

In addition to the stream of direct revenues to the government from the project, and the stream of incremental government expenditures directly related to the project, such as infrastructure expenditures, the macroeconomic analysis will take into account anticipated increases in tax revenues deriving from the project, and additional expenditures on such things as resettlement and long-term environmental protection. The analysis will highlight the extent to which such revenues and costs are covered within the project's budget, and if not they will be included within the estimates of impact over time on the national budget. The anticipated stream of debt-service payments on any government borrowing related to the project will be factored into the macroeconomic analysis of project impact as budgetary expenditures. Debt-service payments also will factor into the balance-of-payments accounting. It is anticipated that in addition to the information to be derived from the first two components of the Study, this task will require quite close co-ordination and exchange of information with responsible GOL authorities, including representatives of the Committee on Planning and Co-operation (CPC) and the Ministry of Finance (MOF).

Task 2: Assess government absorptive capacity. The second task of the macroeconomic analysis will be to assess the capacity of the central government to prioritize and direct net incremental revenues, assuming they are positive and substantial, toward activities designed to enhance sustainable economic development and contribute to poverty alleviation. This will involve a review of the government's Development Program and Public Investment Program, and of the Bank's Public Expenditure Review, as well as an assessment of the government's capacity to absorb and manage additional revenues effectively, including its co-ordination with regional authorities and entities. The Study also will examine the experience of other nations (eg., Indonesia) in handling large increments in export revenue streams. As appropriate, the Study will offer guidance on principles and procedures that could be incorporated into government planning to enhance the contribution of the anticipated increase in revenues to achieving the government's development and poverty alleviation goals.

Close co-ordination with responsible GOL agencies and entities will be essential to completion of this task. Recommendations will be made, as appropriate, concerning the best use of the incremental revenues, institutional strengthening that may be needed to prioritize and utilize the revenues effectively (possibly financed by the use of the incremental revenues themselves), and policy reforms that would help the government to absorb and manage the incremental revenues effectively. One of the key questions is whether the GOL has the institutional capacity in place or planned to implement its undertakings in respect to environmental mitigation and protection, resettlement, and poverty alleviation. One of the aspects to be considered relates to the structure and incentives of the institutions that would carry out GOL undertakings. In particular, the LBII team will assess GOL institutional designs and undertakings in light of known best practices in the



use of economic instruments, including but not limited to fiscal instruments, charge systems, financial instruments, liability systems, property rights, and so on. The objective will be to assess what realistically can be done to increase the GOL's absorptive capacity over the next few years, in light of the experience of other countries.

Task 3: Analyze development implications of revenue stream. The third task under this component will be to analyze a number of aspects of the anticipated revenue stream deriving from the project in terms of development impact. For example, the anticipated long-term stream of incremental revenues could permit the partial funding of recurrent costs of critical investments such as health centers and schools, the initial investments in which could be financed by international institutions. This aspect will be examined, in addition to opportunities for new development projects financed directly from project revenues. The anticipated pattern of net revenues to the government over the life of the project also will be examined, in light of the trade-offs between receiving what may be a large windfall income now versus deferral of such income until it can be readily absorbed. In this respect, the Study will assess whether the expected flow is sufficient to bring substantial net benefits to Lao development efforts in the short-to-medium term. Recommendations will be made as appropriate to mitigate any potential risks that may be identified.

Task 4: Examine impact on external balances. The fourth task of the macroeconomic analysis will be to examine the impact of the project on external balances. The project is designed largely as an enclave, with most of the necessary goods and services imported in kind, producing a rising stream of foreign income to the Lao economy. Nonetheless, the project is bound to produce effects, both in capital flows and in trade flows, and consequently on the balance-of-payments. To the extent permitted by the data, the Study will analyze the likely economic impact of these effects in a consistent framework, and suggest policy changes to mitigate those which are potentially negative, as appropriate. There is also concern that the anticipated increase in net foreign exchange inflows attributable to the project will produce an appreciation of the exchange rate, thereby undermining the competitiveness of Lao exports in such sectors as manufacturing and agriculture — the "Dutch Disease" effect. The likelihood of serious problems arising along these lines, and their possible implications, will be examined carefully, taking into account experiences of other developing countries that have faced comparable situations. Measures that central banking authorities can take to limit (ie., "sterilize") such impacts will be examined in light of realistic financial and exchange rate options in Laos. Close co-ordination with central government authorities, including CPC and MOF, as well as with central banking authorities, will be essential to completion of this task.



