2. ENVIRONMENTAL ASSESSMENT COMMITTEE (EAC)

2.3 2ND EAC REPORT AND STUDY TEAM'S COMMENTS

2ND COMMENTS OF ENVIRONMENTAL ASSESSMENT COMMITTEE AND REVIEW RESULTS OF JICA STUDY TEAM

Nam Ngiep-I Hydroelectric Power Project

As of September 28, 1999

<table>
<tr><th>Name</th><th>No.</th><th>Comments</th><th>Review Results</th></tr>
<tr><td></td><td>1-1</td><td>Since the 1st Committee meeting, progress of the Study Team has been excellent. The Study Team is to be congratulated for its accomplishments to date in defining project dimensions that are relevant for environmental and social impact assessment, in developing environmental and social baseline information, and in consulting affected populations and other stakeholders.</td><td></td></tr>
<tr><td>Mr.Graybill</td><td>1-2</td><td>New information on the reservoir profile and the vertical distribution of population up to EL.400m was presented to the Committee during the meeting. This information is rearranged below:

Concentrations and Gaps in the Vertical Distribution of Population in the Reservoir Area
<table>
<tr><th>Village</th><th>EL.</th><th>Pop.</th><th>pop.</th><th>%-EL.360</th><th>%-EL.380</th><th>Sub</th></tr>
<tr><td>Sopyouk</td><td>245</td><td>408</td><td>408</td><td>9 %</td><td>8%</td><td></td></tr>
<tr><td>Sopphounh</td><td>261</td><td>132</td><td>540</td><td>12 %</td><td>10%</td><td></td></tr>
<tr><td>Namyouk</td><td>271</td><td>540</td><td>1,080</td><td>24 %</td><td>21 %</td><td></td></tr>
<tr><td>Nouaypamon</td><td>275</td><td>127</td><td>1,207</td><td>27 %</td><td>23 %</td><td>1,207</td></tr>
<tr><td colspan="7">No Villages between EL.275m and EL.319m</td></tr>
<tr><td>Pou/Naphang</td><td>319</td><td>416</td><td>1,623</td><td>36 %</td><td>31%</td><td></td></tr>
<tr><td>Phiangta</td><td>323</td><td>322</td><td>1,945</td><td>43 %</td><td>37 %</td><td></td></tr>
<tr><td>Hatsamkhone</td><td>326</td><td>174</td><td>2,119</td><td>47 %</td><td>41 %</td><td></td></tr>
<tr><td>Dong</td><td>327</td><td>509</td><td>2,628</td><td>59 %</td><td>50 %</td><td></td></tr>
<tr><td>Phonyeng</td><td>328</td><td>349</td><td>2,977</td><td>67 %</td><td>57 %</td><td></td></tr>
<tr><td>Naxong</td><td>330</td><td>522</td><td>3,499</td><td>78 %</td><td>67 %</td><td></td></tr>
<tr><td>Naxay</td><td>332</td><td>125</td><td>3,624</td><td>81 %</td><td>70 %</td><td>2,417</td></tr>
<tr><td>Viengthong</td><td>339</td><td>273</td><td>3,897</td><td>87 %</td><td>75 %</td><td></td></tr>
<tr><td>Nahong</td><td>342</td><td>446</td><td>4,343</td><td>97 %</td><td>83 %</td><td></td></tr>
<tr><td>Nakang</td><td>355</td><td>132</td><td>4,475</td><td>100 %</td><td>86 %</td><td>851</td></tr>
<tr><td>Xiangkhong</td><td>362</td><td>247</td><td>4,722</td><td>-</td><td>91 %</td><td></td></tr>
<tr><td>Namlong</td><td>364</td><td>107</td><td>4,829</td><td>-</td><td>93 %</td><td></td></tr>
<tr><td>Phonehom</td><td>368</td><td>375</td><td>5,204</td><td>-</td><td>100 %</td><td>729</td></tr>
<tr><td colspan="7">No Villages between EL.370m and EL.400m</td></tr>
</table>
From this information the Committee observes:
(i) Between elevations of approximately EL.275m and EL.319m, there are no villages.
(ii) The most notable concentration of population in the reservoir area lies within a 10-m zone that extends from EL.323m to EL.332m. This concentration includes 6 villages, 2,001 persons,</td><td>-</td></tr>
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Mr.Graybill		about 45% of the total population below FSL.360m, about 38% of the total population below FSL.400m, and nearly double the population of the lower reservoir area (to FSL.310m). If this zone is extended to 14 m to include EL.319m, then it includes 7 villages, 2,417 persons, about 54% of the total population below FSL.360 m and about 46% of the total population below FSL.400m. (iii) About 81% of the population below FSL.360m is also below EL.332m (the approximate elevation of village B.Naxay). This population is approximately 3,624 persons. (iv) Between EL.335m and EL.360m, there are 3 villages, about 851 people, about 19% of the total population below FSL.360m and about 16% of the total population below FSL.400m. (v) Between EL.360m and EL.370m, there are 3 villages, 729 persons and about 14% of the total population below FSL.400m. (vi) Between EL.370m and EL.400m, there are no villages. On the basis of this information, plus tentative information that the vertical distribution of cultivated land is closely linked with this vertical distribution of population, the Committee offers the following suggestions for optimization of the reservoir FSL: (i) Considerations involving the vertical distribution of population and cultivated land do not appear to provide a strong basis for choosing FSL.300m to be the low-elevation case for cost-benefit analysis (i.e., the case suggested in the work program). A higher FSL, in the vicinity of FSL.315m (i.e., just downstream of the cultivated land and structures associated with village B.Pou/Naphang at EL.319m), may offer grater economic benefits without causing notably greater adverse impacts, and should be given due consideration as the low-elevation case. (ii) For any FSL higher than the village and cultivated land around EL.332m, considerations involving the vertical distribution of population and cultivated land do not appear to provide a strong basis for influencing the choice of the high-elevation case for cost-benefit analysis. (iii) For the interval between approximately EL.319m and EL.332m, several considerations appear to make it very difficult to accurately quantify social and environmental effects associated with any particular FSL. The conditions include low relief, high densities of population and cultivated land, the limited number of points of corrected topographic data (elevations), and the potential importance of cumulative effects of sediment deposition and flood backwater curves on future flooding of population and cultivated land. As a result of these considerations, the Committee advises against choosing any FSL within this interval as a case for cost-benefit analysis, unless the choice is accompanied by further detailed analysis of (a) the elevations of villages and cultivated land and (b) cumulative effects, within this zone of elevations, of flood backwater curves and sediment deposition in the reservoir.	

	1-3	Information concerning the natural environment of the reservoir and other project impact areas, that is available to the Committee in early June 1999, does not appear to provide a strong basis for choosing or avoiding any particular FSLs as cases for cost-benefit analysis.	
Mr.Graybill	1-4	Suitability of resettlement sites has not yet been addressed. To date the demographic, cultural and socioeconomic features of affected villages have been fairly well characterized and three (3) candidate resettlement sites have been identified very tentatively on the basis of a sole criterion – low topographic relief. One of these sites is within an area described as elephant habitat. Another is adjacent to such an area. It is clear that the Study Team understands the current international standards for resettlement, recognizes the sensitivities and complexities of the resettlement process (including pitfalls of simplistic or monolithic approaches), and intends to account for population growth that will occur before project implementation. Also, the Committee realizes that detailed resettlement planning and detailed social acceptance assessment are tasks for a later stage of the project. Nevertheless, the Committee wishes to clarify and emphasize the need for the final report to include a clear demonstration that realistic and concrete possibilities actually exist for accomplishing socially acceptable resettlement, to international standards, of all persons affected (at the time of project implementation) by the case with the recommended FSL, or by the case with the higher FSL, if the recommendation includes options for FSLs. This means: (a) Specific concepts for restoration of income and amenities of the affected population should be described. The concepts should be consistent with available data on demographic, cultural and socio-economic features of the affected population; should be broadly acceptable to potentially affected villages and should be broadly acceptable to concerned government authorities. Examples of land-based concepts include subsistence farming, cash-crop farming, animal husbandry and fishpond aquaculture. Examples of non-land-based concepts include government employment in forest or conservation management, floating net aquaculture in the reservoir, training and permanent employment in construction, manufacturing, retail sales, driving vehicles, driving boats or maintaining the power project and access roads. (b) Specific candidate resettlement sites should be identified. The sites should have features that are suitable for implementation of the aforementioned concepts; that are broadly acceptable to potentially affected villages; that are broadly acceptable to concerned government authorities; and that are available for use as resettlement sites. Examples of suitability parameters include access, drainage, soils, absence of flooding, absence of numerous hosts or intense current use, and size of area (to accommodate all affected persons at the time of project implementation, allowing for population growth).	

		(c) Viability and special needs of villages left behind (i.e., not resettled) should be addressed in the context of the overall scope and cost of resettlement. (d) Special problems involving hosts and neighbors of candidate resettlement sites should be addressed in the context of the overall scope and cost of resettlement. (e) Environmental impacts of resettlement should be addressed, as agreed during the first Committee meeting.	
	1-5	Possible risks to resettlement planning and cost estimating, such as unusual influx of outsiders into the reservoir area, should be addressed, and remedies suggested, in the final report.	
	1-6	The Committee clarified that the cost estimate for each cost-benefit case will include estimates or allowances for all project costs of social and environmental investigations, planning, public participation, mitigation and monitoring (including recommended resettlement, regional development planning and environmental management planning). Resettlement costs will include allowances for population growth until project implementation.	
	1-7	Agricultural inventories have not yet reported data on production or yields of food crops that would be lost through inundation, but the Committee clarified that this information will be forthcoming and will be addressed in the final report.	
Mr.Graybill	1-8	New data on fish consumption were presented to the Committee during the meeting. The Committee clarified that further data will be forthcoming and that project impacts on fish consumption will be addressed in the final report.	
	1-9	Reservoir clearing is not yet prioritized (Comment No.1-9 from the first Committee meeting), but the Committee clarified that priorities for clearing will be described in the final report, to facilitate preparation of a reasonable cost estimate for partial reservoir clearing to support reservoir transportation and fisheries.	
	1-10	The Committee clarified that downstream issues referred to in Comment Nos.1-5 and 5-6 will be addressed in the final report along with the issue of riparian release (and the quality of released water) during impounding. A deregulating pond has been incorporated into the project since the first Committee meeting, but a multi-level intake has been rejected on the basis of high cost of construction.	
	1-11	The Committee agrees with the tentative conclusion of the study team that without a multi-level intake structure, or biomass removal program, water passing though the turbines or a bottom outlet is likely to be deoxygenated and heavily loaded with BOD and H_2S, from decaying soil and vegetation, for at least a couple of years after impounding; and that significant improvement in the quality of discharged water can be expected thereafter. The Committee questions whether BOD input/output modeling, or other water quality modeling of the reservoir, can refine available knowledge of this situation enough to influence the decision on a biomass removal program.	

		The Committee therefor suggests that if this modelling is included in the work program for the next stage, it should be accompanied by an explanation of the extent to which the modelling is expected to refine the knowledge needed for a technically competent decision on a biomass removal program; or for other reasons, such as design decisions on the specifications of structures and components that could be corroded by H_2S derivatives.	
	1-12	Malaria appears to be a public health problem in a number of affected villages. The final report should reveal the species of malaria vectors and parasites that occur in the project region and address risks and mitigation for the construction labor force, project neighbors and resettlers.	
	1-13	The Committee suggests that the tentative proposal for "alternative river basin conservation" should be revisited. Mitigation efforts such as environmental management plans, integrated regional development plans, watershed management and habitat restoration should focus, at least initially, on the basin which contains the project, and particularly on upstream areas where environmental degradation could adversely affect project performance. If there are special circumstances which justify mitigation activities outside of the project basin, especially while the project basin is experiencing degradation, they should be carefully explained.	
	1-14	It would be convenient for readers of the final report, if villages in the reservoir area were always listed in the dame sequence (in order of elevation) in all tables and figures, throughout all volumes of the report.	
Mr.Graybill	1-15	Information on cultural heritage is cursory and appears to be based solely on the village and household surveys. The Committee suggests that the final report should include an initial examination of the risk that the reservoir area may include significant archaeological materials. The examination should be based on a review of literature and secondary data on regional archaeology by a competent archaeologist.	
	1-16	Presentations on reservoir assets are silent on the subject of mineral resources beneath the reservoir area. The Committee suggests that the final report should include an initial examination of the risk that the reservoir area could by underlain by exploitable reserves. The examination should be based on review of literature, available maps and secondary data on regional geology.	
	1-17	Regarding the suitability of resettlement sites, in response to discussions in the final session of the second Committee meeting, the Committee offers the following additional suggestions concerning the presentation of this subject in the final report: (a) To include a detailed enumeration and description of realistic possibilities for employment and income restoration through non-land based activities associated with developments that accompany the construction and operation of the project. Examples are given in 4 (a) above. The report should suggest approximately how many resettlers could be employed through each possibility. (b) To enumerate and describe recognized possibilities for scattered remote resettlement (e.g., joining family members in another town) that were identified through public consultation	

		meetings; to clarify how income would be restored by this approach; and to estimate how many. families could be resettled through each possibility. (c) To enumerate recognized possibilities for land-based resettlement top specific downstream areas that were identified through public meetings; to estimate the number of families interested in these possibilities; and to find and evaluate specific downstream candidate resettlement sites to accommodate these families. (d) To tentatively identify villages with the most promising opportunities for resettlement and income restoration near the reservoir; to describe the opportunities; and to estimate the numbers of families that could be resettled through these opportunities. (e) To enumerate the other families in the reservoir area and add an allowance for population growth; to find and evaluate additional land-based candidate resettlement sites for all of these families, and to confirm that all candidate sites (including those mentioned in (c)) satisfy basic suitability criteria such as are listed in 4 (b) above. To sketch illustrative site layouts (e.g., showing cultivation, grazing, fuelwood, housing and community infrastructure) and preferred house types for various affected groups.	
Mr.Inoue	2-1	Since this investigation is the Environmental Impact Study prior to the Feasibility Study, the geological investigation can not be carried out in detail. However, if geological condition for constructing structure is unsuitable, the environmental study is little meaning. The followings are the comments to the Interim Report by the above background on the geological environmental study for during and after the construction. The evaluation of geological investigation result without boring and adits is very difficult. However, field investigation was carried out in spite of the difficulty of access to the planned dam and surrounding structure. The Interim Report described the adequate results on the important points for the evaluation of construction cost and discussed whether there are fatal geological and/or topographical conditions or not.	
	2-2	The dam height is estimated 10 m higher than the previous report in FSL.360m high water level case. The river deposits are not estimated for designing dam height at this investigation, but, if it is considered, the dam height will be almost 200m. The highest dam by CFRD in operation in the world is less than 200m, but some plans of more than 200m dams by CFRD are underway.	
	2-3	(1) The open cracks were found in the basement rock at the high elevation of the left bank, of which I have pointed at the last meeting. The creeping of the cliff caused the phenomena. The open cracks should be found also at the right bank. This implies that it is not inadequate for construction of dam, but it needs for extra cost estimation by the increase of excavation volume or improvement design to the depth to the downside and inner part of the basement.	

