination of actual lease or concession term shall be subject to the features, size and conditions of each activity.

Article 70: When it is necessary to use an individual's land in the public interest, the State must make appropriate compensation for damages.

Article 71: In determining damages, there must be a Committee comprised of representatives of interested parties to determine the value of the damages.

These articles illustrate the inextricable involvement of the State in all aspects of the rights of individuals and organizations to land, from granting the tenure under Articles 3 and 43 to the use to which that land can be put under Articles 17, 18, 21 and 22. This governance is performed at both a central and district level through the relevant ministries. The location of the land for the NT2 project suggests that the rights to use are primarily under the control of the Ministry of Agriculture and Forestry.

3.2.3.2 Land Titling Legislation

To secure the tenure rights of the resettlers to their resettlement land, two issues must be addressed (a) the individual household rights to their homes and agricultural plots and (b) the communal rights of the villagers to the forest land. The Ministry of Finance is currently supported by the World Bank in its process of registration of land parcels in Lao PDR. This has focused primarily on municipal areas where the Land Titling Department systematically registers parcels of land in a town. The implementation of land titling program is guided by three Ministerial Directives: MD No. 996/MoF, 24 June 1998, MD No 997/MoF, 24 June 1998 and MD No. 998/MoF, 24 June 1998). The titling of agricultural and housing land for NT2 will be performed under the two first MDs, 996 and 997.

As described above, whilst the land within the Lao PDR is the property of the national community, individuals may have the right to use, transfer and inherit land. The land registration project under the above Ministerial Directions assesses an individual's right to the land and if successful in showing such right is issued with a land title registered in a Land Register Book and Land Parcel Register Index specific to each village. Such registers are managed and maintained by the Provincial and Municipal Office of Land and Housing Management. Such title can be inherited, sold and be the subject of a court order (known as permanent assignment). It may also be leased or mortgaged (indefinite assignment). It is important to note that the legislation providing the registration flows through from the Land Law not the Forestry Law. The land title provides the owner with security of tenure for that land but it does not address the specific uses such land may be put to or classified as (for example agricultural or forestry land).

The NT2 Project, in conjunction with the Ministry of Finance intends to register the resettlement housing and agriculture land in the name of the individual households (husband and wife's name shall appear on the title certificate) using the procedure based on the Ministerial Direction on Systematic Adjudication of Land Use Right No. 997/MoF.

3.2.4 Forestry Legislation

3.2.4.1 The Forestry Law, No. 004 (October 11, 1996)

The Forestry Law provides the framework for all implementing legislation in the forestry sector. There have been many regulations and orders issued by MAF to implement in a consistent manner the key Articles in the Forestry Law. Of importance to the NT2 resettlement policy is the relationship with the Forestry and Land Laws, specifically relating to the allocation, zoning and use of forestland within village boundaries and protected areas.

Article 5: Natural forests and forestlands are the property of the national community whom the State represents in the administration and allocation of individual use and reasonable organization. Individuals and organizations shall have the right to possess and use trees, natural forests and forest land only when authorized by the authoritative agencies.

Comment: the Nakai Plateau resettlers have been given this authorization (see section 3.5).

- Article 7: Individuals and organizations having received forest and forest land allocations from the State for their preservation and management shall be entitled to compensation and interest, such as the use of wood, gathering of forestry produce etc (see also customary rights in Article 30).
- Article 12: After allocation of forest categories and determining forest areas and lands, the Government shall assign rights to local authorities, from there the province shall assign to the district who shall assign to the village responsible.
Comment: MAF Ministerial Authorization 0063/29-4-02 given to the Province to assign to the Nakai plateau resettlers the rights to use the Resettlement Area forests (section 3.5).
- Article 13: The State assigns the use of degraded forest land to individuals and organizations in accordance to their labour and financial capacity for forestation or revival and to individuals for an area not exceeding three hectares per labour in the family (legal basis for allocation of degraded forestland to villagers under PM Decree 3 and MAF Instruction 822).
- Article 14: Where necessary for public interest, forests and forest land may be used for other purposes, subject to prior approval from the competent authorities (approval derives from either MAF, PAFO, DAFO or the Government depending on the size of the forest area).
Comment: A Resettlement Committee Regulation (Provincial Decree) will provide guidelines for the land and forest use planning on the Resettlement Area, specifying how urban, peri-urban and agricultural areas will be identified, and how claims to such areas by individuals or companies or other agencies will be reviewed and approved.
- Article 16: Forests in the Lao PDR are classified into the following five categories:
1. Protected Forests
 2. Reserve Forests
 3. Production Forests
 4. Regeneration Forests
 5. Degraded Forests
- Article 30: Traditional use of forests and forest land refers to the long-standing use of forests, forest land and forest produce as acknowledged by the society or law, which includes non-restricted wood collecting for fencing, firewood, forest produce gathering, hunting and fishing of non-restricted species for family consumption, and other traditional uses. Such traditional use shall avoid causing damage to the forests or forest resources, and shall avoid prejudicing the interest of individuals or organizations. The traditional use of forests, forest land and forest produces shall abide by the village forest and forest land regulations. (See also MAF Orders 377 and 54 and MAF Regulation 535 for scope of customary use).
- Article 48: The right to possess and use forests and forest land is acquired through transfer, deliver or inheritance.
- Article 50: Grant of rights to possess and use forest and forest land is decided by the concerned agencies with authority in allocation of forest and forest land for long term and stable possession and use by individuals and organizations based on contracts and specific regulations.
- Article 51: The right to possess forest and forest land is the right to preserve and use the received forests and forest land for a purpose to meet the requirements for persons enjoying the rights of possession and use.
- Article 59: The forestry management agencies include the Ministry of Agriculture and Forestry, the Provincial/Municipal Agriculture-Forestry Services, the District Agriculture-Forestry Offices and the Village administrative authorities.

Most of the forest land in the resettlement area on the Nakai Plateau will need to be classified as Production Forests under Article 16 of the Forest Law, which may further be zoned into each of the forest categories within village boundaries. If any area is to be designated Production Forest, it should comply with recent reforms in PM Decree 59 (2002) and its implementing MAF Regulation on Sustainable Management of Production Forest Areas.

Some areas within the resettlement will also be classified as Protection Forest, especially those areas containing forests on slopes greater than 25 degrees; and in which limited utilisation of forest products but no logging or other significant physical disturbance will be permitted. Although MAF has not issued a specific regulation for designation or management of protection forests, it is a stated objective in the Forestry Law, Article 17, and the Water Law, Articles 13, 29 and 30, to protect watersheds. Moreover, pursuant to MAF Instruction 822, protection forest zones designated as a result of land use planning and allocation within a village boundary shall meet the objective of protection of key watersheds.

Within the resettlement area, there are areas of degraded forests, and these areas will either be regenerated (Forestry Law, Article 20), used for forest plantations or allocated to villagers for tree planting and designated under the Customary Use provision in the Forestry Law (Article 30). Some will be re-classified as agricultural land.

3.2.5 Law on Water and Water Resources, No. 005 (November 11, 1996)

The law on water and water resources recognizes water as the principal natural resource and the need to regulate, exploit and administer both its use and the use of plants, animals and minerals found within aquatic environments. Of particular relevance to the issues of resettlement are the following:

Article 25: The Government promotes the development and use of water resources in small, medium and large scale energy production from water sources with such potential. The use of water resources shall consider its potentials and impacts.

In building a hydropower dam, consideration shall be given to the preservation of: the sources of water, forests, the environment, flood protection, water supply, irrigation, water transport, fishing and fisheries, aquatic life and others.

Article 28: When resettlement is necessary from the area and vicinity of water sources development projects, project owners shall provide assistance in providing appropriate shelters and livelihoods for the resettled population. The funds used to finance resettlement, assistance or compensation to the population shall be included in the projects' investment.

Article 29: ... there are still strict obligations to preserve and rehabilitate and maintain forest resources and forestlands in water catchment areas in conformity with the water source allocation plan, forests, land, and seasons, specifically in the area of water origins or around water sources.

These articles provide the basis of the Project's broad obligations for environmental mitigation but also for assisting the resettlers, whilst recognizing the potential for hydropower in Lao PDR. As discussed in Chapter 28 and under the Concession Agreement (Appendix A), the Project has included the costs of resettlement in its overall investment budget.

3.3 NATIONAL RESETTLEMENT POLICY AND GUIDELINES - 2003

An examination of the relevant laws and decrees indicates that the Lao people have certain basic rights and obligations in relation to resettlement. Among these the right to receive compensation for land withdrawn by the State is paramount. However, while compensation is an important factor in instances that call for resettlement, it is not the only factor. Successful resettlement requires that detailed plans are prepared in advance and that such plans are based on a general set of principles and rules that would apply to the preparation and implementation of these plans.