In addition, the Study will look at the desirability of establishing a Development Fund, to which the incremental revenues to the GOL would flow. On the one hand, constitution of such a Fund could help smooth the utilization of the resources for poverty alleviation, given near-term absorptive-capacity and institutional constraints to their effective use. And re-investment of power export revenues abroad would certainly help to sterilize the impact of windfall foreign exchange inflows on the Lao economy. On the other hand, given the fungibility of money, and in particular, the ability to borrow against security, such a Fund might offer little, if any, protection.

Task 5: Assess economic strategy. Given its size, and the commitment of resources that it entails, this project represents a large part of the export development strategy of the Lao PDR. To date, it appears that most studies have determined that the major potential for increased exports and sustained growth in the Lao economy over the medium-term derives either from timber exports or hydro-power exports. This project is noteworthy in that it takes full advantage of both resources. The Study will attempt to evaluate whether there are additional possibilities for export growth, or whether sustaining reasonable growth rates will depend largely on using the available natural resources to fund more broadly based growth. To the extent that data are available to do so, the Study will examine the economic alternatives to timber and power development, and derive implications for the opportunity costs to be considered in execution of the Lao development strategy.

(4) Overall Economic Analysis

This component will make an assessment of the contribution of the project to the Lao economy as a whole, taking into account both the micro- and macro-economic analyses. The overall assessment will be developed around a unifying framework, a figure explaining how the Project Evaluation, Microeconomic Analysis, Macroeconomic Analysis and Risk Analysis components relate to each other — as well as how they relate to parallel studies undertaken to inform the GOL and the World Bank about the proposed Nam Theun 2 project

The Overall Analysis component will draw upon findings from the other components of the Study identifying to whom the project's benefits and costs will accrue. One means to do so will be to compare and contrast the results of the Project Evaluation component in respect to estimation of ERRs from the project entity perspective vis-a-vis the Lao economy perspective. In addition, the Study's analysis of the GOL's absorptive and institutional capacity to implement its environmental, social and poverty alleviation undertakings will be highlighted.

Special attention will be given throughout the Study to evaluation of the extent to which the Nam



Theun 2 dam project will contribute to poverty alleviation in Laos. The Overall Economic Analysis will draw together the different strains of this analysis from each of the Economic Study's components and make an overall judgement about the potential for poverty alleviation. The Project Evaluation, for example, will estimate costs and benefits attributable to the Nam Theun 2 dam project and its indirect effects. The extent to which these should contribute to poverty alleviation will be carefully assessed. Equally as important as the estimates themselves, however, will be the sensitivity of the results to small changes in assumptions, such as when they are projected to occur. The importance to the assessment of discounting future values to the present will be highlighted in the discussion of poverty alleviation potential.

Similarly, the Real Sector (or Microeconomic) Analysis will make an assessment of the probable impacts of the project on sustainable development and poverty alleviation in the surrounding region, including through its impacts on relative prices; as well as the longer-term opportunities for regional development and poverty alleviation offered by the project and utilization of net revenues expected to derive directly or indirectly from it. This component also will examine the institutional capacities of the BPKP and provincial authorities, in relation to implementation of environmental and social impact mitigation measures, as well as regional development or poverty alleviation plans.

The Macroeconomic Analysis will project the net revenues accruing to the GOL attributable to the impacts of the Nam Theun 2 project, based on the results derived from the Project Evaluation and Microeconomic Analysis components of the Study. These net revenues may be expected to reduce poverty by speeding up the overall rate of economic growth, and the Macroeconomic Analysis will assess the degree to which economic growth is projected to increase as a result of the project. It is also the case that the level and composition of GOL expenditures may be affected by project implementation in ways that may be considered poverty alleviating. In this respect, the macroeconomic Analysis component will assess the capacity of the central government to prioritize and direct net incremental revenues, assuming they are positive and substantial, toward activities designed to enhance sustainable economic development and contribute to poverty alleviation. For example, the anticipated long-term stream of incremental revenues could permit the partial funding of critical investments such as health centers and schools, the initial investments in which could be financed by international institutions.