	2-3	(2) Though the uni-axial compressive strength of muddy rocks as a basement of the dam is 2-10 Mpa, the specimens for the test seem to be used weathered rock due to the difficulty of the sampling. The muddy rock is estimated to have stronger bearing power, because surrounding conglomerate and sandstone is consolidated to hard, and the stratum is Cretaceous age. The muddy rock is estimated to have sufficient bearing power for the CFRD dam of 200 m – height class. (3) The dam axis is fixed as one line in this report, the dam axis enables to set up to some alternatives in response to geological and/or topographical condition and this strategy should be reported in the final report.	
Mr.Inoue	2-4	According to the Interim Report, the quarry site is described including far away site from dam, the site should be located inside the reservoir from the environmental and economical points of view. The site of 1 or 2 in the figure 3.6.8 inside the reservoir is recommended to prior of the first selection. The site of 4 or 5 where it is the down stream of the dam site will give an environmental load, because large amount of rock volume will be moved. The site of 7 or 8 with suitable rocks as the shell materials are found far away from the dam. However, it is not realistic, because it is far from the dam site and new road should be constructed in order to select as a quarry site.	
	2-5	The sedimentation study is carried out referring to the Nam Theun-2 planed and Nam Ngum-1 results. It depends on the elevation of the high water level. However, it is estimated suitable, in this investigation level.	-
	2-6	It is possible to construct the main dam, re-regulation dam and surrounding structure technically even in the alternative plans of among 320 m and 360 m water level. If the water level is more than 360 m, the elevation of the ridge of the end of Nom-Sau river will be deeply affected to the project including the accuracy of the elevation of the topographic map.	
	3-1	General On myself opinion for the resettlement of people, we should be concerning for the ethnic people into 2 important issues in the implementation policy.	
	3-2	The spirit factor - An Education campaign to public awareness should be considered. - A Comprehensive of the specific aspect and the psychology of ethnic people should be considered. -	
Ms.Tongsy	3-3	The material factor - The impact compensation - The new location should be better than the previous site and the weather condition should be considered to. - Improved necessary infrastructure benefit and service facilities for their sustainable livelihood. - Arrange a new job opportunity for them and others.	

Mr. Venevongphet	4-1	General speaking, I agree with this draft document because it provides adequate information and it also can be used as the basic information for applying in the future study. However, I find that this study should provide more detailed in the following issues:	
	4-2	The study on wildlife and habitat should indicate the relationship between the numbers of wild animals and their habitats so as we can understand which habitats or forest types are needed to conserve.	
	4-3	The study is not mentioned which wildlife species are the most affected in the project area and what mitigated measures should be applied.	
	4-4	In the report on Environmental Assessment, page 5-8, table 5.3 said that the tiger and the python are classified as the conservation species (2) but in fact these species are classified as the protected species (1). The pangolins is classified as the conservation species (2).	
	4-5	The study on aquatic species is not also indicated which species are endangered or endemic and what mitigated measures should be applied to make sure they can survive.	
	4-6	The study on the ethnic group, it unveils only the main groups. Are there the subgroups in the project area. If so, which subgroups are the most affected when the resettlement take place and what measures should be applied to make sure their cultures be conserved.	
	4-7	In the resettlement context is also not yet clearly explained about where people exactly prefer to live in and if they prefer to live in the project area where are the most suitable sites for them and what kinds of occupations are the most relevant to them.	
	4-8	In the case of removal of biomass from the basin, the study should explain how long does it take to remove all biomass from the basin and what mares should be applied to make sure people will not cut trees beyond the reservoir.	
	4-9	The study doesn't clearly tell the positive and negative impacts before and after dam construction particularly in the reservoir, upstream and down stream and if there are the negative impacts. What are the mitigated measures should be implemented.	
	4-10	The study is not yet clearly shown what project scale is the most suitable in term of economy and environmental protection.	
	4-11	The study raises several risks of the project but I think the electric sale to only one market (Thailand) is also the major risk. Regarding this matter, how to negotiate with Thailand to the reasonable price because in the past Thailand needed to by electricity at a very low cost.	
Mr.Songhoa	5-1	On behalf of myself as the rural developer, I am agreed for this development project. After listening to the presentation report from study team on the investigation collected data and analyzed the project situation, I have impression that the data collected is satisfactory as the condition of survey can provide. The impacts for the project are in many domain., personally, I will be comment on the issues concerning to the impact people in the reservoir area. There are concerning about their spirit and their material factor. For the material factor, the study team already sufficient reported in detail in their presentation. But, for the spirit of the people, we must take time for implementation on each stage and process. That means the psychology of the people should be considered such as:	

Mr.Songhoa	5-2	The condition of livelihood, social and ethnicity consideration, family relationship, and the weather condition is very important for the resettlement. Therefore, the new location for the resettlement should be near condition as the previous location.	
	5-3	The resettlement is not considered only for the ethnic people who had their own house flooding in the reservoir area. Other relationship of their families and their neighborhood should be considered to. Because, after the resettlement, the condition of livelihood are favorable. This people will be moved and concentrated in the same location.	
	5-4	Some people received from their parents and heritage of cultivation land. So, this people are living outside the inundated area. Due to the resettlement, these people must moved follow to, because their cultivation land are inundated. Therefore, if the resettlement is not soundness study, we will have a problem in further.	
	5-5	One of the important priority for the people in the new location is provide an electricity supply should be considered.	
	5-6	Other important point on the resettlement, additional to the agreed of the local authority, the recommendation from the National Front and the Elders of the village is very important. Because, their recommendation can considered as the unity of the village.	
Mr.Adachi	6-1	The Study Team has been proceeding the hydropower planning and the economic evaluation under the preliminary assumption of hydrology and other technical information. It is expected that the final assessment in the stage would be obtained by the end of November 1999, with enough accuracy to judge the continuation of the study into the feasibility study in cooperation with other environmental factors. To achieve the target, a monetary amount of the incremental net benefit is substantial between several scales of the project. The interim report involves the preliminary observation on economic analysis, presenting the capitalized incremental net benefit of US$ 75 million, approximately, between FSLs.320m and 360m.	
	6-2	The Study Team has proposed the daily peaking of 16 hours for the decision of the installed capacity. The 16-hour proposal might be based on the present daily demand in Thailand system and on the experience of negotiation process in other projects. It is observed that the 16-hour-peak is composed of combination between the day-peak and the evening-peak, and that the situation of the 16-hour-peak may be on the transition in the course of the economic growth. It is very sure that the 8-hour-day peak would be emerging after several years, if the economic recovery would be as expected. In this regard, it is advised that the final installed capacity should be based on the 8-hour-day peak, and that the installed capacity at the first stage could be based on the 16-hour peak. The economic evaluation in the final report would be expected based on the two-stage development.	

Mr. Adachhi	6-3	The accuracy of inflow data is substantial for the decision of the study continuation. However, it is recognized that the hydrological analysis is complex, and that the conclusion should be waited until the next report. It is not clarified yet whether or not the back-water-effect from the Mekong mainstream is affecting to the existing Muang Mai water level gauging station. Further, it is reported that the basin rainfall estimation of 2,900 mm, may be optimistic, if the Nam Theun 2 study is referred to. The Study Team explained the difficulty to break through the estimation obtained in the Nam Theun 2 case, because of information shortage for the hydrology in the Nam Ngiep basin. It is advised that the actual measurement results at the new gauging stations could be compared with the Nam Theun river flow data, after one-year measurement, to make decision whether the Nam Theun study results could be applied or not.	
	6-4	The Study Team has proposed to construct the re-regulating pond at the downstream of the powerhouse site. It may be proper solution from the view-point of the downstream river environment. The idea is supported, also, by the reason that the reliability of kW provision to the system is essential. It is observed that the project may not be viable without evaluating the kW value, and that the re-regulating pond is substantial to secure the reliability of kW provision to the system. It is recommended to scrutinize whether or not the pond capacity is enough to re-regulate the peak discharge of the final stage for 8-hour-peak operation.	
	6-5	The layout of the project is agreed including the dam type of a concrete-faced rock-fill dam (CFRD). However, the CFRD type of dam is sensitive for rock condition of dam foundation and dam material for embankment. It is recommended that the rock foundation and dam material should be discussed in the final report to clarify the CFRD type is proper solution in the project. It should be also discussed that the CFRD could be applied for the designated height of more than 150 m referring to actual results in the world.	
	6-6	General observation says that the cost for environmental mitigation measures including resettlement may be short. More discussion is expected in the final report. It is advised that comprehensive measures should be discussed on, not only actual compensation but contribution to economic development and environmental enhancement of the basin. Several opinions to be presented in the public hearing may contribute to plans of the comprehensive measures. The comprehensive measures may involve the establishment of road network in relevant provinces, of water supply and sewage systems in the downstream villages, and so on. The project should not only compensate the people's loss but also contribute to the relevant rural development.	

2. ENVIRONMENTAL ASSESSMENT COMMITTEE (EAC)

2.4 3RD EAC REPORT AND STUDY TEEAM'S COMMENTS

3RD COMMENTS OF ENVIRONMENTAL ASSESSMENT COMMITTEE
AND
REVIEW RESULTS OF JICA STUDY TEAM

Name	No.	Comments	Review Results
Mr. Graybill	1-1	The JICA study team is to be congratulated for its progress on most environmental and resettlement aspects of the study, since Committee Meeting No.2. Especially notable are its continuing public consultation efforts, which included the addition of a gender consultant; its thorough documentation of these efforts; its attention and responsiveness to public comments; and the overall high quality of its draft reports and presentations to the Committee.	
	1-2	The November 1999 drafts of the environmental and resettlement reports are technically very substantial; are responsive to earlier comments of the Committee; give due consideration to applicable standards and guidelines (including those of multilateral donors such as ABD and World Bank); are appropriate and adequate, for this first stage of the feasibility study, in their coverage of issues, impacts, mitigating measures and proposals for future work; and are on track to satisfy rigorous international standards and guidelines as the project unfolds. The draft reports show the EIA (environmental impact assessment) and SIA (social impact assessment) being finalized during the feasibility stage. However, these documents acnnot be finalized until the project dimensions and operating rules are finalized during the detailed design stage. Therefore, it would be better to refer to EIAs and SIAs for various stages in the same way that the design is referred to for various stages, e.g., "Feasibility Stage EIA", "Final (design-stage) EIA", etc. and to include some time for updating the EIA and SIA during the detailed design stge. Existing descriptions of environmental and resettlement acivities, schedules and costs have been prepared on the assumption that the second stage feasibility study would address only one FSL case. If the decision is confirmed to continue to study more than one FSL case during the second stage feasibility study, then some of the existing descriptions of environmental and resettlement activities, schedules and costs will need to be revised, either to address both cases, or to be postponed until a single project description becomes available. The environmental discussion of initial reservoir filling should include reference to the engineering limitations on speed of filling that are addressed by the Geologist in another part of the report for this EAC Meeting No.3. Other corrections and clarifications of the draft reports were discussed with the respective authors. Some suggestions were made for reorganizing the early sections of the resettlement report; and for more explicit linkage of cost estimates with discussions and schedules of activities, to confirm that all resettlement activity components that are described and scheduled are also included in the cost estimate.	-
	1-3	Information concerning the natural environment of the reservoir and other project impact areas, that is available to the Committee in December 1999, does not appear to provide a strong basis for choosing or avoiding FSL case 320 m or 360 m.	

Mr. Graybill	1-4	Regarding the decision to adopt El. 320 m as the FSL for one of the two cases studied in detail, the Committee refers back to its June 1999 recommendation concerning the relationship between reservoir FSL, the vertical distribution of cultivated land villages, and the cumulative effects of backwater curves and sediment deposition between elevation 319 m and 332 m. In response to the absence of new information on these topics, the Committee reiterates this recommendation and suggests that until detailed studies of the comulative effects of backwater curves and sediment deposition prove otherwise, El. 320 should be considered to be a reservoir flood water level, rather than an FSL. Economic and financial conclusions about the El 320 m case should be interpreted conservatively in this direction. Approaches that would increase the seriousness or frequency of flooding events in the Thaviang area should be avoided, as they would be inconsistent with the commendable environmental principles of the project. Studies of water discharge and sediment load should emphasize event-based sampling for high flow events in the vicinity of El. 320, to facilitate rapid development of a data base for high flow conditions (i.e., simultaneous measurements of water and sediment discharges); and should assume, until local measurements prove otherwise, that local sediment deposition (including bed load) could be a problem for the Thaviang area, even if basinwide sediment transport is very low and reservoir lifetime is predicted to be very long.	
	1-5	Three risks that could significantly affect project costs, schedules, land availability or public acceptance in some areas, are raised, but not put to rest in the draft reports: unexploded ordnance (UXO); banditry and other security risks; and agent orange residues. Provisions for UXO reconnaissance are included among EIA tasks and cost estimates but are not shown as line items. UXO maps were shown in the oral presentations, but are not included in the reports. Unit costs for UXO reconnaissance, planning and clearance were cited during discussions with the Study Team. UXO risks appear to be most notable for the candidate resettlement sites located north of the reservoir and possibly for parts of the upper reservoir area. Security risks occur broadly throughout parts of the catchment area and candidate resettlement sites. Little is known of the possibility of agent orange residues, except that the chemical was used in the region during the Vietnam war. In response to this situation, (a) candidate resettlement sites should be screened for the likelihood of UXO (using maps already in hand), and the findings (including cost of clearance or decisions to avoid certain candidate sites) reported in the final reports of the Phase I study; and (b) provisions (i.e., scope, schedule and cost) for evaluating and determining a final disposition of all three risks, probably during Phase II feasibility studies, should be explicitly described and cost estimated in the final reports of the Phase I study.	
	1-6	Cost estimates presented in the main report, for environmental mitigation and resettlement, seem not to match the corresponding figures in the resettlement report and the EIA report. The computations and presentations of environmental and resettlement costs should therefore be reviewed and amended as necessary to insure internal consistency and tractability through all three reports. It may be useful to	

		arrange all such costs in a matrix with project stage (e.g., second stage feasibility study, detailed design, construction, impounding and operation) and responsibility (engineered structures, social/resettlement activities and other environmental activities) as the axes.	
	1-7	Sixteen candidated resettlement sites were identified but information on the sites is cursory, and less than expected, due mainly to difficulties of access. The sites may be sufficient for accommodating project resettles but their adequacy has not yet been confirmed and the environmental impacts of resettlement have not yet been addressed. Therefore the suitability and adequacy of candidate resettlement sites, and the environmental impacts of resettlement, require urgent attention for the second stage of the feasibility study.	
Mr. Graybill	1-8	Planning of environmental mitigation measures (i.e., development of specifications and measures to insure implementation) would be facilitated by a brief description, in the main report, of the expected procurement process and documents for project implementation.	
	1-9	Future water quality monitoring efforts should begin with a review of quality control and quality assurance procedures throught the sampling, transport, laboratory testing and reporting process, to insure that resulting data are highly reliable. The review should include inspections and audits of laboratory facilities and procedures; and performance testing and inter-laboratory comparisions (round robins) involving reference standards, blanks and spiked samples. Water quality monitoring should not proceed until reliability of data has been demonstrated to be high.	
	1-10	The site visits and other activities of the gender consultant should be described in the "Records during Field Investigations".	
Mr. Inoue	2-1	The draft final report describes about the study from the comprehensive view-points in order to evaluate the effect on the construction and operation of the Nam Ngniep-1 power plant from the environmental points. Especially, the tasks, for engineering geologic stand-point, is included in this report, very shortly, such as sedimentation at the end of the reservoir, construction effects of the dam and road, etc. They are the location of quarry sites and the re-regulation dams etc. which have been discussed at the 1-st and 2-nd Environmental Assessment Committee. Small amount on above topics is reasonable because this survey is the early stage of the investigation, which is aiming to the environmental assessment.	
	2-2	The height of dam The flood level is proposed at El. 320 m from the multi environmental points by the study team. Higher dam than the proposed one will be able to construct from the technical and economical viewpoint. However, the El. 320 m reservoir is born from the 156 m height dam, which is still classified into high-class dam. So, in order to design the dam even preliminarily, careful geological investigation is desirable. The philosophy of brief geological investigation procedures is described shortly as follows. i) Geomorphologic and economical suitable dam axis should be selected by making large-scale topographic. ii) Geologically suitable dam axis should be selected by the careful surface geological mapping.	