The National Resettlement Policy is one such set of principles and rules. A first draft of this policy, formulated by the Chairman of the NT2 Resettlement Committee, was discussed at the NT2 Resettlement Policy Workshop in Thakhek in September 1996, attended by more than forty national, provincial and district government officials and representatives from other organizations. Subsequently, changes and suggestions resulting from the participants were incorporated into a second draft of the policy. This and further drafts of the policy have been reviewed separately by the World Bank, the Panel of Experts and the Asian Development Bank. Workshops including government officials from a range of ministries have

also been used in the development of the policy by STEA³ (see Appendix C9.1 for the final draft of the policy).

The policy is to be implemented by way of a PM Decree (the latest draft of which is attached in Appendix C9.2). The provisions of the Decree aim to:

- (i) help integrate social dimensions in development projects,
- (ii) address measures to mitigate adverse social impacts, in a particular focus on vulnerable groups; and
- (iii) have a comprehensive approach to address social issues in development projects.

The Decree also aims to ensure that mitigation measures, including compensation relocation and economic restoration of affected people are carried out in accordance with the provisions and stipulations of the Constitution and the various relevant applicable Laws and Decrees of government taking into consideration special needs and features of the various ethnic groups of the Lao PDR.

The STEA is assigned to issue requisite Implementation Regulations and Resettlement Technical Guidelines in support of this Decree and to regulate resettlement planning and implementation activities in development projects nationwide, and the latest draft of these (dated 15 April 2004) is attached in Appendix C 9.3.

3.4 NAM THEUN 2 RESETTLEMENT POLICY

3.4.1 Development of the Policy

Development of a resettlement policy specific to NT2 has taken place in parallel with the preparation of the draft national policy. It has been undertaken in large measure by the NT2 Resettlement Committee, which was set up by GOL in 1995. The steps in the process to prepare a project-specific resettlement policy have been:

- September 1996 - NT2 Resettlement Policy Workshop in Thakhek.
- March 1997 - Review by NT2 Study of Alternatives; review by GOL Workshop; and discussion by Public Briefing Session.
- May 1997 – Review by World Bank Mission.
- June 1997 – 2-day Public Consultation Workshop; review by Panel of Experts and by International Advisory Group.
- February 1998 - Approval by State Planning Committee of NT2 Resettlement Policy.
- January 1999 - 2 day Public Consultation Workshop on RAP.
- September 1999 - GOL approval of RAP, including NT2 Resettlement Policy.
- November 2001 and January 2003 – World Bank Safeguards Policy Missions.
- July 2002 – Resettlement Committee Policy Adjustment.

The Policy was last discussed at the GOL Committee of Planning and Cooperation on July 22, 2002. At that time a few changes required to take into account comments and the results of discussions on the Concession Agreement described below.

3.4.2 Nam Theun 2 Resettlement Policy

The NT 2 Resettlement Policy sets out the objectives of the policy, the geographical and impact areas it covers, and then the policy guidelines. It is presented in full below.

³ The material presented in the Policy is generally culled and assembled from several sources. Major among these include the ADB's *Handbook on Involuntary Resettlement*; *World Bank's Draft Source Book on Resettlement*; *Resettlement Guidelines* prepared under ADB TA 3133 -LAO, "Strengthening Social and Environment Management in Lao PDR", July 2000; and *Resettlement Guidelines* prepared under the WB funded "Hydropower Development Strategy for the Lao PDR" in September 2000. Additionally, information presented in the Policy is also drawn heavily from several development projects in Lao PDR as well in neighbouring countries. Where relevant, international best practice examples are presented in the Guidelines with an objective to bring these Guidelines to acceptable international standards, without losing focus on the country context. The final policy and the decree have been prepared under ADB loan 1857: Environment and Social Program. The policy and Decree have been approved by Cabinet and the Decrees scheduled to be issued by the Prime Minister within 2004.

It should be noted that the area/populations of policy coverage is not restricted to those listed in Article 2, but includes all areas and persons affected by the Project as of the eligibility cut-off date of the household survey conducted in 2003. In addition, Article 2 clause 2.1 will also include PAPs on the Nam Theun downstream of the dam, and those affected by substations. In articles 4 and 5, all affected persons are entitled to rehabilitation as well as compensation. Article 5, clause 5.8 may be revised to ensure that all affected people occupying land - regardless of proof of recognizable rights or claims to land - will still qualify for entitlements. They may not be entitled to compensation for loss of land but are still entitled to compensation for their loss of livelihood and legitimate assets, and to other assistance so that they will be at least as well off as they would have been in the absence of the Project.

Nam Theun 2 Resettlement Policy (translation of the 1998 policy)

Article 1: Objectives of the Resettlement Policy

- 1.1. This policy outlines the basic principles and measures governing the resettlement, provision of agricultural and forestry production areas and compensation to the population of the Nam Theun 2 Project zones, with the view of upgrading and ensuring sustainable livelihoods.
- 1.2. It provides that the population participates in the consultation, planning and design process of their new settlement and production areas.
- 1.3. It provides for the application of special measures as required towards ethnic minorities and vulnerable persons to assist them to take care of their needs and foster self-reliance.
- 1.4. It provides for the construction of infrastructure in new settlements areas in accordance with designs approved by the Resettlement Committee in the best interests of the population in and around the Resettlement Areas.
- 1.5. The population to be resettled should materially improve its standard of living after relocating; individual household incomes should be above the national poverty line within four years after physical relocation and should be supported in the interim period.
- 1.6. The policy provides for replacement land being available to all those interested; cash compensation would only be considered for those with specific plans to permanently move out of the district.
- 1.7. The resettlement and rehabilitation plans will be conceived and executed as specific development plans.

Article 2: Policy Areas

The areas of this policy are those where the population is directly and indirectly impacted by the Nam Theun 2 Project, including:

2.1. Khammouane Province

- Nakai District: The dam and reservoir area covers the territory of 15 villages in Nakai District.
- Gnommalat District: The powerhouse, weir and water basin, outflow channel from the powerhouse and first portion of the high voltage transmission line.
- Mahaxai District: Outflow canal to the Xe Bang Fai and the middle portion of the high voltage transmission line.
- Thakhek District: The 115kV transmission line, from Mahaxai to Thakhek.
- Nong Bok and Xe Bang Fai Districts: Xe Bang Fai downstream.

2.2. Savannakhet Province

- Xaybulee: May be affected by releasing water from the reservoir and to Xe Bang Fai and remaining portion of the high voltage transmission line.
- Khanthanbouly District: and remaining portion of the high voltage transmission line.

2.3. Bolikhamxay Province

- Khamkeut District: One portion of the reservoir on the dam's right side, the new road, and two villages: Ban Sop Hai and Ban Nam Nian

The NT2 Resettlement Policy is directly linked to the above Project components and operation of the powerhouse, dam and reservoir.

Article 3: Selection of Resettlement Areas

Based on the preferences of the reservoir population and in accordance to the Decree 193/PM of December 2000, three areas have been selected for resettlement:

- Area 1:* Near Ban Oudomsouk (Khammouane Province) covering an approximate area of 1,600 hectares.
- Area 2:* On the east of Ban Done and Ban Khone Khen, Nakai District (Khammouane Province), covering an approximate area of 10,300 hectares.

Area 3. On the west of Ban Nakai Tai and Ban Nakai Neua (Khammouane Province), covering an approximate area of 10,900 hectares.