Finally, given its size, and the commitment of resources that it entails, the Risk Analysis component will examine the overall economic strategy entailed by the Nam Theun 2 dam project, both in the context of its reliance on using natural resources to fund more broadly-based growth, and the financial risks entailed by the size of the project in relation to the Lao economy. The extent to which the opportunities for economic growth and poverty alleviation deriving from the



Nam Theun 2 project outweigh such risks will be carefully assessed.

(5) Risk Analysis

Under this component the Study will examine the financial exposure risks to the Laotian government arising from the project, including any implications for Laos's future borrowing capacity. Attention will be paid to the structure of the financing package, including envisioned contributions to equity; the allocation of the revenue stream between the NTEC and the Lao government; government guarantees to the private lenders; and the government's financial exposure or responsibility in respect to possible project delays or cost overruns. The nature and anticipated contribution of the requested World Bank guarantee of government undertakings to the NTEC will be highlighted.

Task 1: Identify and assess government risk. The objective of the first task under the Risk Analysis component will be to identify and assess the nature of the financial risks undertaken by the government through its sponsorship of the Nam Theun 2 dam project. This comes in the context of the potential for World Bank to extend partial guarantees relating to Nam Theun 2 against the political risks of government interference on the project, government non-performance of obligations to the project and, possibly, war or civil disturbance. One of the first steps in the analysis will be to determine the nature and scope of the guarantee(s) contemplated by the Bank, in the context of the financing package currently under negotiation and the contractual agreements among the joint-venture team members.

Financial risks to the government can arise from unanticipated additional expenditures or reduced revenues, in any given year or over the life of the project. Unanticipated expenditures might be necessitated by project cost overruns, or from a delay in project completion which requires financing debt payments from export earnings rather than from project revenues. Lower revenues than anticipated might occur, for example, if the quantity and/or price per unit of electricity did not reach projected levels, either because of problems or delays in supply or a reduction in final demand.

Given debt-service obligations that would result from the GOL's borrowing for equity, and the possibility of calls on the partial risk guarantee(s) provided by the Bank, the Risk Analysis will determine what is the actual capacity of Laos to service such obligations. This assessment must begin with a review of the GOL's current borrowing (including levels of debt exposure, annual debt-service payments and contingent liabilities), from either commercial sources or the IMF, the World Bank, ADB or other multilateral or bilateral lenders. One of the questions to be examined



is whether there may be changes that can be recommended in the Nam Theun 2 financing plan that would make the GOL's potential burden more bearable. Although there may be advantages to the envisioned financial structure, for example, the back-loaded nature of the revenues anticipated to accrue to the government would make the construction phase the most vulnerable one in terms of any debt payment obligations that it might undertake. Inability to meet GOL debt obligations will entail derivative costs in terms of higher interest rates or inability to procure needed financing for other projects. On the other hand, the latter ten or twelve years will offer the least risk in the sense that projected revenues should clearly outweigh potential costs. During this phase, the main risk to be considered is that the project will still be facing a single purchaser who may be in a position to change the terms of sale.

Identification and analysis of potential risks to the government of the Lao PDR will require close co-operation with responsible central government authorities, including meetings with the government's legal and financial advisers, and access to relevant information about financial and institutional relationships; as well as meetings with NTEC representatives and financial sponsors, and EGAT representatives. Full access to the basic assumptions and figures, contracts and legal agreements, underlying the proposed investment will be essential.

Task 2: Assess implications of government risks for the economy. The second task will be to assess the implications of the government's financial exposure under this project, in light of the project's size in relation to the Lao economy. For example, the amount of project-related external borrowing could reduce access by the Lao government to loans from bilateral and multilateral official sources as country exposure limits are reached. High debt exposure resulting from the Nam Theun 2 project may also reduce the interest of private foreign banks and investors in other Lao investments, and thus "crowd out" other possible projects, including power projects. Net GOL income from the project that is below projected levels, especially if combined with public expenditures predicated on the inflow of that revenue, could lead to loss of credit worthiness and increased inflationary pressures

Even if GOL debt obligations are met, and Bank guarantees are never invoked, if the project turns out less successfully than anticipated, and the NTEC experiences difficulty servicing its debt obligations, this could have a negative impact on the GOL's future external commercial borrowing capacity. Of course, there is also the corollary that successful completion of this project on terms satisfactory to all parties will enhance the ability of the Lao government significantly to raise investment financing in the future. The Study will present the issues involved for due consideration by central government authorities. To the extent that any of these risks can be hedged or mitigated, the Study will provide guidance as to how this might be done.