Mr. Inoue		iii) Boring excavation procedure will be performed after the careful selection of dam axis, as mentioned above. Geophysical exploration is also desirable with the boring. However if previous results are close to the new axis, it could be utilized as a reference. iv) The most important engineering geological points at this dam site are as follows: a) The permeability tests, especially at the both wing of dam must be carefully performed in order to investigate whether there are big open joints or not. b) Weathering extent and underground water level at the both wings of dam must be also investigated in order to decide the excavation line. c) Careful boring core investigation is enable to check whether limestone is distributed underneath dam or not. d) The thickness of talus deposits at the both riversides and the depth of grabel sediment at the riverbed must be checked. v) If large open cracks are found deep in the basement of dam by boring geological investigation, the excavating adits is desirable even at the early stge of investigation. vi) Location of borings should be planned not only below the flood water level, but higher level than that, because water table, weathering extent etc. should be estimated in order to design the slope.	
	2-3	Quarry site It is very important point to locate quarry in the reservoir in order to minimize the environmental affects with the big construction works. This report describes that quarry site is planned in the reservoir and near the dam site. The quality and volume of rocks for dam materials should be investigated by boring excavations in the early stage. In spite of quarry is located in the reservoir, the artificial slope will be appear upward high water level. The stability of the slope and plantation will be important design for the conservation of the environment.	
	2-4	Sedimentation estimation It is reasonable to estimate the sedimentation at the end of the NNP1 reservoir by the experience of the NG1 reservoir and the estimation at the NT2 in this early stage of investigation.	
	2-5	Re-regulation dam Re-regulation dam is planned at the wide river area, down-stream of the main dam. The important engineering geological points here are the depth of the river bed deposits. Hence, combined geological investigation of the seismic exploration and boring investigation are effective to this site.	
	2-6	Stability of slope during the operation of generation The landslide including avalanche is a very few before the construction. However, the amount of up-and-down of water during generation is 36 m in the 320 m case, so unvegetated area will expose very	
	2-7	Difference of the construction term between 320 m and 360 m case is not discussed in the report. If 320 m case is adapted, more than one year is saved. This is one of the large merit for 320 m case.	

Mr. Inoue	2-8	The pouring water speed in the reservoir should be decided by not only from hydrological point but also watching the behavior of dam, because CFRD dam is considered to be very sensitive to the load of water. It should be referred to the standard.	
Ms. Tongsy	3-1	After listening to the presentation of the Nam Ngiep 1 Study Team on the 3rd meeting of the Environmental Assessment Committee for the Environmental Impact Study on Nam Ngiep 1 Hydroelectric Power Project in Lao PDR. I have the following comments.	
	3-2	Firstly, I'd like to congratulate the Study Team on the success of each stage of the study's progress. The Study Team has shown two alternatives for the Environmental Impact Study. 1/. FSL 360m and 2/. FSL 320m. At the 2nd workshop in Pakxan, on 9-11 June 1999, both alternatives were confirmed to be the most appropriate for further environmental study.	
	3-3	On behalf of the member of the Environmental Assessment Committee, I have some comments on the resettlement plan, as follows: 1/ Try to explain more to the local people for them to understand the purpose of the project so that they can accept the project. 2/ Compensation policy to the effected people should be implemented properly and fairly, and the people are able to have opportunity to improve their standard of living. 3/ Vocational training for local people must be arranged according to the Government Policy on the reduction of shifting cultivation. 4/ Resettlement area should be located where the projected rural electrification will be. 5/ Representatives of concerned agencies should be involved in every implementation process of the project. These agencies including Lao Front for National Construction, Youth Organizations and the representatives of the effected people.	
Mr. Venevongphet	4-1	After two days hearing the report from the study team. First of all, I would like to appreciate the study team for its hard work in preparing the study report.	
	4-2	It was observed that the presentation made by the team has answered the major questions given by people concerned in the last meeting.	
	4-3	However, there are something remained to be done in the main study for example: • We understand that EL 320m is good only for environmental protection, but it is not economical. Therefore, it was proposed that the study team should study again in term of economical viability. • The Study Team has developed the environmental management plan, but I think in the next study it should also develop a detailed rules and procedures in specific areas for the environment protection. • The resettlement action plan should be incorporated with provincial and regional development plan. The compensation must be fair and life in the resettlement areas must be better off.	

Mr. Venevongphet	4-4	The study team should find out exactly which parts of the project area were affected by the unexploded ordnance, including in the proposed construction and in the resettlement sites. This is to avoid the problem may happen during the resettlement and the project cost's estimation as well.	
Mr. Songhoa	5-1	After listening to the 2 day presentation of Nam Ngiep 1 Study Team, I have a very good impression. I congratulate the JICA Study Team and Department of Electricity for the successful preparation of the 3rd Environmental Assessment Committee Meeting on the Environmental Impact Study on Nam Ngiep 1 Hydroelectric Power Project in Lao PDR.	
	5-2	The 2nd General Workshop in Pakxan in June 1999, the FSL 320 alternative was exceptable by the villagers. Although there are some difficulties with resettling people from the reservoir area, I believe that when the project is approved for construction, the resettlement can be done properly.	
	5-3	On behalf of the member of the Environmental Assessment Committee, I have some comments as follows: 1/ Local people, villagers, representatives from Lao Front for National Construction, Youth Organization and Lao Women's Union should have opportunity to involve in all resettlement processes; 2/ The resettlement plan should focus on improving the standard of living of the local people; 3/ The compensation plan should clear, fair and reasonable; and 4/ The resettlement plan should consider not only the technical aspects of moving they should also consider the local religion of each group of people to be resettled.	
Mr. Adachi	6-1	The comparison between the 360 and 320 alternatives have been intensively discussed in the meeting. It has been recognized that the 320 alternative would be unable to be economically viable, as far as the present basis of the power purchase agreement between GOL and EGAT is referred to. I myself very confidence, it is possible that the 320 alternative would be viable very near future, even if the Thavian rejects to be submerged, but not now. Therefore, for the time-being, I recommend to continue also to pursue the economics of the alternative 360 in corporation with the investigation for further step, maintaining two alternatives of the 360 and 320. The significant factors may be inflow data and peaking hours.	
	6-2	The Study Team has proposed the daily peaking of 15 hours for the decision of the installed capacity. The 15-hour proposal might be based on the present daily demand in Thailand system and on the experience of negotiation process in other projects. It is observed that the 15-hour-peak is composed of combination between the day-peak and the evening-peak, and that the situation of the 15-hour-peak may be on the transition in the course of the economic growth. It is very sure that the 8-hour-day peak would be emerging after several years, if the economic recovery would be as expected.	

Mr. Adachi	6-3	The accuracy of inflow data is substantial. However, it is recognized that the hydrological analysis is complex, and that the conclusion should be waited until the next stage. It has been clarified in this stage the back-water-effect from the Mekong mainstream is not affecting to the existing Muang Mai water level gauging station. If so, the records at the Munag Mai gauging station should be reviewed in corporation with the actual measurement results at the new gauging stations after one-year measurement complete. It is advised that the review should be made in the eraly stage of the next step.	
	6-4	The Study Team has proposed to construct the re-regulating poind at the downstream of the powerhouse site. It may be proper solution from the view-point of the downstream river environment. The idea is supported, also, by the reason that the reliability of KW provision to the system is essential. It is observed that the project may not be viable without evaluating the KW value, and that the re-regulating pond is substantial to secure the reliability of KW provision to the system. It is recommended also to scrutinize the capacity of re-regulating pond to respond to the peak discharge of the final stage for 8-hour-peak operation.	
	6-5	The layout of the project is agreed including the dam type of a concrete-faced rock-fill dam (CFRD). However, the CFRD type of dam is sensitive for rock condition of dam foundation and dam material for embankment. It is recommended that the rock foundation and dam material should be discussed in the next step to clarify the CFRD type is proper solution in the project. It should be also discussed to overcome the high CFRD could be applied for the designated height of more than 150 m referring to actual results in the world.	
	6-6	The 320 alternative may be very sensitive at the end of the reservoir in terms of back-water effect to the cultivated areas for the compensation. In the next step, micro adjustment of FSL is essential on the basis of more accurate and comprehensive topographic data, and the careful computation of the back-water effect.	

3. GENERAL WORKSHOP

3.1 1ST GENERAL WORKSHOP

3.1.1 PROGRAM AND ATTENDANCE LIST

The Nam Ngiep-I Hydroelectric Power Project

ACTUAL PROGRAM
ON
GENERAL WORKSHOP FOR INCEPTION REPORT

First Day (November 26, Thursday, 1998)			
No.	Time	Program	Presented By
1.	8:30 - 9:25	Registration	HPO/MIH staff
2.	9:25 - 9:30	Time schedule of Workshop, Introduction of : ① Chairmen, ②E/A Committee & JICA member, ③ JICA Study Team	Facilitators
3.	9:30 - 9:40	Opening Speech	Vice-Minister of MIH
4.	9:40 - 9:50	General description of Power Policy in Lao PDR	HPO (Mr.Somboune)
5.	9:50 - 10:00	JICA's Policy for the Project	JICA (Mr.Nagata)
6.	10:00 - 10:30	Morning Coffee Break	Coffee service
7.	10:30 - 11:10	General Presentation of : ①Project general description, ②General description of Study, ③Basic approach of Study	JICA S/Team (Mr.Araki)
8.	11:10 - 11:30	Presentation of Hydropower plan on ①Pre-F/S scheme and ②Alternative study results	JICA S/Team (Mr.Ikeda)
9.	11:30 - 13:30	Lunch Break	Lunch service
10.	13:30 - 14:10	Presentation of Natural environmental aspects on ① IEE results and ②Execution plan for EIA	JICA S/Team (Dr.Yon)
11.	14:00 - 14:40	Presentation of Social environmental aspects on ①IEE results and ②Execution plan for EIA	JICA S/Team (Dr.Ragsdale)
12.	14:40 - 14:50	General Comments of by Environmental Assessment Committee (EAC)	Facilitator of EAC (Mr.Adachi)
13.	14:50 - 15:30	Afternoon Coffee Break	Coffee service
14.	15:30 - 16:30	General Discussion / Distribution of Suggestion Sheets	Facilitators

Second Day (November 27, Friday, 1998)			
No.	Time	Program	Presented By
1.	8:30 - 9:30	Registration & Receipt of Suggestions Sheets	HPO/MIH staff
2.	9:30 - 9:40	Proposal on Discussion Items of Sub-sections	JICA S/Team
3.	9:40 - 9:50	Establishment of Discussion Items of Sub-sections	Facilitators
4.	9:50 - 10:30	Morning Coffee Break	Coffee service
5.	10:30 - 12:00	Detailed Discussion on each Items (I)	Facilitators
6.	12:00 - 13:30	Lunch Break	Lunch service
7.	13:30 - 15:00	Detailed Discussion on each Items (II)	Facilitators
8.	15:00 - 15:30	Afternoon Coffee Break	Coffee service
9.	15:30 - 16:00	General Answers to Suggestions & Comments	HPO, JICA S/Team
10.	16:00 - 16:10	Schedule of Next Workshop	HPO (Mr.Somboune)
11.	16:10 - 16:20	Closing Speech	Vice-Minister of MIH
12.	16:20 - 16:50	Break Time	-
13.	16:50 - 17:00	Press Conference	JICA, HPO
14.	17:00 - 18:30	Internal Meeting	EAC, JICA, HPO, S/Team
15.	18:30 - 19:00	Break Time	-
16.	19:00 - 20:30	Dinner Reception of Workshop for Inception Report	All participants

Nam Ngiep-I Hydroelectric Power Project
ATTENDANCE LIST (1/3)
GENERAL WORKSHOP FOR INCEPTION REPORT
In Vientiane, Lao PDR, On November 26 - 27, 1998

I. Chairman

No.	Name	Position	Organization	26th	27th
1.	Mr. Khammone Phonekeo	Vice Minister	Ministry of Industry & Handicraft	O	O
2.	Mr. Done Somvorachith	Director	Ministry of Foreign Affairs	O	O
3.	Mr. Soukata Vichith	Director	STENO	O	O
4.	Mr. Douangmisay Likaya	Deputy Director	Ministry of Inform. & Culture	O	O
5.	Mr. Hayao Adachi	Specialist	JICA/Tokyo	O	O
6.	Mr. Kuniaki Nagata	Director	JICA/Tokyo	O	O