Article 4: Compensation Policy

- 4.1 Compensation based on the principle of replacement cost will be provided for agricultural lands, gardens, building land, fruit trees, houses, schools, hospitals, dispensaries, temples, cemeteries, markets, buildings and any other assets and activities that will be affected.
- 4.2 The Project will provide housing and agricultural-forestry production land for each household in the reservoir area at the time of the population and assets survey. For any household not wishing to receive any such land or housing, the Project will pay cash compensation at replacement cost based on the local market value prevailing at the time.
- 4.3 Fruit trees shall be compensated according to the agreement between the concerned parties and/or locally prevailing market prices.
- 4.4 Schools, hospitals, dispensaries, markets, temples, clubs, cemeteries, roads and other constructions owned by the State and the village will be re-built by the Project or will be otherwise compensated for at their replacement cost.
- 4.5 The dismantling of old houses and construction cost of new replacement houses will be, jointly with the owners, determined by the Project and will be compensated. Transportation to the Resettlement Area (including wood prepared by the population) and labor and equipment provided by each family will be compensated. Each house may be designed by the population itself according to their preference. Moving of household goods including livestock will be arranged at no cost to the household.
- 4.6 Villagers resettling outside the Resettlement Areas (to other localities) will receive full compensation from the Project in one single payment for agricultural land, gardens, fruit trees, houses, building land and other losses and will be provided transportation to their destination. Any self-resettlement proposals must be reviewed for feasibility and approved by the Resettlement Committee before agreement to cash payment.
- 4.7 Food security will be provided to households until the Policy income target has been met, according to the Regulations.
- 4.8 All persons that sustain a loss under the Project will be entitled to adequate and prompt compensation or replacement of assets lost.
- 4.9 Under this policy, regulations will be made that classify those who are entitled to compensation and the level of compensation entitlement.
- 4.10 Households in the Project's Reservoir Area as of October-1998 will be entitled to compensation and have been registered, including those household of natural growth and household of any government employees who have been assigned to the area since the registration process.

Article 5: Other Provisions

- 5.1 The resettlement transition period (from relocation to self-sufficiency) will be minimized and adequate social, economic and environmental support will be provided during this period.
- 5.2 Those to be resettled will, as a matter of their preference, be relocated on the sites situated on the Nakai Plateau in areas as mentioned in Article 3. Those few households wishing to relocate off the Nakai Plateau will have that option and will be paid adequate compensation.
- 5.3 Villages will be resettled as villages and according to their traditional groupings; where two or more villages are to be combined in a new location, agreement of all concerned villages will be obtained. Living standard in the new villages must be better than before.
- 5.4 New villages will be provided with appropriate community infrastructure as specified in the Resettlement Action Plan.
- 5.5 Insofar as changes in household economic activities are proposed, the replacement opportunities will recognize the ability and interest of the persons affected; new activities will be introduced on a sound economic basis, with risks identified and understood.
- 5.6 All compensation, relocation and rehabilitation costs will be borne by the Project, with funds disbursed through an appropriate institutional structure.
- 5.7 All those affected by the Project will have the same basic rights, although entitlements may vary.
- 5.8 Proof of residency or traditional use from the Village administration is required to establish the right to compensation.
- 5.9 The allocation of farm/house lots will recognize family composition; households with large numbers of present or future labor-force members will be considered for allocation of plots that can accommodate larger or expanding households.
- 5.10 The socio-cultural composition of the affected villages will be recognized in the resettlement plans and their implementation. Special measures will be planned for vulnerable groups.
- 5.11 All affected persons will have effective access to grievance procedures that would deal with problems that

may emerge at the household or village level.

5.12 The program of resettlement will be linked to the Project construction program; reservoir impoundment will not proceed until all affected persons have been relocated in accordance with the approved resettlement schedule.

5.13 Any host people affected by the resettlement program will be compensated according to the degree of the impact.

Article 6: Implementation

6.1 The NT2 Resettlement Committee will be responsible to carry out the effective implementation of the Resettlement Action Plan and for the coordination of the organizations involved; the Resettlement Committee will instruct the Resettlement Management Unit (RMU).

6.2 The NT2 Resettlement Committee and the Resettlement Management Unit (RMU) will prepare the Regulations under this policy.

6.3 The NT2 Resettlement Policy is to be recognized and assisted by Ministries, Organizations equivalent to Ministries, Committees and Rural Authorities for effective implementation.

Article 7: Validity

7.1 The policy replaces the NT2 Resettlement Policy No. 023/SPC, dated February 1998 and will be come effective on the date of signature entered upon.

3.4.3 Resettlement Committee Regulations

While the NT2 Resettlement Policy (and more recently the Concession Agreement of 2002) is the overarching framework describing the resettlement principles, it specifies (article 6.2) that more specific regulations will be issued dealing with individual procedures for the successful implementation of the policy. It is the intention that, as detailed planning and implementation proceeds, additional Regulations under the Policy will be passed by the Resettlement Committee, at the recommendation of the Resettlement Management Unit and NTPC. Together, the Policy and Regulations will form the basis of GOL authority under which resettlement and compensation take place. These regulations are executed by the provincial governor and therefore have the authority of a Provincial Decree.

The following Resettlement Committee regulations were issued prior to the signing of the Concession Agreement, and are now incorporated into this Concession Agreement.

(a) Resettlement Committee Regulation Number 1 - Eligibility

Lists the categories of people eligible to receive entitlements and a process of updating the register of such people including due to natural growth of households. Further details of the eligibility of such people and hence the identity of those whom NTPC is obliged to consider is detailed in the Concession Agreement.

(b) Resettlement Committee Regulation Number 2 - Entitlements

Lists the entitlements for items such as housing, cash, infrastructure and production assistance for the different categories of people listed in Regulation Number 1.

(c) Resettlement Committee Regulation Number 3 – Downstream Areas Impacts

Describes the survey and monitoring work NTPC shall undertake one year prior to commercial operations and at approximately two and four years thereafter.

Resettlement Committee regulations which will be drafted and executed prior to Financial Close will include:

- RC Regulations on the process for issuing land title to the resettlers, and the endorsement of such land titles to ensure their non-transference during the resettlement process;
- RC Regulations on the process of forest and land use planning and allocation in the resettlement area, including the identification and process for delimitating urban, peri-urban and agricultural areas;
- RC Regulations regarding the right each future resettler family to access and 5m³ of timber from current village forest (to be inundated by the NT2 reservoir);

- RC regulations on the per diems and other benefits to accrue to GOL staff working on the NT2 project;
- RC regulations regarding establishment of new business's and the management of camp follower's and in-migration in the area of the NT2 Project during the construction period ;

3.5 THE CONCESSION AGREEMENT

3.5.1 Introduction

A review of the national legislation provides for the general rights of the resettlers and the obligations of the owner of a large hydropower project. However, the specific obligations of NTPC, and to some extent the GOL to satisfy these requirements is set out under the Concession Agreement (“CA”) that was signed on 3 October 2002 between NTPC and the GOL, represented by the Committee for Investment and Co-operation and acting for and on behalf of the Lao PDR.

Under the CA, the GOL grants NTPC the right to implement the Project on a build, own, operate and transfer basis for a period of 25 years (the **Concession Period**”) following the occurrence of the Commercial Operations Date, subject to any extensions for Force Majeure.

The CA has been approved by the National Assembly on 12 October 2002. As such the rights and obligations of the GOL and NTPC including in relation to social and resettlement issues are approved by the highest legislative body in Lao PDR. Indeed, it is the CA that requires the production and approval by the GOL of this Resettlement Action Plan (Clause 30.1).

The GOL and NTPC acknowledge that the Project will cause environmental and social impacts in the Lao PDR and that NTPC and, where applicable, the GOL will be responsible for addressing, alleviating and/or remedying such impacts.

There are two main sections in the CA are dealing with the resettlement of the affected population and set out how the GOL and NTPC will comply with and implement the Nam Theun 2 Resettlement Policy in order to further the Project’s resettlement objectives:

- Clause 30; and
- Part 1 of Schedule 4 of the CA

3.5.2 CA Schedule 4, Part 1 (Social Component)

Part 1 of Schedule 4 provides a general overview of the obligations of both NTPC and the GOL, the duration of these obligations and institutions within NTPC and the GOL who are responsible for the process. The monitoring of the resettlement process is performed both internally by the Company and the GOL and also by independent parties. This section provides for the eligibility of the resettlers to the benefits NTPC will provide, with a population survey undertaken in October 1998 and another to be undertaken approximately 3 months prior to financial close. This second survey will take into account natural growth and certain other categories (Clause 7.1, Schedule 4, Part 1).

The CA also provides a detailed description of the development of the villages in both the planning stage (including population and village location surveys and consultation and clearance of UXO) and the implementation stage (including land distribution and titling, relocation, construction and as described below the entitlements of the resettlers). There are a series of livelihood development programmes detailed in the CA both on a village and community basis (including for livestock improvement, agriculture and fisheries development and for the sustainable use of the community forest). Should problems arise and in accordance with Article 28 of the Constitution, the CA sets out a grievance procedure as further discussed in Chapters 46 and 47. The CA sets out the funding arrangements for these activities.

3.5.3 Entitlements

The CA also provides for the entitlements of the Project Affected People, as detailed in Table 3-1.