B. Public Consultation Program

The purpose of the public consultation program is to strengthen the Economic Impact Study's outcome by incorporating information on the projected costs and benefits of the proposed Nam Theun 2 project, as defined by stakeholder groups, into the Study's analysis, findings and conclusions. The specific objective of the consultation process outlined below is to create an explicit, systematic, and value-neutral process which will allow:

- information on the objectives, activities, and findings of the study team to be successfully communicated to key stakeholders; and
- the observations of key stakeholders regarding project costs and benefits to be communicated effectively to members of the study team.

To accomplish this, the following process will be followed:

Task 1: Identify, segment, and prioritize stakeholder groups. The first task will be to identify key stakeholders of the project as they pertain to the Economic Study. In addition to the NTEC, these would include, for example, affected groups among the Lao population, including families to be resettled, as well as local, regional, national and (potentially) international governmental and public agencies, private industry concerns, academic and research institutes, consumer groups and NGO's. The World Bank is also considered to be a stakeholder in this process.

To accomplish this task, members of the Study team will carry out a series of expert interviews, to identify key organizations, structures, and individuals who are stakeholders in the project. These interviews will occur both in person and by phone, and will be carried out both in Washington before the team's departure as well immediately upon arrival in Laos. The purpose of these interviews is to make as complete an identification as possible of the universe of potential stakeholders who will need to be involved in the consultation process. These interviews will also be used to assess and understand the objectives and concerns of the stakeholder groups; the areas of likely perceived impact of the project on their constituents; and leadership and available contact/entry points for the group

Based on the findings of these interviews, key stakeholders will be identified and prioritized for involvement in the consultation process, and grouped according to likely common concerns and type of outreach needed.

Task 2: Initiate contact and establish dialogue. Using the results of the interviews, team



members will establish contact with the targeted stakeholder groups and initiate a dialogue regarding the planned consultation process. The team will explain the purpose of the planned consultation process and how it will work, and solicit input and suggestions regarding ways to make it more responsive to the needs of the stakeholders. Based on the suggestions received, aspects of the consultation process or the planned schedule may be revised as needed.

Task 3: Disseminate information. In conjunction with steps one and two above, the team will begin to disseminate information about the team's activities and schedule, including specifically the release of the TOR and the Inception Report for the Economic Impact Study. This dissemination process will begin as soon as a significant set of key stakeholder groups and access points are identified, and will continue through the process of making initial contacts (since personal contact may be needed, in selected cases, to transmit the information.) Information dissemination will continue during the course of this process, as additional stakeholder groups are identified.

Task 4: Hold first consultation workshop. A group forum will be held at a Laotian location to be determined, bringing together the members of the Economic Study team and stakeholders or representatives of key stakeholder groups. The purpose of the workshop will be:

- to explain and expand on the information contained in the inception report, and to discuss questions, comments, and potential additions to the team's objectives, planned activities, and schedule;
- to collect input from each stakeholder or key stakeholder group on the project's cost and benefits for their constituents; and
- to communicate the subsequent steps planned for the public consultation process, and to identify additional avenues for ensuring an effective ongoing communications process.

The logistical arrangements for this consultation workshop will be determined after the necessary discussions with the GOL and the Bank. It is understood that the Science, Technology and Engineering Office (STENO) attached to the Prime Minister's cabinet intends to host the proceedings. It is anticipated that this workshop would occur in Week 3 following initiation of the assignment (see Chart I).

Task 5. Maintain communication with stakeholder groups. During the course of the Study team's activities, contact will be maintained with stakeholder groups to ensure that the team remains available for the transmission of stakeholder concerns, and maintains access to additional