II. Government

No.	Name	Position	Organization	26th	27th
1.	Mr. khamphai	-	Ministry of Inform. & Culture	O	O
2.	Dr. Vilayvone	Engineer	Ministry of Public Health	O	O
3.	Mr. Phetduangchan Ekbanlung	Head of Division	Ministry of Labor & Social	O	O
4.	Mr. Soukthavi Koela	Chief of Division	Ministry of Foreign Affair	O	-
5.	Mr. Onchane Chanthongdi	Engineer	Ministry of Defense	O	O
6.	Mr	Engineer	Ministry of Justice	O	O
7.	Mr. Chanthaviphone Inthavong	Engineer	Ministry of Agriculture & Forest	O	-
8.	Mr. Khamsing Ngonvorarath	Adviser	MIH	O	-
9.	Mr. Sisomphet Simuong	Deputy Director	MIH	O	O
10.	Mr. Somboun Manolom	Deputy Director	MIH	O	O
11.	Mr. Khamsaone	Head of Division	MIH	O	O
12.	Mr. Humphone Boliyaphol	Director	MIH	O	-
13.	Mr. Thavone Vongphosi	Officer	STENO	O	O
14.	Mr. Phouvong Onsisaleurm	Engineer	STENO	O	O
15.	Mr. Chansanouk Kounavong	Engineer	STENO	O	O
16.	Mr. Aughmilner	-	STENO	O	-
17.	Mr. Bounthong Xaysida	Deputy Director	Department of Forestry	O	O
18.	Mr. Hoy Phomvisouk	Resettlement Committee	Nam Theun 2 Project Office	O	-
19.	Mr. Khampheng	Labour Protection Division	Lao Trade Union	O	O
20.	Mr. Soulasak Sayavong	Teacher	Youth Union	O	O
21.	Mr. Khamtanh	Deputy Director	Livestock & Fish	O	O
22.	Mr. Pheng Lasoukhan	Director	National Front	O	O
23.	Mr. Khamsene Mousngmani	-	National Assambly	O	-
24.	Mr. Manomai Vilayhong	Director	Depart. of Geology & Mining	O	-
25.	Mr. Eravanh Bounghaphalom	Deputy Director of Division	Depart. of Geology & Mining	O	-
26.	Mr. Souphith Darachanthara	Engineer	Commit for Planning Cooperation	O	O
27.	Mr. Soulasith Oupralavane	Deputy Director	Commit for Investment & Coope.	O	-
28.	Mr. Thongphet Duangngeung	Chief of Environment	EDL	O	-
29.	Mr. Bounsalong Soutidala	Deputy Chief of Division	EDL	O	O
30.	Mr. H. Koyabu	Specialist, JICA	EDL	O	O
31.	Mr. Phimphone	Chief of Division	PMO	O	-
32.	MR. Bounmi Sousavath	Engineer	MCTPC	O	O
33.	Dr. Ed Wronski	Adviser	HPO	O	O
34.	Mr. H. Murashige	Adviser/JICA	HPO	O	O
35.	Mr. Tony Drscoll	Adviser	HPO	O	-
36.	Mr. Chansaveng Boungnong	Engineer	HPO	O	O
37.	Mr. Seumkham	Engineer	HPO	O	O
38.	Mr. Chantho Milattanapheng	Engineer	HPO	O	O
39.	Mr. Phensavane	Engineer	HPO	O	O
40.	Mr. Anousak	Engineer	HPO	O	O
41.	Mr. Sisoukhan	Engineer	HPO	O	O
42.	Mr. Bouatep	Engineer	HPO	O	O
43.	Mr. Vitullabundith	Engineer	HPO	O	O
44.	Mr. Sanya	Engineer	HPO	O	O
45.	Mr. Khammanh	Engineer	HPO	O	O

ATTENDANCE LIST (2/3)
GENERAL WORKSHOP FOR INCEPTION REPORT
In Vientiane, Lao PDR, On November 26 - 27, 1998

III. Local people

No.	Name	Position	Organization	26th	27th
1.	Mr. Souatho Phiengloung	Deputy Head of District	Hom District	O	O
2.	Mr. Thongma	Director of Cabinet	Bolikhan District	O	O
3.	Mr. Somsi Chanthamisay	Deputy Secretary	Bolikhamsay Province	O	O
4.	Mr. Moun Chanthavong	Deputy Director	Borikhamsay Province	O	O
5.	Mr. Thongthen Vanaboathong	-	Borikhamsay Province	O	O
6.	Ms. Phonesay Luangvilay	Director	Borikhamsay Province	O	O
7.	Mr. Singkham Souvankham	Deputy General Director	Bolikhamxay province	O	O
8.	Mr. Xaikham Thonglat	-	Borikhamxay province	O	O
9.	Mr. Bountont Chanthaphone	Head of Investment	Xiengkhouang Province	O	O
10.	Dr. Boun Ieng	Khanachudsum	Xaysomboun Special Zone	O	O
11.	Mr. Singkham Sivongkham	Chief of Division	Xaysomboun Special Zone	O	O
12.	Mr. Xiengmai	Head of Village	B.Hatkham	O	O

IV. International Organization

No.	Name	Position	Organization	26th	27th
1.	Dr. Nguyen Duc Lien	OIC-Water Resouseces Unit	Mekong River Committee	O	O
2.	Mr. Tes Sopharith	Basin Planer	Mekong River Committee	O	O
3.	Mr. Boliboun Sanasisan	Director	Mekong River Committee	O	-
4.	Mr. Seiji Nagano	Secretary	Embassy of Japan	O	-
5.	Mr. Tsuneo Takahata	Resident Representative	JICA/Lao Office	-	O
6.	Mr. Mikio Masaki	Project Formulation Adviser	JICA/Lao Office	O	O
7.	Mr. Sophonh	Program Office	JICA/Lao Office	O	-
8.	Mr. S. Fujiwana	Officer	MITI, Japan	O	O
9.	Dr. Daei Inoue	Director	Envi. Assess. Committee (EAC)	O	O
10.	Dr. D.L. Graybill	President, GCP	Envi. Assess. Committee (EAC)	O	O
11.	Mr. Philippe Devaud	ARR/P	UNDP	O	-

V. NGOs in Lao PDR

No.	Name	Position	Organization	26th	27th
1.	Mr. Izumi Tsukamoto	Project Coordinator	Japan Inter. Volunteer Center	O	O
2.	Mr. Tatsuya Watanabe	Representative	Japan Inter. Volunteer Center	O	-
3.	Dr. Bountheung Menvilay	Director	Red Cross	O	O

VI. NGOs Overseas in Lao PDR

No.	Name	Position	Organization	26th	27th
1.	Mr. A. Inhof	Coordinate	Intenatinal River Network (IRN)	O	-

VII. Facilitator and Media

No.	Name	Position	Organization	26th	27th
1.	Mr. Michel Miron	-	Facilitator	O	O
2.	Mr. Loy Chansavath	-	Facilitator	O	O
3.	Ms. latdavane Lounglath	-	Assistant of Facilitator	O	O
4.	Ms. Phonethalom Changthavong	-	Translator	O	O
5.	Mr. Thanomsi	Media	-	O	-
6.	Mr. Keo Oula	Media	National Radio	O	-
7.	Ms. Inthavone	Media	National Radio	O	-
8.	Mr. Ouliyatay	Media	National Radio	O	-
9.	Mr. Lattana Chanla	News Reporter	Lao TV3	O	-
10.	Mr. Peuksa	Cameraman	Lao TV3	O	-
11.	Mr. Phonephet	Media	KPL	O	-
12.	Mr. Nalop	Media	KPL	O	-
13.	Mr. Buffin	-	Sogreah	O	-
14.	Mr. Phouviengkham	Media	People Newspaper	O	-
15.	Mr. Bounthong	Media	People Newspaper	O	-
16.	Mr. Phalin Daravong	Engineer	NT2 Office	O	O
17.	Mr. J.M. Somers	Managing Director	Venture International	-	O

ATTENDANCE LIST (3/3)
GENERAL WORKSHOP FOR INCEPTION REPORT
In Vientiane, Lao PDR, On November 26 - 27, 1998

VIII. Consultant and Study Team

No.	Name	Position	Organization	26th	27th
1.	Mr. Chung Phounlatsavong	Chairman	STS Consultant	O	-
2.	Mr. Phoumi Soukphilanouvong	Engineer	STS Consultant	O	-
3.	Mr. Sisavath Chanthamisay	Chief of Project	STS Consultant	O	O
4.	Mr. Liko Solingkoun	Project Manager	STS Consultant	O	O
5.	Dr. Robert Murray Watson	Manager	RMR	O	O
6.	Mr. Sean Philip Watson	Field Manager	RMR	O	-
7.	Mr. Peter Crees	Engineer	RMR	O	-
8.	Mr. Ichiro Araki	Team Leader	JICA Study Team	O	O
9.	Mr. Hiroshi Ikeda	Hydropower Planner	JICA Study Team	O	O
10.	Dr. Bernard Yon	Natural Environment Expert	JICA Study Team	O	O
11.	Dr. Tod Anthony Regsdale	Social Environment Expert	JICA Study Team	O	O

Ground Total : 106 Peoples

3. GENERAL WORKSHOP

3.1 1ST GENERAL WORKSHOP

3.1.2 MINUTES OF MEETING

The Nam Ngiep-I Hydroelectric Power Project
Minutes of Discussion
of
The 1st General Workshop for Inception Report
(in Vientiane on November 26-27, 1998)

No.	Name and Position	Questions and Comments	Study Team's Comments
1.	Representative from Mekong Committee	As the medium and small schemes are in doubtful from the economic viewpoint, it is recommended to evaluate carefully those from economic and financial aspect.	At the present that the topographic and hydrological conditions are not clear, economic evaluation for the project seems still early, but it will be analyzed during this phase. We think this phase is mainly applied for environmental assessment, but a certain result on economic aspect would be reported at the next Workshop though its accuracy might not be satisfactory, because topographic survey for the reservoir area and geological drillings for the dam site have not been performed yet.
2.	Representative of a consulting firm	It is assumed difficult to carry out EIA at this stage when definite scale of the development has not been consolidated. Therefore, screening of EIA should be made first.	Alternative study will be carried out in parallel with EIA, so that satisfactory result of EIA will be obtained at the final stage of this study. In the contract with JICA, such intention has been reflected.
3.	Representative of an international NGO	He confirmed first whether or not an official contact with local people has been made.	Several times of field investigation have been carried out at the prospective dam site and reservoir area. Especially for the Thaviang Region, hydrological observation and topographic survey are now being done. But, the formal presentation on the Project to the inhabitants has not yet been made. For this General Workshop, people in the project area were invited. Communication with local people will be continued through the social-environmental survey and close contact with them will be maintained further. The above questioner directly asked to the representatives of local people upon consent of the chairmen and confirmed them of the impression to this project implementation. One of the participants of Thaviang Region expressed intention of welcome for the Project as the representative opinion of them on the condition that the living standard is improved by the resettlement.

4.	Representative from d/s of dam site	He expressed his mind of welcome for the Project. But he demanded the project to improve living standard of the local people as the present conditions are vary bad at traffic, communication and electricity.	-
5.	Representative from Kethpiseth Xaisomboun	Local people are in a big anticipation for the regional economic growth by the development of hydro-potential in the Nam Ngiep river basin. Looking upon the present condition, merit of the Project seems to be larger than demerit, therefore, it is requested for sufficient consideration for the regional development. He proposed the establishment of a trust-fund for the regional economic development.	-
6.	Representative from Bolikhamxay Province	He explained there is a provincial intention to secure in the local people's livelihood by the chance of the Project. The Province agreed with execution of the project, as it is assumed there is a lot of merit of the Project. Detail of his wishes was on stable electric supply, improvement of irrigation facilities, traffic improvement, increasing job opportunity, well supply of public services like well-equipped hospital, etc. to be included in the Project facilities. For further process, he requested for close contact with Provincial Office to have respect for a democratic approach in the project implementation.	-
7.	Representative from Ministry of Justice	He proposed a thorough watershed management under the Project, because it is great concern about shifting cultivation in the river basin. Also he requested to take care for influence upon water quality at the downstream reach.	-
8.	Representative from STENO	He stressed for the point that economic development of Lao PDR is strongly depending on the maximum use of hydro-potential in the country and argued necessity of this project implementation.	-
9.	Representative from MIH	He explained present status and policy on electricity in Lao PDR, and touched upon the exchanged MOU for trading national power with Thailand and Vietnam. In which, he introduced on-going national plan about 3,000MW export to Thailand by the year 2006 and 1,500 to 2,000 MW to Vietnam by the year 2010.	-
10.	Other comments	There were several questionnaires occupying interest of the people about concrete time schedule for project construction, definite area to be inundated, so on.	-

3. GENERAL WORKSHOP

3.1 1ST GENERAL WORKSHOP

3.1.3 QUESTIONNAIRES AND STUDY TEAM'S COMMENTS

The Nam Ngiep-I Hydroelectric Power Project
SUGGESTION PAPERS
AT
GENERAL WORKSHOP FOR INCEPTION REPORT
(In Vientiane, November 26 & 27, 1998)

No.	Name / Position	Suggestion	S/Team's Comments
1.	Xiengmay Phiakeo Head of Village Hatkham	I am a representative of people in this area. If this project is going on, so we will have: (i) transportation facilities (road), (ii) electricity supply and (iii) irrigation system. Even if there will be some impacts, we are not worried, because you have the plan to resolve these problems. We hope this project will be proceeded successfully.	Some facilities will be prepared by the Project and GOL as a rural development plan.
2.	Mr.Souator Phiengluang, Lao Chief of Economy of Hom District	1. After completion of the dam, can people still live and cultivate at the upstream of the dam, or not. If not, what is reason? I want to know the policy, so we have to train the people and to make a plan for the resettlement area, because people in our district want to live around there. 2. Please explain more details about resettlement policy and inform us what we want to know in order to answer to the people correctly.	1. People and cultivated area in Hom District should be moved even in the case of low dam scheme. 2. More details will be explained in the next workshop.
3.	Mr.Thongten Vannabouathong, Lao Director of Lao National Front in Borikhamsay Province	I agree with the Inception Report of F/S on the Nam Ngiep-1 HEPP, because the local people waited for this project for long time already. Therefor, I have no any comments in this Workshop.	-
4.	Mr. Socelasan. Lao Teacher (Lao Youth Union)	1. The important problem is the benefit and loses of trade in future including environmental issues. 2. For the resettlement people we have to train and arrange a new job for them before the project implementation. 3. We have to explain the people around project area to understand about working process.	1. Comparative list of benefit and loss due to the Project will be prepared by S/Team. 2.& 3. More details will be explained in the next workshop.
5.	Mr.Thongma Souvanasan, Lao Chief of Cabinet of Borikhan District	1. I agree with the Project, because it's relationship with our rural development and the needs of local people. 2. I don't worry about environmental-social impacts, because I believe that S/team will collect all data and time the best alternative. 3. The alternatives of dam scale and installed capacity should be optimized. 4. I want to see the Project in the implementation stage as soon as possible, so we try affording good coordination.	The S/Team appreciated the suggestions. More details will be explained in the next workshop.
6.	Mr.Saytham, Lao Deputy Chief Spuuic of Industry Handcraft	1. The Division of Industry and Handcraft of Borikhamray Province are ready to work with JICA S/Team at every stage for competing the Project in time. 2. The development plan of the Project should coordinate with the development plan of the Local area.	The S/Team will contact with the local government for execution of the Study.