Table 3-1: Entitlements of PAPs in Downstream Areas, according to CA

Category of Project Affected Person	Entitlements
<p>B. Power Station, Regulating Pond, Regulating Dam and Downstream Channel from Regulating Dam to the Xe Bang Fai River</p> <p>All those adversely affected by the construction and operation of the Downstream Channel, either through loss of land and infrastructure or economic loss or disturbance. On the alignment of the Downstream Channel prior to the commencement of the Preliminary Works, a detailed survey of impacts will be conducted to register eligible affected persons.</p>	<p>1 Housing if required for right-of-way or construction of Downstream Channel:</p> <ul style="list-style-type: none"> • as per housing for Reservoir Area households (see A.1) <p>2 Land (home lot and production land):</p> <ul style="list-style-type: none"> • if 25 percent or more of the land is required, the Project Affected Person is entitled to sell the entire land to the Project and receive compensation accordingly • if less than 25 percent of the land is required and the remaining land is not economically viable for production the Project Affected Person is entitled to sell the entire land to the Project and receive compensation accordingly • the replacement value of the land is its local market value of the year in which the compensation is paid • the compensation can be cash or the provision of replacement land of equal size and productivity (in the vicinity of the home lot) <p>3 Trees:</p> <ul style="list-style-type: none"> • fruit trees compensated at district prevailing market prices • other trees compensated at stumpage value <p>4 Land and disturbance allowance: ten percent of the amount calculated under Item 2 above.</p>
<p>C. Downstream of Nakai Dam to the Mekong River, Nam Kathang, Xe Bang Fai and road from Thakhek to the Project site.</p> <p>All those living or working along natural rivers downstream to the Mekong river who will be adversely affected by the operation of the Project either through loss of land or infrastructure or economic loss or disturbance.</p>	<ul style="list-style-type: none"> • Infrastructure or economic losses will be compensated at replacement cost on a village or household basis, as per consensus

3.5.4 Security

As security for NTPC's various resettlement obligations, NTPC must provide to the GOL a number of letters of credit.

- If the **Company fails to comply** with its environmental and resettlement obligations it must make certain payments to the GOL. An independent Panel of Experts will review compliance of NTPC and the GOL to the Social and Environmental obligations including completion of the resettlement obligations, thus the end of the Resettlement Period. These payments are secured from within 30 days of the construction phase commencement by a letter of credit of USD 2,500,000.
- NTPC warrants that the environmental and social objectives set out in the Concession Agreement are reasonably sufficient to mitigate against or compensate for the reasonably foreseeable project impacts. Nonetheless, NTPC also recognizes that there may be **unanticipated project impacts** and agrees to fund such additional costs to a limit of USD 10,000,000 and any amount received from environmental insurance proceeds. To secure its obligations in respect of the unanticipated project impacts NTPC agrees to put in place a letter of credit of USD 2,500,000 within 30 days of the construction phase commencement.
- Where the CA is terminated before the Commercial Operations Date (“**COD**”) and before the satisfaction of the various social obligations to be met by COD the Company must make certain payments to the GOL to ensure certain resettlement obligations are satisfied. Such sum secured by a letter of credit of USD 1,000,000. These **termination obligations** are further described in Appendix A-2.

Villages in Lao PDR have historically and in most cases continue to practice traditional methods of forest tenure, use and management despite a government management system and legislation. After the formation of Lao PDR in 1975, the forest resources became the property of the national community to be managed by the State. A system was established to conduct forest management activities through 9 State Forest Enterprises (“**SFE**”) whereby the role of villagers was limited to labour with minimal benefits. SFEs were abolished in the late 1980s (PM Decree 117) and forest management was turned over to the provinces, and the harvest of forest products to private enterprises and three SOEs⁴.

The recognition to increase the role of villages in forest management has emerged over the past decade, especially since poverty alleviation and the reduction of natural forest degradation have become higher policy goals of the GOL and international donor community. Through the Forest and Land Use and Planning process, the GOL has attempted to identify village boundaries and define forest use and protection zones within village boundaries under forest management agreements. Securing temporary tenure and management rights over forest areas has been a positive step, but the process has been inconsistently implemented with inadequate training to district staff or benefits to the villages in a consistent manner.

3.5.5 National Legal Framework

The Forestry Law (1996) recognizes the village as the grass-roots level of a four-tiered forestry administration that includes the national, provincial, district, and village levels. The law states that village authorities have the right and duty to develop specific regulations that are “appropriate to the actual conditions of the village” (Item 6, Article 63). This is further implemented and clarified through PM Decrees 59 and 102 attached in Appendices C4.2 and C8. PM Decree 102 (1993) recognizes village administration as a formal level of the government with rights and duties to implement policies at the village level.

3.6 THE NT2 PROJECT IN RELATION TO WORLD BANK AND ADB SAFEGUARD POLICIES

The NT2 Resettlement Policy details guiding objectives, principles and provisions under which resettlement is carried out. This NT2 Policy, and the Social Development Plan which has been drafted over many years, aims to follow the principles of the three applicable ('triggered') World Bank Policies:

- Operational Policy 4.12: Involuntary Resettlement.
- Operational Directive 4.20: Indigenous People.
- Operational Policy 4.11: Cultural Property.

More recently, the Asian Development Bank has also become a partner in the NT2 Project, and thus the ADB safeguards policies are also relevant to the social and resettlement program of the NT2 Project, including:

- ADB Policy On Involuntary Resettlement (1995) and Operations Manual(OM) F2
- ADB Policy on Indigenous Peoples(1998) and OM F3
- ADB Policy on Gender and Development (1998) and OM C2

NTPC and GOL are fully committed to comply with these World Bank and Asian Development Bank requirements and policies for indigenous peoples, involuntary resettlement, cultural property and gender and development.

These policies are set out in full in Appendix B.

3.6.1 WB OP 4.12: Involuntary Resettlement

The fundamental objective of Bank policy on resettlement as stated in OP 4.12 is to assure that development projects which must displace people also benefit them. To recall this overall objective, affected persons should be consulted from the beginning and special attention should be paid to socially or economically disadvantaged people. The NT2 policy states that the people affected by the Project

⁴ Agricultural Development Services Group (ADS), Bolisat Phathana Khet Phoudoi (BPKP or Phoudoi), and Development, Agriculture Forestry Industry Group (DAFI) are all under the Ministry of Defense.

should after relocation be better off than before. The resettlement plan is designed to achieve this. Policy objectives of the WB that have been applied to the SDP include:

- Involuntary resettlement has been avoided when feasible or minimized, exploring all viable project designs (2a)
- When resettlement is unavoidable, activities have been planned as “sustainable development programmes” that provide sufficient resources and opportunities to enable displaced persons to share the benefits of the project (2b).
- Ample assistance will be provided to displaced persons in order to improve their livelihoods and standards of living (2c)
- WB Safeguard Policy on Involuntary Resettlement is applicable due to loss of structure, land and livelihood of affected persons resided in the proposed reservoir or impacted directly by project activities (3a). In addition, there is “restricted access” to the NBCA to the north and east of the proposed reservoir, impacting the livelihoods of the displaced persons (3b). The proposed livelihood model that is explained in detail in Chapters 21-25 takes into account that resettlers will not have access or be reliant to resources in the NBCA.

The SDP also follows the measures outlined in Section 6 of OP 4.12:

- Displaced persons have been “informed about their options and rights”, “consulted on, offered choices among and provided with technically and economically feasible resettlement alternatives” and will be “provided with prompt and effective compensation” in the form of new livelihood system that will significantly exceed the value of their existing livelihood systems in terms of economic return and “at replacement cost for selected assets” (6a, i-iii).
- Assistance will be provided during relocation that exceeds moving allowances and housing; housing sites and agricultural land will be developed in co-operation with displaced persons; labour inputs and consultations on site preparations will take place in advance of the relocation (6b, i-ii).
- The SDP outlines a plan for “support after displacement, for the transition period, based on a reasonable estimate of time likely to be needed to restore their livelihood and standards of living” by establishing two targets to bring all households to the Lao rural poverty line four years after relocation and all villages to the national rural income level upon completion of the resettlement process (cf. Section 8.9.2).

The SDP covers all the elements of a SDP as prescribed in Annex A of OP 4.12, including a specific Resettlement Policy for the Project approved by GOL.

3.6.2 WB OD 4.20 Indigenous People

The WB's Safeguard Policy OD 4.20 is addressed in detail in the Ethnic Minorities Development Plan (EMDP) for the NT2 Project Area. The findings and recommendations of the EMDP have been incorporated into the SDP and are consistent with its policies and planned activities.

Indigenous peoples and ethnic minorities commonly have little voice in development decision making. Moreover, exploitation of their fragile resource base has largely profited others. Given that the reservoir population is made up of ethnic minorities, this SDP shows that they have had a voice in decision making and that development plans have been designed to respect their rights and reflect their cultural practices and traditions.

OD 4.20 sets out the prerequisites for culturally appropriate planning for development, including for resettlement as development. These include assuring that project staff (private and government) are familiar with the social, technical and legal aspects of proposed development activities; recognising traditional organisational structures, religious beliefs and resource use; using appropriate consultation methods that take advantage of local knowledge; focusing on production systems that suit the people's needs and environment; and avoiding increased dependency on project or government agencies by incorporating capacity building. The SDP follows these guidelines.

Households that currently live on the Nakai Plateau can be classified as indigenous people or ethnic minorities and have strong cultural ties to the area. All are sharing a common livelihood system. The

focus on vulnerable groups needs to be on older people and others that may be disadvantaged, such as single parents.

The SDP has approached the indigenous peoples issue by planning that all proposed activities be "culturally appropriate development" and by giving specific consideration to the 'local patterns of social organization, religious beliefs and resource use' in the design of the plan's associated livelihood proposals. The plan also specifically aims at avoiding the creation of dependency and promotes self-management on the part of the resettlers.

3.6.3 WB OP 4.11: Cultural Property

Operational Policy OP 4.11 - Cultural Property - covers archaeological, historical, cultural, religious and natural values (environmental features). Studies that have been carried out previously in the project area have not revealed any significant loss of cultural property. However, a future more detailed study is now underway, and due to be complete by mid 2004 (see the EAMP) while provisions have been made however for "chance finds", in co-operation with concerned GOL agencies as outlined in the EAMP.

3.6.4 ADB's Policy on Gender and Development

ADB's OM F2/OP requires that the findings of a gender analysis be included in the resettlement plan.. The Policy requires:

- Gender sensitivity to observe how the project impacts women and men differently and to take account of their different needs and perspectives in resettlement planning;
- Gender analysis which refers to the systematic assessment of the project impact on men and women and on their economic and social relationships;
- Gender planning which refers to the formulation of specific strategies to bring about equal opportunities to men and women

Thus, the SDP has adopted gender "mainstreaming" as a key strategy for promoting gender equity. This entails ensuring the consideration of gender issues at all stages of the project and that women participate in the decision-making processes. A preliminary gender analysis has been conducted for the Nakai Plateau and the Xe Bangfai, and is currently being updated. This gender analysis and improvements to the strategy will ensure the following specific activities:

- Inclusion of gender sensitivity and capacity building for all stakeholders involved in the detailed design, implementation and monitoring and evaluation;
- Separate components for encouraging women's participation;
- Integration of gender into livelihood planning and implementation, monitoring and evaluation, and all training programs
- Gender specific interventions such as targeting health programs, livelihood technical training to and land titling and land use rights to both men and women

3.7 DEFINITION OF PROJECT AFFECTED PERSONS

As per ADB policy, affected people (AP) include any person, household, firm or private institution who, on account of changes resulting from the Project, or any of its phases or sub-projects, will have its: (i) standard of living adversely affected; (ii) right, title or interest in any house, land (including residential, commercial, agricultural, forest, salt mining and/or grazing land), water resources or any other moveable or fixed assets acquired, possessed, restricted or otherwise adversely affected, in full or in part, permanently or temporarily; and/or (iii) business, occupation, place of work, residence or habitat adversely affected, with or without displacement.

3.8 PROJECT ENTITLEMENTS AS PER CONCESSION AGREEMENT

As presented in Section 3.4.2, the NT 2 Resettlement Policy sets out the objectives of the policy, the geographical and impact areas it covers, and then the policy guidelines.

It should be noted that the area / populations of policy coverage is not restricted to those listed in Article 2, but includes all areas and persons affected by the Project as of the eligibility cutoff date of the household survey conducted in 2003. For the downstream areas, the cut-off date is August 2003

Article 2 clause 2.1 will also include PAPs on the Nam Theun downstream of the dam, and those affected by substations.

In Articles 4 and 5, all affected persons are entitled to rehabilitation as well as compensation.

Article 5, clause 5.8 will be revised to ensure that all affected people occupying land - regardless of proof of recognizable rights or claims to land - will still qualify for entitlements. All occupants during the survey will be entitled to compensation for loss of land and are also entitled to compensation for their loss of livelihood and legitimate assets, and to other assistance so that that they will be at least as well off as they would have been in the absence of the Project.

Impacts	Entitlements
<p>c. Downstream Of Nakai Dam to the Mekong river, Nam Kathang, Xe Bang Fai</p> <p>All those living or working along natural rivers downstream to the Mekong river that will be adversely affected by the operation of the Project either through loss of land or infrastructure or economic loss or disturbance.</p>	<p>Infrastructure or Economic Losses will be compensated at replacement cost on a village or household basis as per consensus</p>

3.9 PROJECT ENTITLEMENTS FOR DOWNSTREAM AREAS

The project entitlements presented below will address various types of losses, as presented in Section 2.0 above. Absence of legal title to land is not a bar to compensation. Both male and female PAPs will be equally consulted and their rights recognised. Negotiations and compensation payments and livelihood restoration will be with both male and female head of each household.

3.9.1 Loss of Land

As a priority, “land-for-land” of equal size and productive capacity satisfactory to PAPs will be provided. However, at the request of PAPs, compensation for loss of land will also be paid in cash equivalent to current market value of lost land. If the head of household is married, land title will be issued in the names of both the husband and wife. PAPs will not be charged for taxes, registration and land transfer costs.

- (a) **Temporary Loss of Agricultural, Garden and Residential Land (i.e., loss of use of land for a period of less than one year e.g. during riverbank protection works).**
 - (i) No compensation for land if returned to the original user. However, the Project will pay compensation to PAPs during temporary use of land.
 - (ii) Restoration of land to its previous or better quality by providing measures to improve land quality in cases of land being adversely affected or acidified.
 - (iii) If the disruption is more than one (1) year, PAPs have an option to a) continue the temporary use arrangements or b) sell affected land to the Project through the provision of “land-for-land of equal productive capacity and in a location satisfactory to PAPs.
 - (iv) Extreme care shall be taken by contractors to avoid damaging properties. Where damages do occur, the contractor will be required to pay compensation immediately to PAPs. Damages will be restored to its former condition.
- (b) **Permanent Loss of Agricultural and Garden Land.**
 - (i) Compensation through provision of “land for land” of equal productive capacity and in a location satisfactory to the PAP. Land will be cleared, leveled and otherwise prepared for cultivation at the expense of the project. In lieu of new pumping costs for new land, additional garden land will be provided.
 - (ii) Where less than 10% of total productive, income generating assets is lost, the AP has the option to receive cash compensation for the lost portion of land at current market value.

- (iii) Provision of land disturbance allowance which is equivalent to 10% of the total compensation amount calculated for the affected land.
- (c) **Permanent Loss of Residential Land and Non -Agricultural/Garden Land**
 - (i) If the residential or other non-agricultural land is partially affected and the remaining landholding is sufficient to re-establish houses and structures, PAPs may opt to receive cash compensation for affected portion of land and structures.
 - (ii) If the residential or other non-agricultural land is partially affected and the remaining landholding is not sufficient to rebuild affected houses and structures, the Project will acquire the entire landholding. As a priority, PAPs will be provided with 'land-for-land' in a location (within the village) satisfactory to PAPs. Land will be cleared, leveled at the expense of the project.
 - (iii) Provision of land disturbance allowance which is equivalent to 10% of the total compensation amount calculated for the affected land.

3.9.2 Loss of Houses and Structures

- (a) Compensation will be paid for the entire house and structure at full replacement cost for materials, labour and transportation associated with the dismantling of existing house and structure and constructing new ones. Payment will be in the form of cash, materials or a combination of both, without deduction for depreciation or salvageable materials. Relocation shall preferably take place when crops have been harvested and farming and fishing activities are minimal (off-peak season).
- (b) For other partially or totally affected structures (e.g., kitchens, toilets, animal sheds, fences, walls, etc.), compensation will be equivalent to a) the replacement value of the affected portion (part or whole) based on current market prices; or b) the costs to relocate the property; or c) the costs of repair of the property to its original or better condition. Compensation will be made in the form of cash, materials or a combination of both, without deduction for depreciation or salvageable materials.

3.9.3 Loss of Riverbank Garden and Crops

- (a) Compensation for crops will be based on gross harvest income taking into consideration the cost of production and investment. Compensation for standing crops will be compensated at full replacement cost regardless of maturity of crops.
- (b) Riverbank Garden and Crops Livelihood Restoration Program. In addition to compensation for lost crops, The following programmes will be provided to PAPs:
 - (i) Extension of irrigation system to new land if there is already an existing irrigation system in the village; or
 - (ii) Installation of new water supply to irrigate new land if there is no irrigation system in the village; and
 - (iii) In lieu of new pumping costs, additional land will be provided.