7.	Mr. Bounton Chanthaphone, Lao The Chief of Investment Management and Foreign Relation Division of XiengKuang Province	1. I am a representative of Xiengkhouang Province and I agree with the Government and foreign investment to build the Nam Ngiep-1 HEPP. Xiengkhouang Province is the source of the Nam Ngiep River. So we are ready to work with the Project for natural protection and we will explain the local people for their understanding. 2. The S/Team should inform more that: a) If the full supply level is EL.360 m, it can supply capacity about 440 MW. b) If it is EL.320 m, how about the installed capacity and it will be economic or not. c) If it is EL.240 m, how about the capacity, and I rise these questions because I would like, 1) to help the Government to make the right decision, have the high effective in the economic, minimize the environment and social impacts. The investors are sure in the investment. 2) to help the Local Authority to find the resettlement area instead of flooded area, enplane them to understand about the project, to make sure the respective of human rights. 3) to establish watershed conservation fund relating with the social economic development (it should be in the contract).	1. More detailed information will be given to people about differences of merit and demerit in both development scales. 2. (a) According to the Pre-F/S. 377MW by our Study. (b) About 246MW, it is still economic. (c-1) investors are not decided. (c-2) some prospective resettlement area will be shown at the next Workshop. (c-3) the fund will be studied later.
8.	Mr. Ounchanthavong, Lao Deputy of Trade Union Borikhaunsay Province	I am a deputy of trade union and agent of the Borikhamsay province. So, for efficiency of the Project, detailed social and environmental impacts should be considered in the Project after finishing of this Workshop. 1. To carry out the study of mental ethnic group in the Project area for preparation of resettlement. 2. Project community had to coordinate with security of province and local, because of Special Zone. 3. To mobilize people to participate in the Project for implementation plan.	These matters are under survey by the S/Team in cooperation with HPO and the local consultant.
9.	Mr. Phonesay, Lao Chairman of Women's Union	1. We are agreed with you to continue the Project to be completed. 2. We agree with you to build the Project for supplying electricity to local people, because they hope to develop their life.	The S/Team will make a rural development plan with the Project later.
10.	Mr. Somsy Chanethamisay, Lao Deputy Secretary of Youth Union	The Nam Ngiep-1 HEPP has a positive impact for local people. The Project will make life better for local people. They will have a good transportation. The Project is not dangerous to the Environment or the ecosystem.	The S/Team will study not only positive impacts but also negative impacts.
11.	Mr. Khamphey Khanthavong, Lao Department of Archaeology & Museum	I agreed with the Nam Ngiep-I HEPP. Because our country is under development and has the low income. We should take a chance for the Project in realization. Therefore, I recommend you below: 1. For the tasks of survey on the socie-economic, land use and resettlement, you should include the archaeology survey at cultural sites, religion sites and other. It means that the survey team had better to make survey in one unit for socio-economy, archaeology and cultural site survey. 2. You should include the study of the work opportunity for the resettlement people to the new area.	1. The S/Team will survey including the archaeology and cultural issues. 2. The S/Team will make a resettlement plan including work opportunity for the people.

12.	Mr. Khampheng Vanabouathong, Lao Director Department of Labour Protection and development (Lao Trade Unions)	1. I think that this Workshop is very important. And the implementation of the Project should be begun soon, because the Project is a basic condition to develop the country. 2. We should make the soft explanation to the people who will be asked to move from the Project area. 3. We should establish the new place with the facilities keeping their living condition step by step. 4. You should propagate or explain them for their understanding about the socio-economic development through public consultation with local people.	1. The Workshop is held for the smooth execution of the Project. 2. The S/Team explained to the people directly at the Site Workshop at the Project area in March 1999. 3. The S/Team will make the resettlement plan with infrastructures. 4. The S/Team will hold future Site Workshop in June and December 1999.
13.	Mr. Bountheung Menevilay, Lao Disaster preparedness Delvef Dept. LAO CROSS/HQ.	1. Except the inundation by reservoir, are there another impacts to the natural resources due to the Project? 2. The comprehension of the people in the Project area is very important particularly in public consultation and hearing. What are their benefits from the Project? The result we are the impact for they longhand.	1. Comparative list of benefit and loss due to the Project will be prepared by S/Team. 2. The S/Team will hold the Site Workshop at the Project area three times.
14.	Mr. Chanthaviphone Inthavong, Lao	You have to study and make recommendations to the Lao Government at the maximum useful for the F/S on the infrastructures and the rural developments follows: (i) fund for watershed management, (ii) torsion and hotels, (iii) agriculture and irrigation at downstream, (iv) manufacture and handicraft and (v) education and sanitary for people.	These matters will be studied in the resettlement plan as well as the rural development plan of the Project, including a regional industrial promotion center.
15.	Dr.Vileyvone, Lao Ministry of Health	1. For the resettlement of people, potential risk of epidemic diseases, malison, etc., mitigation measure should include medical treatment place, medicament, sanitary and feed supplies. 2. Education program for people on risk of transmitted disease HIV/AIDS also should be included.	The issues of the medical services and education for the resettled people will be studied in the resettlement plan of the Project.
16.	Unknown	1. We are supporting the international organization providing the assistance for development in Lao PDR. We express the high appreciate the Workshop, but you should coordinate with the concerned organization for implementing your duty in the right way such as the ethnic group. We have the committee for the ethnic group in the Lao PDR. 2. For implementation of each project, we take care to get the detailed information or database for these projects. 3. The Project should be supported by the fund, and it will expand the right of ethnic group. The ethnic group should be monitored as the Project's responsibility. 4. We need the management plan and monitoring plan for the purpose of the Project.	Care of ethnic group will be considered in the socio-economic study through the field investigation. And the survey results will be presented at the future Workshop and be shown in the Study Report.
17.	Unknown	1. In the EIA Report of the Nam Ngiep-1 HEPP, if the EIA survey will not be clear, more survey should be carried at the next phase of the study, especially for the socio-economic and natural environment impacts. 2. For the study on EIA, you should take care the experiences of the Nan Theun 2 HEPP.	1. The EIA survey will be continued at the next stage of the Study. 2. The S/Team is under review of the Nam Theun 2 HEPP by JICA's instruction.

18.	Mr. Singkham Sivongkham Head of Industry Division of Xaysomboun Special Zone	1. Basically, we agreed the Project. But for the resettlement of peoples, does the Project prepared the new location? Where are there situated? 2. For the reunification of Industry Division at Xaysomboun Special zone, we planned to construct 22 kV transmission lines at Thaviang to Yhom and Phalavek to B.Sopyouk. The 115 kV at the Nam Leak HEPP to Xiengkhouang will be passed Thavieng. What is recommendation and comment for this plan from the Nam Ngiep-1 HEPP.	1. Some resettlement area is under survey. 2. The T/L route is subject to change due to the alternative study results. 3. Administrative disposition will be explained in the Interim Report.
19.	Mr. Phetdouangchan Ekloanlang, Lao Government Office	1. The infrastructure for the new resettlement area should include roads, schools, hospitals, water supply and others. 2. The revenue from the export of electricity on the Project should be confirmed by the financial analyses and it should be guaranteed for the long period.	1. The resettlement plan will include the items of infrastructures as well as a rural development plan. 2. The financial analysis will be carried out by the S/Team.
20.	Mr.Onchanth The representative of the Ministry of Defense General Major	According to the F/S Report on the Nam Ngiep-1 HEPP, there are some items relating with the Ministry of Defense. For contributing to the Workshop, I have some idea relating with the security during the implementation of the Project as follows: 1. For location of the Project This Project is located in two (2) province and one (1) special zone such as: Borikhamxay Province (in the lower part); Xiengkhouany Province (in the upper part) and Xaisomboune Special zone (in the middle part). 2. This Project is recommended to use the light plane/helicopter for survey in the Project area. 3. For site survey by land a) Safety is the first during the survey, it is necessary to have some people protect the survey team every time. b) In the above three (3) areas, it is requested to be closely coordination with Ministry of Defense in the activities for the security at the Project area. So, I would like to have some ideas such as: - The working schedule in each section should be informed to the concerned authorities and to the Ministry of Defense at least 7 or 10 days before go to the Site to secure the safety during the survey by controlling by the Ministry of Defense through the Laws. - The S/Team need to accompany some people to protect them. The S/Team should inform of the number of people for protection. And the S/Team should provide them the allowance during the working time. I really hope that the S/Team should consider the above ideas and we are looking forward to have the answer from you. Finally, I wish the Workshop will be completed with the successful.	The S/Team agreed to inform to the Ministry of Defense of their survey schedule prior to the field survey.

21.	Mr. Boun ieng; Lao	1. The S/Team should identify that many villages will be inundated by the Project in the Thavieng areas. 2. When will the Project be commenced after finishing the investigation? Because, we have to discuss with local people.	1. The S/Team made the detailed topographic survey at the Thaviang area by GPS survey and grand survey. The survey results will be presented at the next Workshop. 2. Generally, it takes time more than 10 years after completion of F/S.
22.	Mr.Khamfanh, Lao Deputy Direction of Fishery Department	1. Is it possible to use the water in the reservoir for irrigation? (for compensation of flooded field in the reservoir) 2. We request you to study about fish migration and possible provision of the migration facilities. Do you have the ideas about its?	1. Irrigation for resettlement area will be studied in the resettlement plan as well as rural development plan. 2. Fishery aspects are under investigation.
23.	Mr. Phouvong Onsysaleum Engineer of Evaluation and Estimation of Environmental Impact	1. The dam height should be selected in appropriate to minimize the impacts, but the height will affect its economy. 2. Please make the detailed study on the impacts to the resettlement people at the upstream and downstream of reservoir. 3. The resettlement plan should conformed to the Lao standard and the international standard.	1. The economic and financial analysis will be carried out by the S/Team. 2. The environmental survey at the proposed reservoir area is under implementation. 3. The S/Team will follow them.
24.	Mr.Tes Sopharith, Cambodia Basin Planner, Makong River Commission	As the Nam Ngiep River flood into the Mekong River, we would like to ask you the impacts of this dam construction to the Mekong River: (i) flow condition, (ii) water quality, (iii) fishery, etc.	Influences to the Mekong River will be studied by using data from MRC.
25.	Mr. Inthapanya. Legal Officer	Please distribute the document or report of the Study to the participants of the Workshop, because speakers talk only in general.	JICA has an intention to distribute any documents to people who require.
26.	Mr.Nguyen Duc. Len, Vietnam Senior Project Officer MRCS	1. More available information should be collected from various sauces, such as MRCS, LAS Natural Mekong counties, summitries, and point field investigations. 2. Power export, especially to Thailand, should be for peaking as anticipated. Different assumptions should be considered. 3. Fisheries and resettlements issues, together with socio-economic aspects, should be considered seriously so that the Project would be proceeded with confidence. 4. Study of HWZs should be for in two (2) steps: (i) a coarse step with EL.360m, EL.320m and EL.240m as proposed, (ii) the different HWZs around the selected level should be fore (if EL.320m will be selected, EL.300m and EL.340m should be examined for example). 5. Curative effect to the Mekong River should be indicated. The future possible aspects at the upstream reservoir of the Nam Ngiep basin should also be examined. 5. If possible, the reports of the Nam Ngiep-1 HEPP shall be sent to MRES for his information and followed up for activities (MRCS, P.O Box 1102, Phnom Purl, 1 Cambodia).	1. The S/Team agreed to proceed the Study as suggested. 2. The S/Team will study 16-hour and 8-hour peak generations. 3. Fisheries issues are under investigation. 4. The S/Team will select among the three alternatives (EL.360m, EL.320m & EL.240m) at first, then the most suitable EL. will be recommended. 5. The S/Team agreed to study. 6. The S/Team will give their reports through the Workshop.

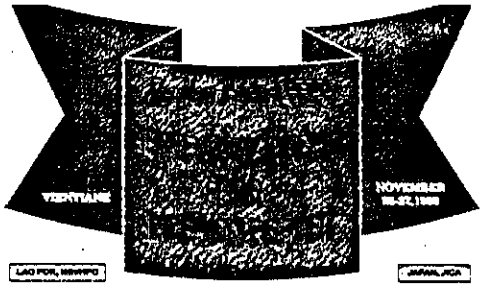
27.	Mr. Bounsalong Southidara., Lao Deputy Division of Investment, EDL	1. Why do you make EIA before the F/S? 2. The S/Team should confirm to the local people that (i) this Project is under study, and (ii) the S/Team does not know exactly which the Project will be proceeded or not. 3. The survey of social issues will need to take care the livelihood and tradition. 4. The social environment issue and economic issue shall be composed together.	1. Project alternatives at each stage couid be studied following the results of EIA. 2. The S/Team confirmed at the Site Workshop. 3. The S/Team will take care for them. 4. The S/Team carried out both at once.
28.	Mr. Tatsuya Watanabe, Japan JVC (NGO)	1. NGO participation is very limited. How have they been informed and invited to the Workshop? Why does the organizer think they have not participated? 2. The S/Team seems to favor EL.320 m option. The whole process seems to justify selecting the EL.320m option, then what is the meaning of the process? 3. Is not a year-and-half study period too short to early out any meaningful environmental studies? 4. Have the S/Team learned from experience of Nam Theun-Hirbun HEPP, which is causing a lot of problems to its downstream inhabitation's? 5. The Environmental Assessment Committee (EAC) is, to our mind, supposed to be an independent body. However, it belongs to the Government of Lao PDR (GOL) officials of its members. Could the impartiality and subjectivity be guarantied by having GOL officials? (Detailed S/Team's comments) JICA is proceeding EIA of the Project from a standpoint of impartiality, and he is trying to carry out the Study and data collection with objectivity as much as possible. The EAC has been established by JICA to make discussions and comments to the S/Team's technical appropriateness on the Study. The S/Team, the Consultant, was entrusted to with duty by JICA. The EAC is an advisory group to JICA in other word. Therefore, it is expected to play a role in making comments on the S/Team's study methods and results through their evaluations from each professional standpoint, since all members of the EAC are the experts in their fields respectively. Consequently, the members from GOL also have joined the EAC at a standpoint of impartiality and they wish to make appropriated comments to the S/Team based on their rich experiences in their fields in Lao PDR. In the above context, we will judge it is inappropriate to meet with criticism on the Lao members of EAC.	1. S/Team already tried to invite NGOs in and out of Lao PDR in cooperation with MIH/HPO. However, limited NGO replied to participate. 2. Process of the Project is to identify all feasible alternatives at first, then study for each. 3. Years of 1.5 is not for EIA period, it will be continued in the next stage. 4. Not considered yet. NGOs are also required to inform the S/Team of useful information. 5. EAC will be described in Interim Report in details. EAC members even from GOL can make comments on the Project at the middle position due to their specialties. Detailed S/Team's comments are shown in the left.