In some cases, villagers may be able to adjust to the new Xe Bangfai water levels, and relocate their riverbank fields and gardens further up the river bank. However, in many cases this may not be feasible or productive (at least in the initial years after COD) and thus NTPC is committed to providing assistance for re-establishing cropping and gardening activities, as requested by the communities themselves. Simple measures to re-establish gardens by villages will be taken into account, as will considerations to support irrigated fields and gardens above the river banks. In some cases, such irrigated garden development may be linked to the larger irrigation schemes for dry season paddy production.

This livelihood restoration programme for loss of riverbank fields and gardens will be assessed on a village and household basis. The focal concern is the importance of these gardens to livelihoods and nutrition. Thus, each village will be asked to: (i) rationally assess the level of damage to

livelihoods and nutrition (assisted by data gathered by the Project surveys and studies); and (ii) consider the various programs jointly with the NTPC and GoL.

3.9.4 Loss of Trees

- (a) Compensation for fruit trees will be based on the type, age and productivity. If the affected trees are young and have not started bearing fruits, a lump-sum amount to cover for the maintenance and rearing of trees should be made. In case the tree has already started bearing fruits, the annual productive value should be determined from making local enquiries and the compensation equivalent to three years of annual production value. PAPs will be given at least two months to cut and harvest fruit trees.

3.9.5 Loss of Common Property Resources

The compensation policy provides entitlements to villages, wards and government units for the damage to or loss of community and public resources. Compensation will take one of the following forms:

- (a) Repair and restoration to original or better condition of affected community buildings and infrastructure such as schools, water sources, bridges, roads, irrigation etc., at no cost to the community; or
- (b) Replacement, if necessary, of community buildings and infrastructure at locations identified in consultation with affected communities and relevant authorities at no cost to the community; or
- (c) Cash compensation at full replacement cost for affected community assets, if preferred.

If income loss is expected (e.g. irrigation, community forest, community grazing land), the affected village, or government unit will be entitled to compensation for the total production loss (over three years). This compensation should be used collectively for income restoration measures and/or new infrastructure.

3.9.6 Loss of Livelihood and Income Opportunities during Physical Relocation of Affected Houses/Businesses or for Severely Affected Persons

All relocating PAPs with businesses or shops affected will receive cash compensation for the actual business loss during the transition period until the businesses can be re-established at new comparable locations.

Employees of relocating businesses/shops will be entitled to compensation for lost income during the transition period until the business and their jobs are re-established.

All relocating PAPs will receive the following allowances during the transition period, as follows

- (a) **Food Security** during the transition period until PAPs are re-established at new sites (e.g. provision of food or rice supply).
- (b) **Materials Transport Allowance:** All PAPs with any structure requiring relocation will receive cash or in-kind assistance in the form of labour and vehicles sufficient to transport household effects, new and salvageable materials to the new sites.
- (c) **Special Assistance to Vulnerable PAPs.** Vulnerable PAPs will be provided with special assistance that is appropriate to their needs. Such assistance would include but not limited to labour to dismantle and rebuild structures, provision of materials sufficient to build a basic standard house, provision of land to the landless.

All severely affected persons who lose more than or equal to 10 % of their total productive income, will be entitled to:

- (a) **Food Security** during the transition period until PAPs livelihood is re-established at the new sites.

3.9.7 Loss of Domestic Water Source

- (a) Compensation for loss of domestic water source will be through the provision of open or deep wells.
- For villages where total values of water sources are 75% or above, reliance on these are thought to be so high that the Project will provide a new water supply system to the whole village
 - For villages where total values of water sources are less than 75%, provision of the new water supply system will be made to the corresponding percentage of the population of that village

The actual type of alternative household water source and supply system will be identified by a combination of community consultation and consensus, and technical feasibility studies in each village.

3.9.8 Loss of Fish Catch and Other Aquatic Products

(a) Fisheries Livelihood Restoration Program

The current pre-feasibility study has outlined a possible scenario making use, to various degrees, of the various options described below, in the 70 affected Xe Bangfai mainstream villages. The irrigated area, potential area for irrigation and market access of each of these villages is taken into account when allocating a spread of each of these various options in each village. The net benefit for each option is also included in the calculations of exactly how much of each option is required, in each village, to replace the fish loss that is predicted to be experienced by each village. Similar and more options will be offered to the villages in the Nam Theun downstream, Nam Phit area and to Xe Bangfai hinterland villages.

(i) “Fish-for-Fish” Aquaculture Program

It is expected that many of the affected communities will suggest that the impacts on fish catch are replaced by programs to produce or catch fish by other means. Thus, the objective of such a fisheries program is to develop systems for the raising of fish which could replace the loss of those fish currently caught in the Xe Bangfai. Options currently under investigation include:

Integrated rice-fish farming

Fingerlings (fish seeds, 10 to 15 cm) are placed in a rice field, in which they can move for most of the growth period. Roughly 10 % of the field should be allocated to a refuge pond and/or trenches to allow fish to escape from predators and heat. Rice benefits from the fish as they eat weeds and small insects plus fertilize the soil. Fish benefit from access to a large area plus natural feed in the field.

A typical rice-fish combination would consist in a 1600 m² field, with a 1 m wide trench in the inner perimeter and a refuge pond of 40 m². A more extensive model for one season (5 months) would involve a narrower trench and a smaller pond.

Three options have been considered in the model:

- Option 1: Rice-fish farming, semi-intensive, 10 months in dry and wet season irrigated area;
- Option 2: Rice-fish farming, extensive, 5 months in dry season irrigated area; and
- Option 3: Rice-fish farming, semi-intensive, 10 months with introduction of irrigation in dry and wet season

Fish Pond

Fish are stocked in a pond; fish can be managed extensively (no or only little feed and manure), semi-intensively (using on-farm by-products, i.e. rice bran and broken rice, livestock manure and a steady water supply) or intensively (fish pellets). Farmers without past experience in fish farming would not go beyond semi-intensive level, as it becomes too expensive and risky. A typical pond would be 1.5 m deep, with an area of 500 m².

Three options have been considered in the model:

- Option 4: Pond culture, semi-intensive, 10 months with access to irrigation;
- Option 5: Pond culture, extensive, 5 months in rain fed area; and
- Option 6: Pond culture, semi-intensive, 10 months with introduction of irrigation in dry and wet season.

Integrated Livestock-Fish Farming

Chicken is kept in a hut above the fish pond or on the dike. This saves space and labor, and allows droppings to automatically fall in the pond and fertilize the water and stimulate plankton production for the fish. Typically, this option would associate a chicken house for 100 animals and a 500 m² fish pond. Chicken could be exchanged with duck involving similar cost and revenues.

The two options considered in the model are:

- Option 7: Integrated chicken-fish farming, semi-intensive, 10 months in dry and wet season irrigated area; and
- Option 8: Integrated pig-fish farming, semi-intensive, 10 months in dry and wet season irrigated area

In villages, where irrigation is not available or only to a limited extent, water supply will be provided in order to facilitate rice-fish farming and/or pond culture (Options 3 and 6).

(b) Development of Alternative Livestock Production Program

As mentioned above, rather than fish for fish loss compensation strategy, it might be technically more feasible, or socially preferred in some villages and/or some communities or households to opt for a combined protein for protein compensation and income for income compensation, in which case the development of livestock raising, especially cattle, may be the preferred option.

(c) Improved Natural Fisheries Management Option in Rivers and Wetlands

It is the shared opinion of (a) fisheries experts, and (b) local villagers, that there is currently, or certainly will be in the near future, 'over-fishing' in Xe Bangfai. While over fishing refers partly to numbers of fishers and fishing effort, it also refers to inappropriate fishing practices and fishing gear, and lack of fisheries management (management of brood and spawning grounds, management of catch of fry etc). Experience in the region has demonstrated that with the planning and implementation of participatory natural fisheries (river and wetland) management, natural fisheries yields can increase significantly. Relevant GOL agencies have made some efforts to promote such management, but are hampered by lack of knowledge of fish biology and lack of extension funding.

Thus, another option for compensation of fisheries loss in the mainstream Xe Bangfai is to develop improved management of natural fisheries, both in those wetlands fisheries connected to the Xe Bangfai, and the fisheries in the mainstream itself. It is likely that such a compensation and livelihood restoration program would be most effective when communities require fisheries compensation and livelihood restoration at the community rather than at the household level.

The Project entitlement matrix is shown in Table 3-2.

Table 3-2: Project Entitlements for Downstream Areas

	Types of Impacts	Eligible PAPs	Project Entitlements	ISSUES
1	Temporary Loss of Agricultural, Garden and Residential Land (i.e., loss of use of land for a period of less than one year e.g. riverbank protection works)	Owner or Occupant	<p>a) No compensation for land if returned to the original user. However, the Project will pay compensation to PAPs during temporary use of land.</p> <p>b) Restoration of land to its previous or better quality by providing measures to improve land quality in cases of land being adversely affected or acidified.</p> <p>c) If the disruption is more than one (1) year, PAPs have an option to a) continue the temporary use arrangements or b) sell affected land to the Project through the provision of “land-for-land of equal productive capacity and in a location satisfactory to PAPs.</p> <p>d) Extreme care shall be taken by contractors to avoid damaging properties. Where damages do occur, the contractor will be required to pay compensation immediately to PAPs. Damages will be restored to its former condition.</p>	
2	Permanent Loss of Agricultural and Garden Land	Owner or Occupant	<p>a) Compensation will be through provision of “land for land” of equal productive capacity and in a location satisfactory to the PAP. Land will be cleared, leveled and otherwise prepared for cultivation at the expense of the project.</p> <p>b) Where less than 10% of total productive, income generating assets is lost, the AP has the option to receive cash compensation for the lost portion of land at current market value.</p> <p>c) Provision of land disturbance allowance which is equivalent to 10% of the total compensation amount calculated for affected land.</p>	<ul style="list-style-type: none"> • In lieu of new pumping costs for new land, additional garden land to be provided. • If the household is married, land title will be issued in the names of both the husband and the wife. PAPs will not be charged for taxes registration and land transfer costs. • Income restoration programmes will be provided to PAPs as described in Item 10 below.
3	Permanent Loss of Residential Land and Non-Agricultural/Garden Land	Owner or Occupant	<p>a) If the residential or other non-agricultural land is partially affected and the remaining landholding is sufficient to re-establish houses and structures, PAPs may opt to receive cash compensation for affected portion of land and structures.</p> <p>b) If the residential or other non-agricultural land is partially affected and the remaining landholding is not sufficient to rebuild affected houses and structures, the Project will acquire the entire landholding. As a priority, PAPs will be provided with ‘land-for-land’ in a location (within the village) satisfactory to PAPs. Land will be cleared, leveled at the expense of the project.</p>	<ul style="list-style-type: none"> • If the household is married, land title will be issued in the names of both the husband and the wife. PAPs will not be charged for taxes registration and land transfer costs. • Relocating PAPs will be provided with allowances as stated in Section 9-11 below.

	Types of Impacts	Eligible PAPs	Project Entitlements	ISSUES
			c) Provision of land disturbance allowance which is equivalent to 10% of the total compensation amount calculated for affected land.	
4	Loss of Houses and Structures and Other fixed assets	Owner or Occupant	<p>a) Compensation will be paid for the entire house and structure at full replacement cost for materials, labor and transportation associated with the dismantling of existing house and structure and constructing new ones. Payment will be in the form of cash, materials or a combination of both, without deduction for depreciation or salvageable materials. Relocation shall preferably take place when crops have been harvested and farming and fishing activities are minimal (off peak season).</p> <p>b) For other partially or totally affected structures (e.g., kitchens, toilets, animal sheds, fences, walls, etc.), compensation will be equivalent to a) the replacement value of the affected portion (part or whole) based on current market prices; <u>or</u> b) the costs to relocate the property; <u>or</u> c) the costs of repair of the property to its original or better condition. Compensation will be made in the form of cash, materials or a combination of both, without deduction for depreciation or salvageable materials</p>	a. Relocating PAPs will be provided with allowances as stated in Section 9-11 below.
5	Loss of Trees	Owner with customary usage rights	a) Compensation for fruit trees will be based on the type, age and productivity. If the affected trees are young and have not started bearing fruits, a lump-sum amount to cover for the maintenance and rearing of trees should be made. In case the tree has already started bearing fruits, the annual productive value should be determined from making local enquiries and the compensation equivalent to three years of annual production value.	<ul style="list-style-type: none"> • PAPs will be given two months notice to harvest crops and fruit trees.
6	Loss of Garden and Field Crops	Owner /user of riverbank garden and field crops	<p>a) Compensation for crops will be based on gross harvest income taking into consideration the cost of production and investment. Compensation for standing crops will be compensated at full replacement cost regardless of maturity of crops.</p> <p>b) Garden and Field Crops Livelihood Restoration Program.</p> <p>(i) Extension of irrigation system to new land if there is already an existing irrigation system in the village.</p> <p>(ii) Installation of new water supply to irrigate new land if there is no irrigation system in the village.</p> <p>(iii) In lieu of new pumping costs, additional land will be provided.</p>	

	Types of Impacts	Eligible PAPs	Project Entitlements	ISSUES
7	Loss of Common Property Resources	Community losing resources	<p>a) Repair and restoration to original or better condition of affected community buildings and infrastructure such as schools, water sources, bridges, roads, irrigation etc., at no cost to the community; <u>or</u></p> <p>b) Replacement, if necessary, of community buildings and infrastructure at locations identified in consultation with affected communities and relevant authorities at no cost to the community; <u>or</u></p> <p>c) Cash compensation at full replacement cost for affected community assets, if preferred.</p>	<ul style="list-style-type: none"> • If income loss is expected (e.g. irrigation, community forest, community grazing land), the affected village, or government unit will be entitled to compensation for the total production loss (over three years). This compensation should be used collectively for income restoration measures and/or new infrastructure or provided in kind. • For loss of access across river. The project will provide canoes with simple long tailed motors, provision of pedestrian bridges, natural crossings will be improved by placement of high box culverts • For affected irrigation pump stations. The Project will relocate irrigation pump stations • For loss of water supply sources. The Project will provide open or deep wells to PAPs (see Item 12 below). • For affected communally owned structures. Buildings will be relocated to new sites. For, temples, the Project will undertake riverbank protection works for Temples to avoid relocation of said temples.
8	Loss of Livelihood and Income Earning Opportunities During Physical Relocation of Houses and Structures or Severe loss of Productive (Income Generating) Income	All Relocating PAPs or PAPs severely affected by loss of 10% or more of productive income	<p>a) Food Security during the transition period until PAPs are re-established at new sites (e.g. provision of food or rice supply).</p> <p>b) Materials Transport Allowance for Relocating PAPs. Cash or in-kind assistance in the form of labour and vehicles sufficient to transport household effects, new and salvageable materials to new sites.</p> <p>c) Special Assistance to Vulnerable PAPs. Special assistance will be provided to vulnerable PAPs in accordance to their needs. Such assistance would include but not be limited to labour to dismantle and rebuild structures, provision of the very poor of materials sufficient to build a basic standard house, provision of land with titles to the landless.</p>	

	Types of Impacts	Eligible PAPs	Project Entitlements	ISSUES
9.	Loss of Income From Businesses (e.g. shops)	PAPs with businesses requiring relocation.	<p>a) Compensation for Lost Business. A lump sum payment equivalent to actual loss during the transition period until re-established at comparable location.</p> <p>b) Materials Transport Allowance. Cash or in-kind assistance in the form of labour and vehicles sufficient to transport household effects, new and salvageable materials to new sites.</p> <p>c) Employees will receive cash compensation equivalent to wages for each day that they cannot work during relocation.</p>	To avoid disturbance or loss of income, all shop owners will be given sufficient time to reconstruct /re-establish their shops to new sites before they are required to dismantle their structures and relocate.
10.	Loss of Domestic Water Supply	PAPs who will lose main source of water supply	<p>Provision of new water supply system. (Open wells or deep wells).</p> <ul style="list-style-type: none"> o For villages where total values of these water sources are 75 % or above, reliance of these are thought to be so high that the Project will provide a new water system for the entire village. o For XBF villages where the total value amounts to less than 75 %, provision of the new water system will be made to the corresponding percentage of the population of that village. 	Villagers will be offered open wells or deep wells depending on technical feasibility and community preference. Open wells can be shared by three households while deep wells can be shared by 15 households.
11.	Loss of Fish Catch and Other Aquatic Products	PAPs affected by loss of income/protein from fish catch	<p>Entitled to Fisheries Income Restoration Program:</p> <p>a) Fish for Fish Aquaculture Programs: Options currently under investigation include: integrated fish farming; fish pond culture; and integrated livestock-fish farming;</p> <p>b) Development of Alternative Livestock Production Program.</p> <p>c) Improved Natural Fisheries Management Option in River and Wetlands</p>	<p>The level of income restoration programs required will be identified on a household by household and village by village basis.</p> <p>A TA to Non-Fisheries Income Restoration Program will also be provided</p>
12.	Vulnerability	Vulnerable PAPs	<p>Special Assistance to Vulnerable PAPs</p> <p>Special assistance will be provided to vulnerable PAPs . Such assistance would include but not be limited to protein and rice supplement during the transition period until their conditions have stabilized, assistance with labor to build houses or operate a small business.</p>	