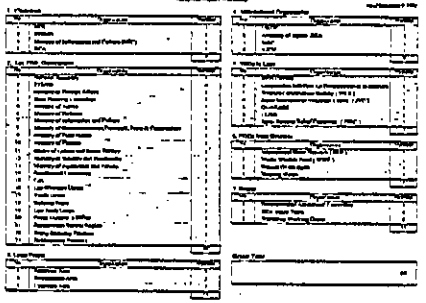
29.	Mr. Izumi Tsukamoto, Japan JVC (NGO)	1. In Lao PDR, there are many plans of dam construction. How GOL advance these plans considering environment and economical efficiency? 2. How many dams are most beneficial for Lao People, especially domestic people to make sustainable and self-reliant living? 3. Many explanatory meetings should be held in each concerning village. Then the president should explain good points and bad effects for corresponded plan. They should give much time to villagers to consult by themselves. Much information for villagers is important.	1. As most of large-scaled dams in Lao PDR are to be constructed for power selling, benefit from projects will be obtained by GOL directly. However, we have to remind that all rural development projects will be carried out by their finance. 2. Hydropower from small-scaled dam and run-of river type project will be used for Lao people, but large-scaled one is for power selling. This is Lao power policy. 3. JICA will carry out the Site Workshops in the relevant villages apart from the General workshop in Vientiane and Pakxan.

3. GENERAL WORKSHOP

3.1 1ST GENERAL WORKSHOP

3.1.4 PRESENTATION OHP SHEETS





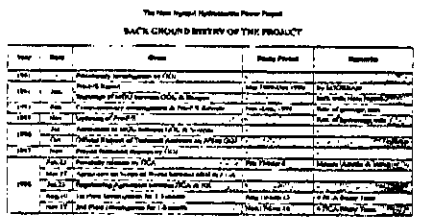
Contents of General Presentation by S/Team

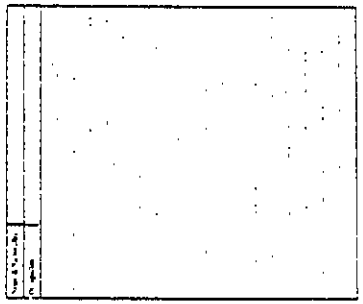
by Team Leader (I. Araki)
- Project General Description
- General Description of JICA Study
- Basic Approach of JICA Study

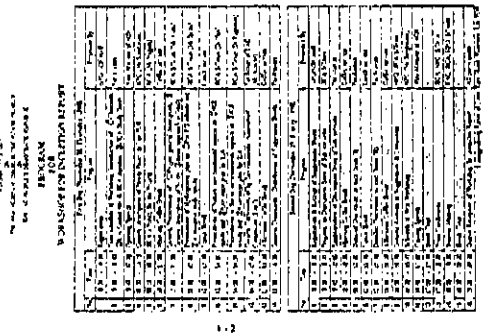
by Hydropower Planer (H.Ikeda)
- Hydropower Plan

by Natural Environmentalist (B.Yon)

by Social Environmentalist (T.Ragsdale)
- Report on IEE results
- Execution Plan & TOR of EIA survey

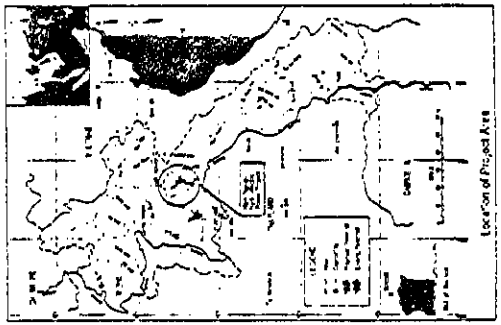


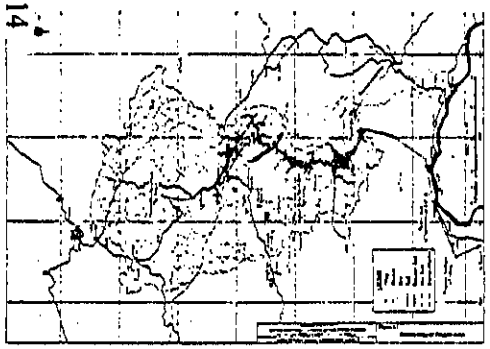


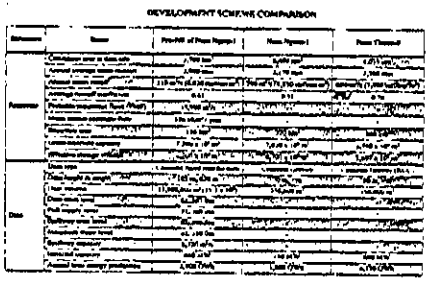


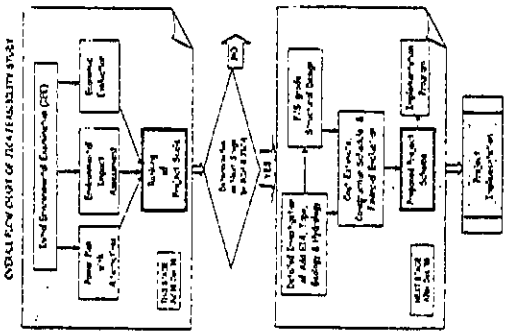
Project General Description

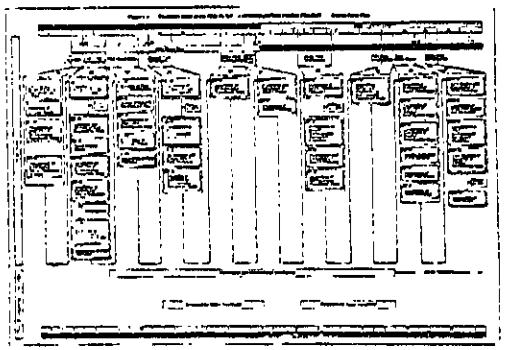
- Location of Project Area (Map-1,2,3)
- Back Ground History of Project (Table-1)
- Project Features being compared with the Nam Ngum-1 & the Nam Theun-2 (Table-2)

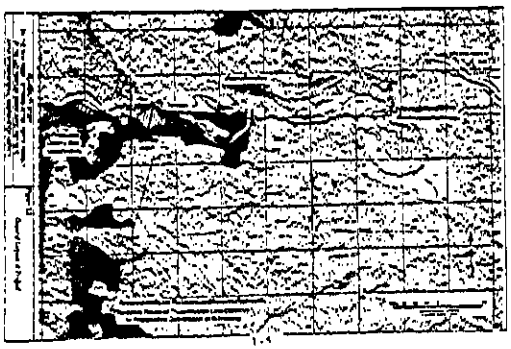






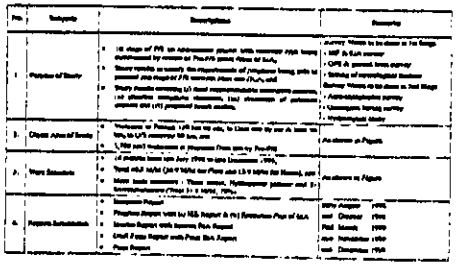


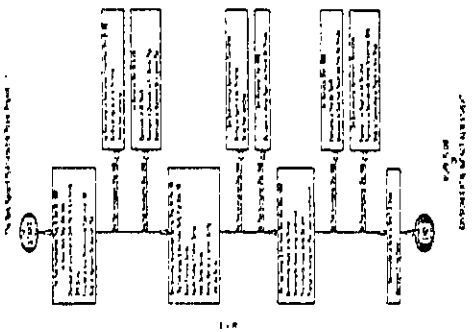




General Description of JICA Study

- 1st Stage of Feasibility Study (Fig-1,Table-1)
- General Work Flow focused in EIA(Fig-2)
- Time Schedule of Study(Fig-3)
- Member of Study Team & Assignment Schedule (Fig-4)

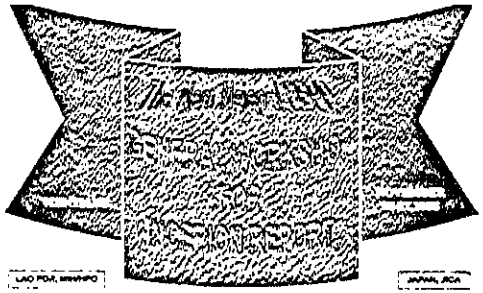


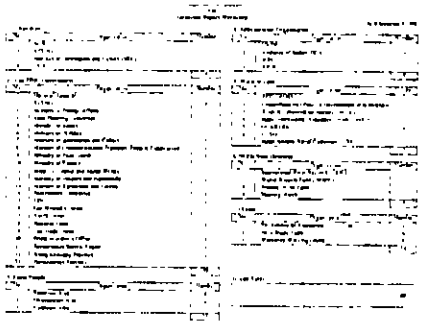


3. GENERAL WORKSHOP

3.1 1ST GENERAL WORKSHOP

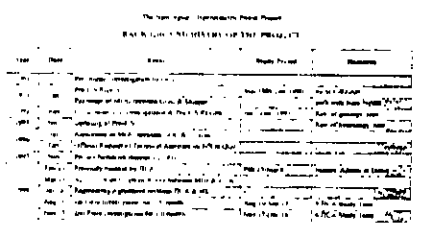
3.1.4 PRESENTATION OHP SHEETS

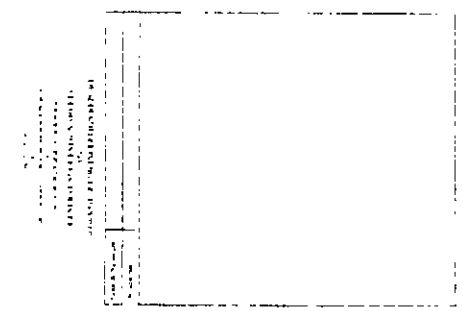


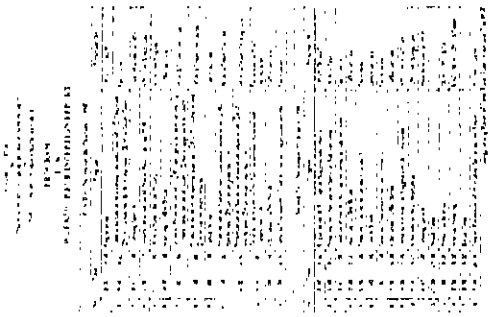


Contents of General Presentation by S/Team

- by Team Leader (I Araki)
  - Project General Description
  - General Description of JICA Study
  - Basic Approach of JICA Study
- by Hydropower Planer (H Ikeda)
  - Hydropower Plan
- by Natural Environmentalist (B Yon)
- by Social Environmentalist (T Rogsdale)
  - Report on IEE results
  - Execution Plan & TOR of EIA survey





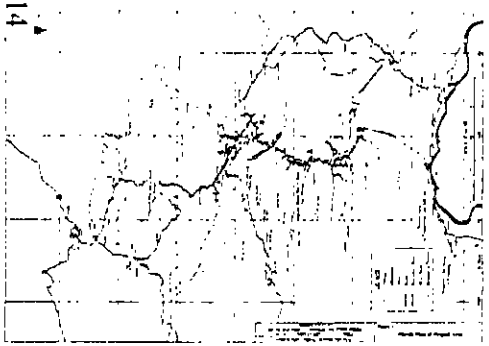


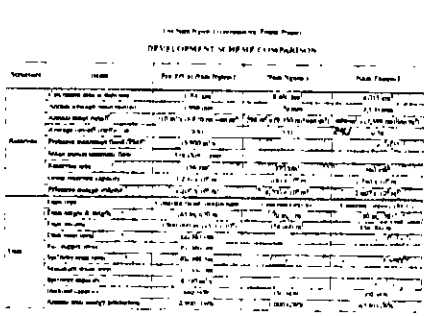
Project General Description

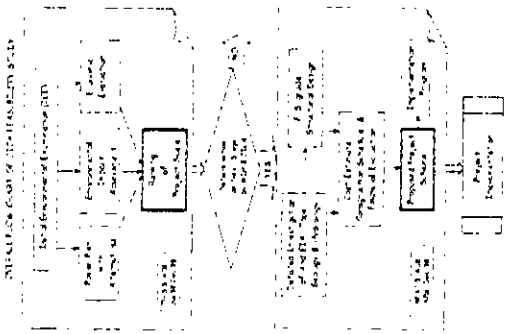
Location of Project Area (Map-1,2,3)

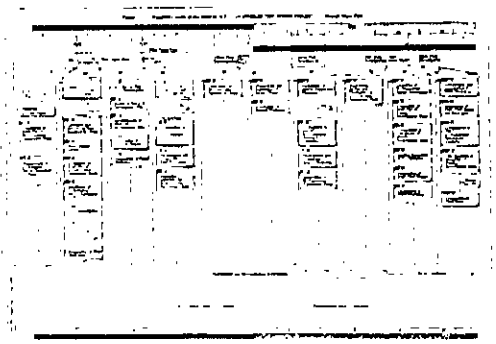
Back Ground History of Project (Table-1)

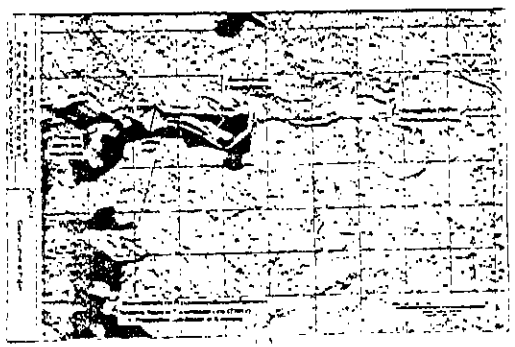
Project Features being compared with the Nam Ngum-1 & the Nam Theun-2 (Table-2)





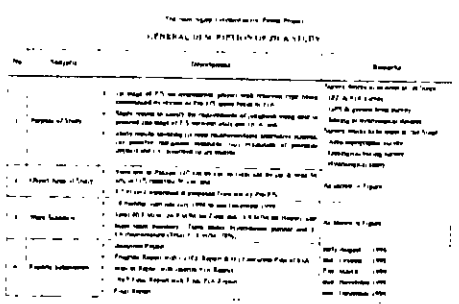


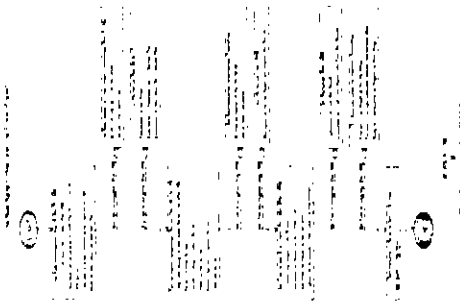


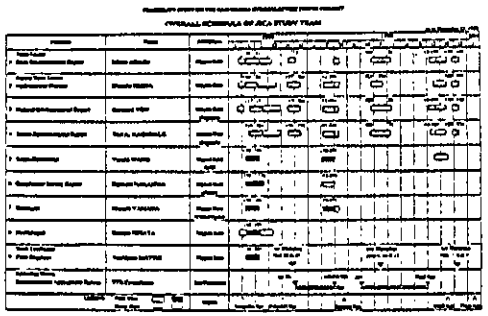


General Description of JICA Study

- 1st Stage of Feasibility Study (Fig-1, Table-1)
- General Work Flow focused on EIA(Fig-2)
- Time Schedule of Study(Fig-3)
- Member of Study Team & Assignment Schedule (Fig-4)







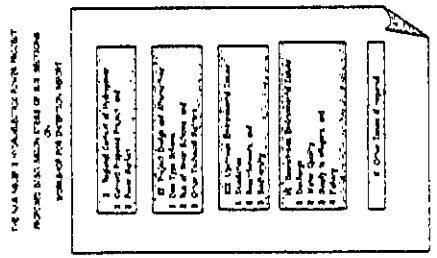
Basic Approach of Study (2/2)

- EIA by Local Consultant under JICA S/Team
  - STS Consultants
  - 10 months from Dec.'98 to Sep.'99
- Execution of Accurate leveling survey (Map-1)
  - Thaviang District at Upper Reservoir Area
  - GPS Survey at 23 points (+33.88m & -15.36m)
  - Additional cross section survey at Thavien District
    - Frame survey by Satellite Photo (SPOT)
    - Point survey of Villages, Paddy field & Dry field
- Establishment of Hydrological Station

Basic Approach of Study (1/2)

- EIA Study prior to Feasibility Study
- No MOU between GOL & Developer
- Public Involvement
  - Workshop (Nov.'98, Jul.'99 & Dec.'99)
  - Free Access to Information
  - Detailed Socio-economic survey
- Environmental Assessment Committee
  - Advisory committee for JICA
  - Facilitator & 4 members

1-9



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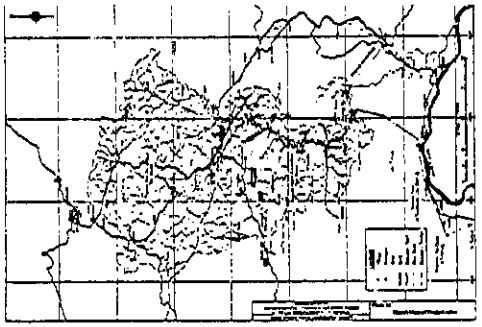
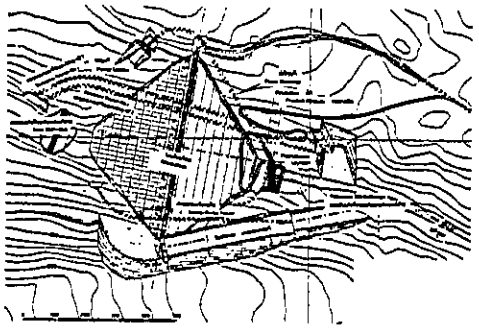
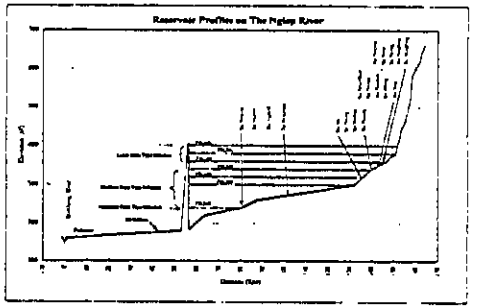
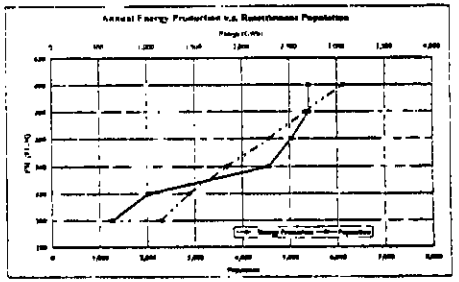
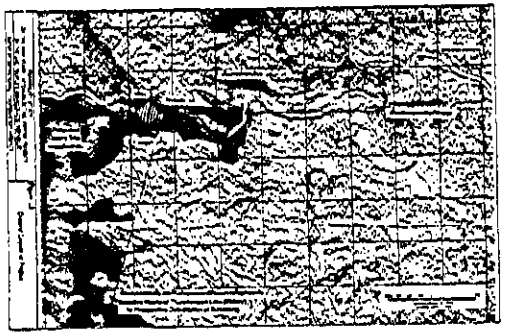


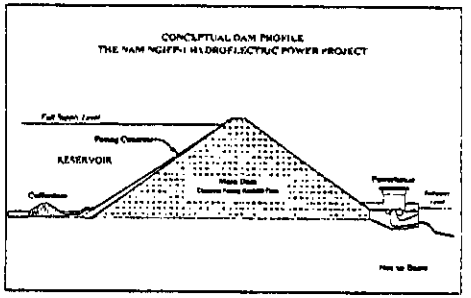



Reservoir Profiles on The Ngiep River

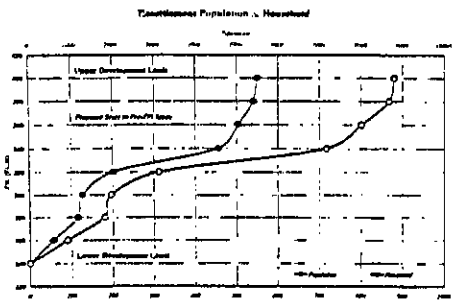

Annual Energy Production v.s. Resettlement Population



2-1


CONCEPTUAL DAM PROFILE
RESERVOIR

2-2


Upper Development Limit
Lower Development Limit

2-3

2-4

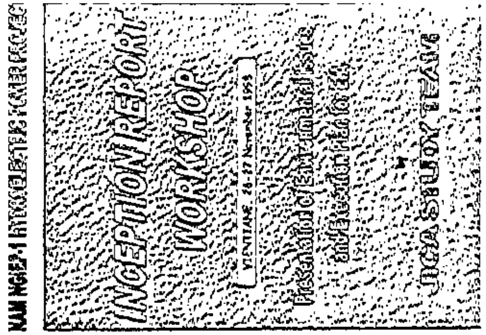
NAM NGIEP 1 HEPP FEASIBILITY STUDY
INCEPTION REPORT WORKSHOP

LIST OF OVERHEAD TRANSPARENCIES FOR ENVIRONMENTAL PRESENTATION BY BERNARD YON

1. FRONT PAGE
2. CONTENT 1 : PROJECT AREA
3 Project Area (Map)
4 Dam site and lower valley (Photos)
5 Lower reservoir (photos)
6 Upper reservoir (photos)
7 Work program for EIA

8. CONTENT 2 : ENVIRONMENTAL ISSUES
9 River Flow Issues
10 Water Quality Issues
11 Aquatic Ecology Issues
12 Terrestrial Ecology Issues
13. NBCA in Laos (Map)
14 View of degraded forest (photos)
15. Land use and Forestry issues
16 Land Cover in Future Reservoir

17. CONTENT 3 : EXECUTION PLAN
18 Schedule for Environmental surveys
19 Water Quality Survey
20. Aquatic Ecology and Fisheries Surveys
21 Habitats and Wildlife survey
22 Vegetation Biomass and Forestry Survey
23 Land Use and Cultural survey



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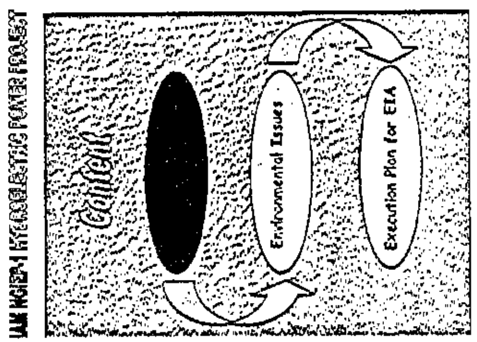

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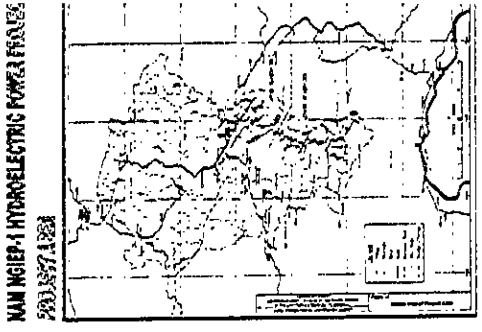

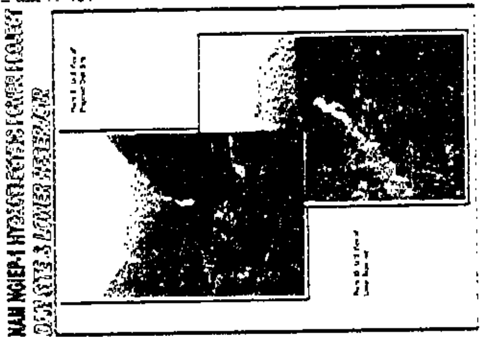

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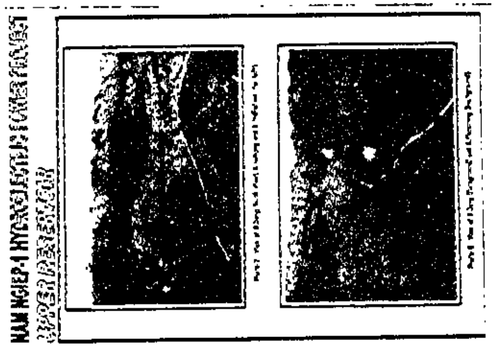

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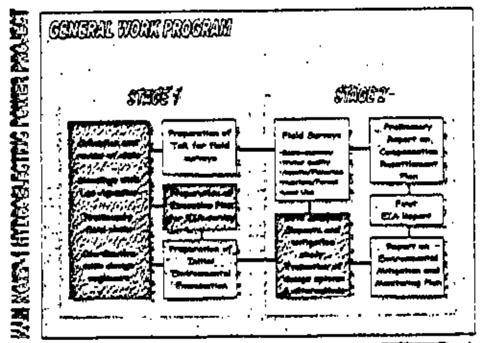

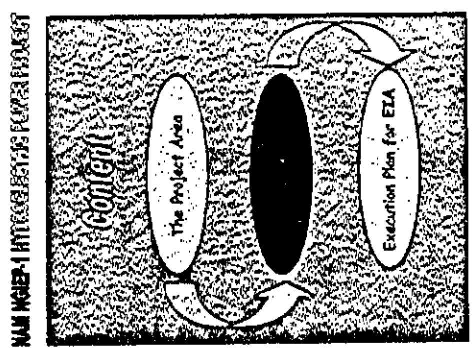

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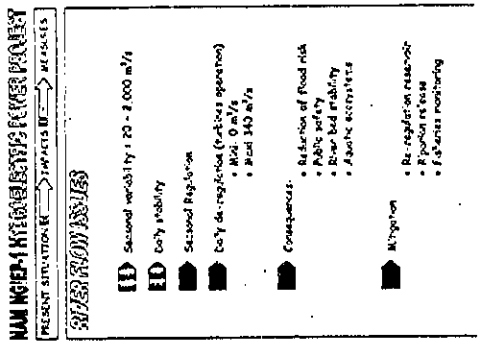

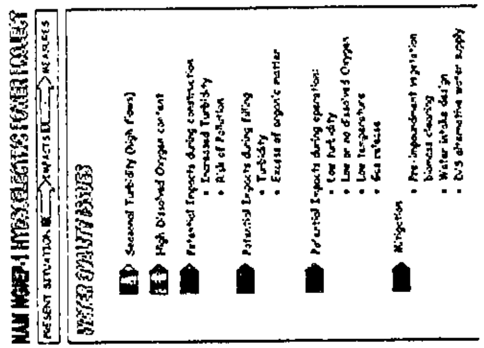

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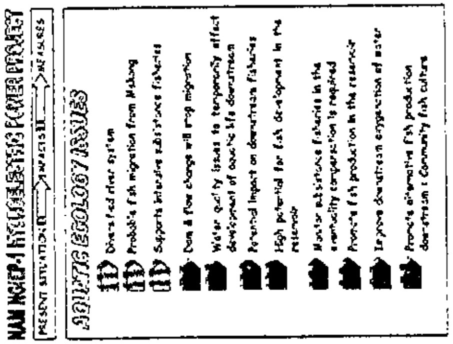

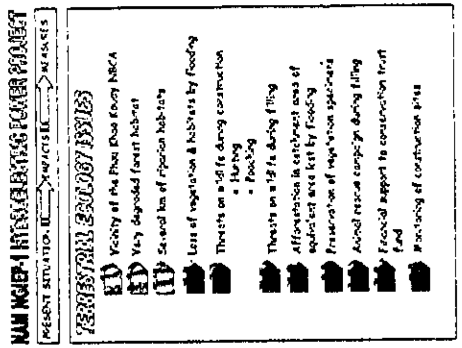

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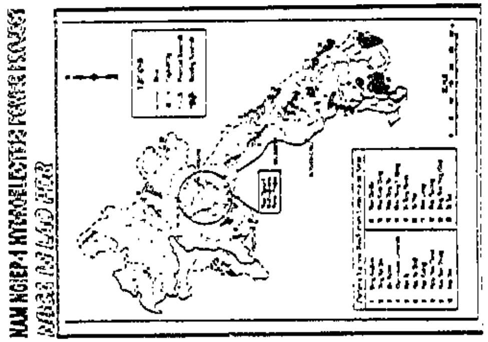
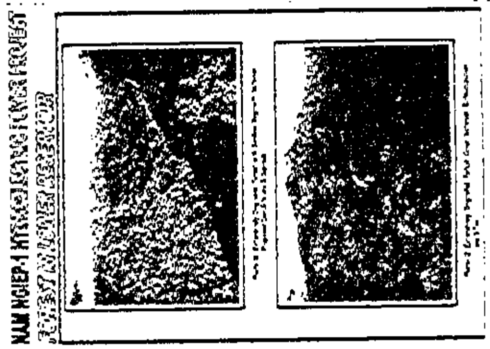




3-8

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

Content

- The Project Area
- Environmental Issues

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

PRESENT SITUATION → IMPACTS → MEASURES

LAND USE & FORESTRY ISSUES

- Secondary forest in lower reservoir area
- 500 ha irrigation in upper reservoir area
- Loss of forest by flooding
  - Loss of wood & products
  - Decay of organic matter
- Loss of agricultural land, built-up structures because of reservoir, of roads, transmission line and construction sites.
- Pre-inundation forest logging
- Compensation and resettlement
- Development of new agricultural land
- Optimization of Project design

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

WATER QUALITY SURVEY

Where ?

- 4 Stations :
  - Nam Ngiep at Dam site
  - Nam Ngiep at Ban Muang Mat
  - Nam Xot upstream confluence
  - Nam Ngiep at Ban Dong

When ?

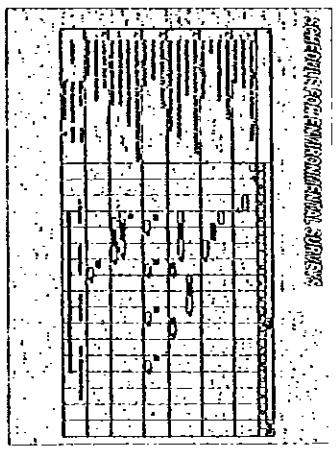
- 4 sampling surveys :
  - December 1998
  - March 1999
  - June 1999
  - September 1999

What ?