CHAPTER 4

DESCRIPTION OF ENVIRONMENTAL IMPACTS

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4 DESCRIPTION OF ENVIRONMENTAL IMPACTS

4.1 INTRODUCTION

The environmental impacts of the NT2 Project discharges into the Xe Bangfai can be viewed as being either 'primary' or 'secondary' in nature, as follows:

Primary impacts:

- increase of water quantity discharges down the Xe Bangfai, comparatively more in the dry season than the wet seasons (see Sections 4.3 and 4.4), leading to increased river depth, more in the dry season than the wet, and decreasing from Nakai to the confluence with the Mekong river;
- variation in this increased quantity of water from weekday discharges of between 250 to 330 m³/s to low flows on Saturday and Sunday of between 30 to 80 m³/s (see Section 4.4)
- changes, and probable decrease in water quality, especially during the early years during degradation of biomass in the Nakai reservoir (see Section 4.6.3.5)

Secondary impacts:

- erosion and slumping of the river banks (see Section in 4.5)
- impacts on the biology of fish in the mainstream (see Section 4.7)

For description of the livelihood impacts caused by these environmental impacts, refer to Chapter 4.

4.2 CURRENT XE BANGFAI DISCHARGE

The Xe Bangfai has a catchment area of 4,520 km², as measured at Mahaxai, the first major settlement downstream from where the Downstream Channel joins the Xe Bangfai. Based on 13 years of records, annual water flow in the Xe Bangfai averages 8,370 MCM. The mean annual rainfall at Mahaxai is 2,646 mm, and this mean monthly rainfall exhibits a strong seasonal variation, which is shown in Figure 4-1. This strong seasonality is reflected in the mean monthly river flow in the Xe Bangfai, with a mean monthly high at Mahaxai of 921m³/s in the wet season month of August and a mean monthly low of 13 m³/s in the dry season month of April for Mahaxai. A minimum flow of about 3 m³/s was measured in 1993.

Figure 41: Maximum, Mean, and Minimum Rainfall at Mahaxai

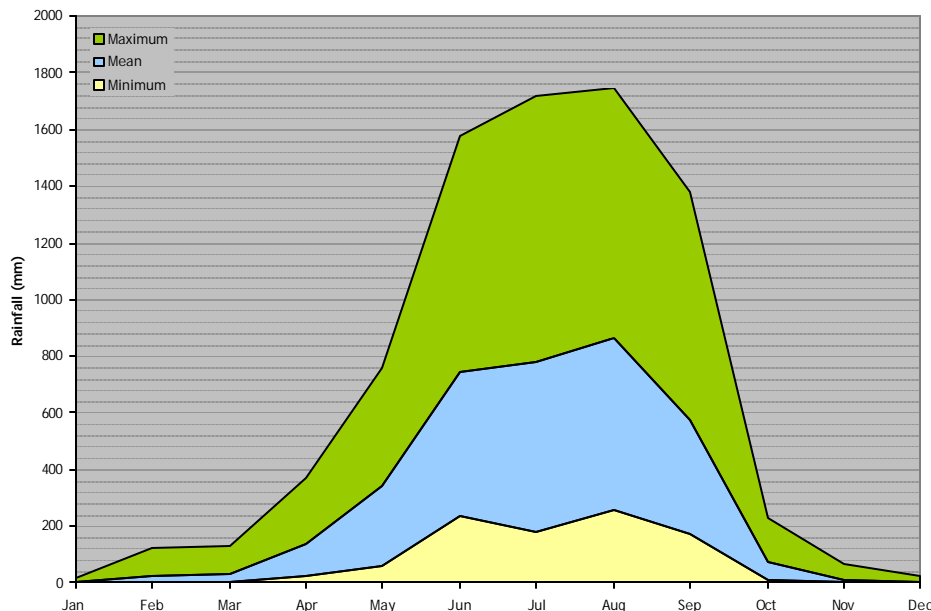


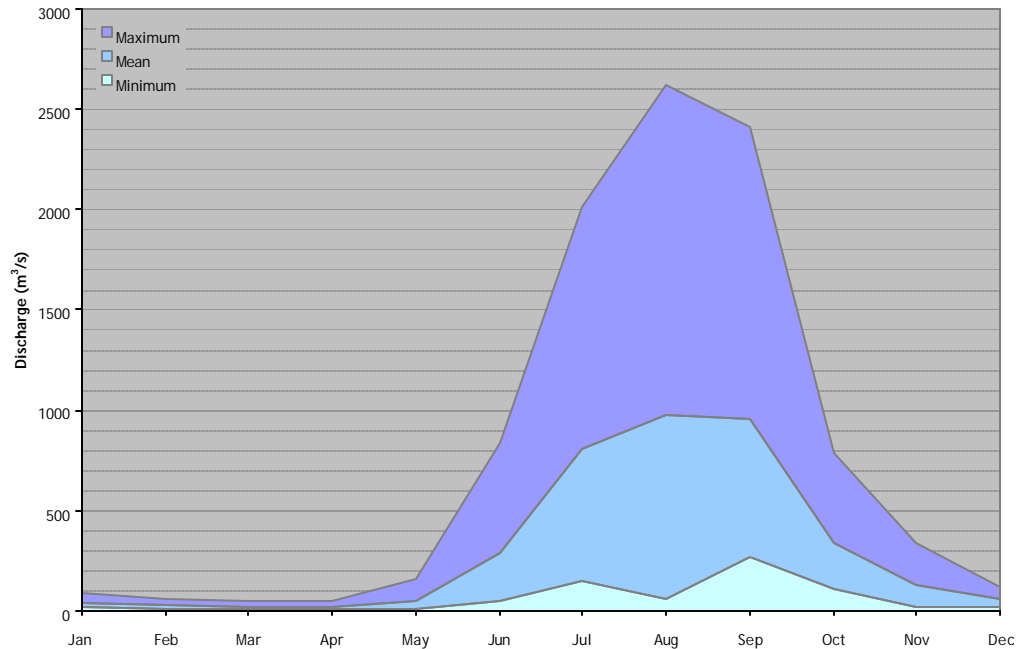
Figure 4-2: Maximum, Mean, and Minimum Discharge in Xe Bangfai at Mahaxai

Figure 4-2 shows clearly the annual, seasonal, and monthly differences in discharge, that determine water depth, water velocity, water level fluctuation, water quality, river bank erosion, and sedimentation. The river appears to have widened in places over the recent past, but essentially has maintained its course within the present channel. Notwithstanding, the high annual and monthly differences in the hydrological conditions of Xe Bangfai determine the livelihood options of the riparian human population and provide a highly dynamic environment for aquatic life with fluctuating abundance of fish populations

Downstream of Mahaxai, the Xe Bangfai flows in a sandy channel until it reaches the Phou Xoy Gorge, where it runs through the Sayphou Xoy Ridge. Further downstream, at the Bridge on Road 13, the Xe Bangfai has a catchment area of 8,560 km². The area downstream of the bridge on Road 13 consists of flat plains, and when the river level exceeds a certain height, whether due to flood in the Xe Bangfai or the backwater effect from high Mekong River flows, flooding occurs. This region is flooded to some extent nearly every year. In the 36 years of discharge monitoring at the bridge on Road 13, the Xe Bangfai in these lower sections has spilled over its bank in 31 years. The flooding can be significant with up to approximately 30,000 to 45,000 ha covered with one to three meters of water. The time, duration, and frequency of flooding depend not only on the hydrological conditions of the Xe Bangfai but on the hydrological conditions of the Mekong River as well. The annual flooding pattern varies greatly. Flooding can result in damage to agricultural crops, but paradoxically the flooding pattern is of major importance for fish productivity in Xe Bangfai River Basin. Figure 4-3 shows the extent of such flooding in September 2000.

Figure 4-3: Wet Season Satellite Photo of the Lower Xe Bangfai, September 2000, Showing Natural Wet Season Flooding.