- 16 parameters : 8 physical and 8 chemical

OBJECTIVE : BASELINE INFORMATION FOR ASSESSMENT OF FUTURE RESERVOIR WATER QUALITY

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT



NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

WILDLIFE & HABITATS SURVEY

Habitats

- Habitat survey in the Project area (reservoir, access roads, quarries, TL, sites)
- Mapping of habitats 1:50,000
- Identification of areas of conservation significance for future surveys
- Lists of main woody tree species observed and use

Wildlife

- Observations coordinated with the habitat survey
- Interviews with villagers on large animals observed and hunting practices
- Identification of observed or reported species of conservation significance with potential habitats
- Identification of distribution in other places in Laos (MRC4)

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

AQUATIC ECOLOGY & FISHERIES SURVEY

Aquatic Ecology Survey — WHAT FISH ?

- Collection of fish species and other aquatic products in April-May 1998
- Interviews with villagers & fishermen conducted with socio-economic survey
- Identification/mapping of key river habitats
- Observation of fish migrations in June-July

Fisheries Survey — HOW THEY FISH ?

- In upstream and downstream villages
- Interviews of villagers & fishermen on fishing practices, equipment, catches

Fisheries Ecology — HOW MUCH THEY CATCH ?

- In upstream and downstream villages, in selected households
- One week long monitoring in March (DS) and in June (WS) during field work.
- Expected to be conducted 4 times/year in the coming years

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

LAND USE AND CULTURAL SURVEY

LAND USE AND POTENTIAL

- Based on aerial cover for downstream area
- Light plane/helicopter reconnaissance for reservoir area
- Investigate future use of area with and without Project
- Report information on 1:50,000 map

CULTURAL SURVEY

- In reservoir area
- Investigation on cultural and archeological sites to be located by GPS and described
- Report information on 1:50,000 land use map

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

VEGETATION BIOMASS & FORESTRY

Biomass

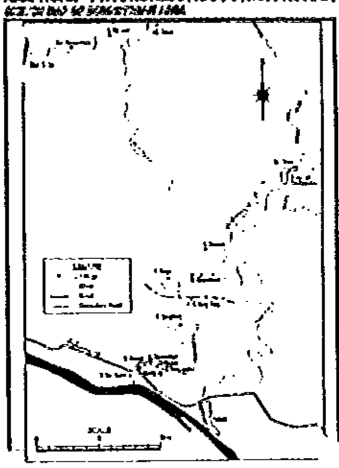
- Survey in reservoir area
- Preliminary assessment of above ground and below ground vegetation biomass according to
  - Vegetation types
  - FSL scenarios considered
- Mapping of biomass distribution at 1:50 000

Forestry

- Preliminary assessment of commercial timber in reservoir area
- Preliminary estimates of timber volume
- Mapping at 1:50,000

OBJECTIVE : TO SUGGEST HOW LOGGING AND BIOMASS CLEARANCE MAY BE ORGANIZED

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT



NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION

Mid-August to Mid-September, 1996

FIELD VISIT RESULTS

TOTAL OF THIRTY-FOUR (34) UPSTREAM & DOWNSTREAM VILLAGES POSSIBLY AFFECTED BY PROJECT

UPSTREAM & DOWNSTREAM VILLAGES

HOUSEHOLDS: 1,961

POPULATION: 11,117

LIST OF OVERHEAD TRANSPARENCIES FOR SOCIAL ENVIRONMENTAL PRESENTATION BY TOO RAGSDALE

GENERAL INTRODUCTION
1. Cover Page
2. Activities Carried Out Mid-August to Mid-September
3. Map of Project Area
4. Photos of Downstream Area - River Plain, Fish Ponds
5. Photos of Lower Reservoir Area - B. Sopdoun Road, B. Sopyouk School
6. Photos of Upper Reservoir Area - Entrance to Plain, B. Phiangdeu/Pou
7. Total Upstream & Downstream Affected Villages, Households, Population

DOWNSTREAM AREA INTRODUCTION
8. Map Downstream Area
9. Total Villages, Households, Population in Downstream Area
10. Summary of Situation in Downstream Area - Bolikhan & Pakxan Districts, Borikhamxay Province - Irrigation, Drinking Water, Fishing, Transport
11. Summary Table of Pakxan District Villages, Households, Population
12. Summary Table of Bolikhan District Villages, Households, Population
13. Photos of Downstream Area - B. Nahiam/Hatsaikham
14. Photos of River Life - Transportation by Boats, Downstream Area

UPSTREAM AREA INTRODUCTION
15. Map of Reservoir Area
16. Expected to Find and What Found in Reservoir Area
17. Total Villages, Households, Population in Reservoir Area
18. Map of Lower Reservoir
19. Summary Table of Villages, Households, Population in Lower Reservoir
20. Map of Upper Reservoir
21. Summary Table of Villages, Households, Population in Upper Reservoir
22. Photos of Upper Reservoir - B. Vienthong/Nahong & Ponsaam
23. Photos of Upper Reservoir - B. Dong/Nahong Paddy, Irrigation Channel

POSSIBLE IMPACTS OF PROJECT
24. Possible Impacts Downstream
25. Possible Impacts Upstream at 290m
26. Possible Impacts Upstream at 320m
27. Summary Table Village Impacts Upper & Lower Reservoir
28. Reservoir Profile of Nam Ngiep River

POSSIBLE MITIGATION STRATEGIES
29. Possible Mitigation Downstream
30. Possible Mitigation Upstream

EXECUTION PLAN FOR SOCIOECONOMIC SURVEY
31. Survey Objectives
32. Survey Preparation Stage
33. Field Survey, Analysis & Reporting

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION

Mid-August to Mid-September, 1996

FIELD VISIT RESULTS

- DOWNSTREAM (Bolikhan and Pakxan Districts):
  - Sixteen (16) Villages
  - Six Thousand Seven Hundred (6,700 Population
  - One Thousand One Hundred (1,100 Households
  - Little Irrigation Development
  - Much Reliance on Nam Ngiep for Drinking Water, Fishing, Transport

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION

Mid-August to Mid-September, 1996

FIELD VISIT RESULTS

TOTAL OF SIXTEEN (16) DOWNSTREAM VILLAGES in Bolikhanh & Pakxan Districts, Borikhamxay Province

DOWNSTREAM VILLAGES

HOUSEHOLDS: 1,090

POPULATION: 6,719

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION

Mid-August to Mid-September, 1996

ACTIVITIES CARRIED OUT

- Reconnaissance Fieldtrip to the Project Area, August 25-28
  - Visits to Provincial & District Offices
  - Motorboat Visit to Downstream Area
  - Helicopter Overview of Reservoir and Downstream Areas
  - Village Visits in the Reservoir Area
- Preparation of Socioeconomic Survey Terms of Reference

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIELD VISIT RESULTS

JICA FEASIBILITY STUDY

Inception Report Workshop

November 28th, 1996

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION

Mid-August to Mid-September, 1996

FIELD VISIT RESULTS

FIVE (5) DOWNSTREAM VILLAGES in Bolikhanh District, Borikhamxay Province

HOUSEHOLDS & POPULATION, AUGUST 1996

Village (Ban)	Households	Population	Yrs
Nampa	90	438	-
Houaythoun	263	1,684	-
Sonkeum	183	1,123	-
Pakthom*	130	541	240
Tohua	50	251	-
Total	650	4,036	

* Also known as B. Nahiam

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION

Mid-August to Mid-September, 1996

FIELD VISIT RESULTS

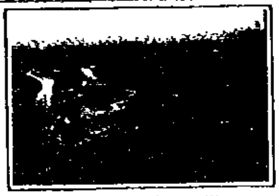
ELEVEN (11) DOWNSTREAM VILLAGES In Pakxan District, Borikhamxay Province

HOUSEHOLDS & POPULATION, AUGUST 1996

Village (Ban)	Households	Population	Yrs
Sar Oudom	48	306	-
Nangiep	54	315	-
Pakkok	27	177	-
Thabokhen	63	354	-
Phonel	38	247	-
Kansaphet*	-	-	-
Songkhon	36	221	-
Nongdeng	17	99	-
Faysamboun	50	320	-
Faysavang	53	341	-
Thong Gnai	34	308	-
Total	410	2,684	

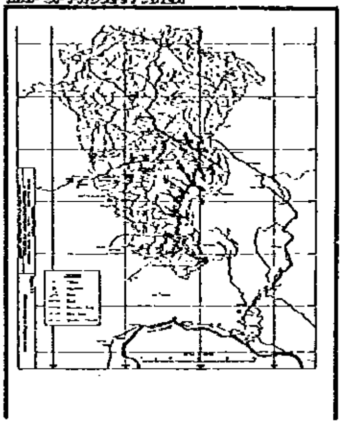
* A military encampment, data not available

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT



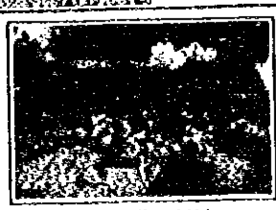
NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

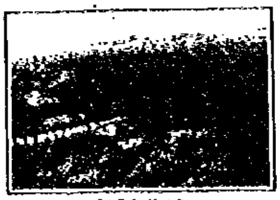
MAP OF PROJECT AREA



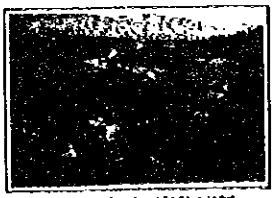
NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

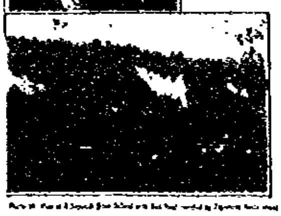




NAM NGIEP-1 HYDROELECTRIC POWER PROJECT



NAM NGIEP-1 HYDROELECTRIC POWER PROJECT



NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION
Mid-August to Mid-September, 1998

POSSIBLE PROJECT IMPACTS

- DOWNSTREAM (Borikhamxay Province):
  - Water Quality lowered first few years after inundation, from organic decay leading to de-oxygenation:
    - ★ Adverse impact on downstream fisheries
    - ★ Adverse impact on village drinking water and other water usage, eg, irrigation
  - Danger from irregular release of water from dam

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

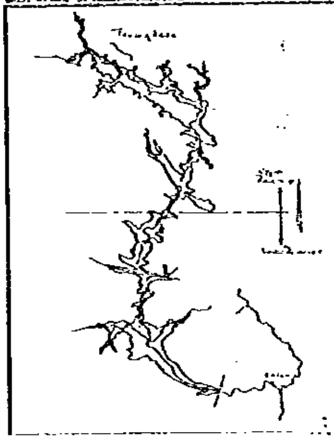
NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION
Mid-August to Mid-September, 1998

FIELD VISIT RESULTS

- RESERVOIR - EXPECTED TO FIND:
  - Ten (10) Villages
  - Two Thousand (2,000) Population
  - Four Hundred (400) Households
  - Lao Sung Villages
  - Forest, Some Agricultural Land
- RESERVOIR - FOUND:
  - Eighteen (18) Villages
  - Five Thousand Five Hundred (5,500) Population
  - Nine Hundred (900) Households
  - Mostly Lao Loum Villages
  - Four to Five Hundred (4-500) Hectares Paddy Land

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT



NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION
Mid-August to Mid-September, 1998

POSSIBLE PROJECT IMPACTS

- UPSTREAM (Xaysomboon Special Zone):
  - Reservoir Full Supply Level (FSL)at ~~325m~~ 320 m
    - ★ Inundation of 4 Villages, nearly 200 households, about 1,300 persons, 38 Ha of Paddy Land
    - ★ Avoidance of Inundating 14 Villages, almost 600 Households, nearly 4,200 Persons, and 400 Ha of Paddy Land
    - ★ Reservoir Open Communication with Upper Reservoir Area

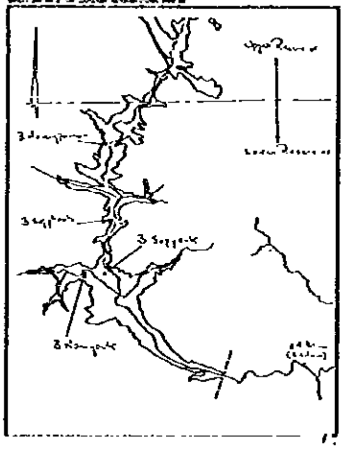
NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION
Mid-August to Mid-September, 1998

POSSIBLE PROJECT IMPACTS

- UPSTREAM (Xaysomboon Special Zone):
  - Reservoir Full Supply Level (FSL) at 360m:
    - ★ Reservoir 80-90 KM Long
    - ★ Inundation of 156 Sq KM Land
    - ★ Little impact on human habitation around dam site
    - ★ Inundation of 18 Villages, almost 900 Households, nearly 5,500 Persons, and 4-500 Ha Paddy Land

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT



NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION
Mid-August to Mid-September, 1998

FIELD VISIT RESULTS

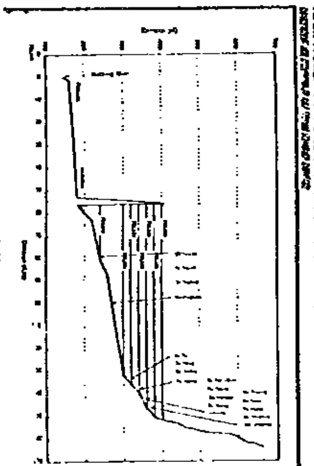
- TOTAL OF EIGHTEEN (18) RESERVOIR (UPSTREAM) VILLAGES in Thathom & Hom Districts, Xaysomboon Special Zone

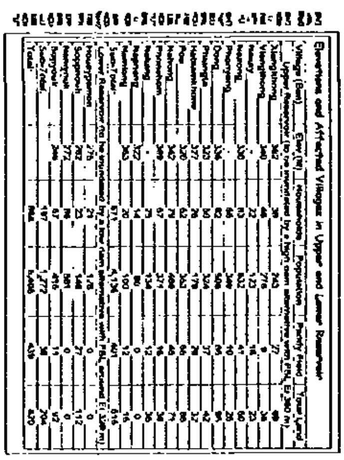
UPSTREAM VILLAGES

HOUSEHOLDS: 877

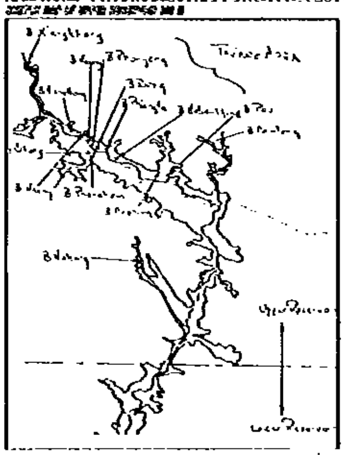
POPULATION: 5,4[illegible]

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT




Elevations and Affected Villages in Upper and Lower Reservoir

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT



NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION
Mid-August to Mid-September, 1998

FIELD VISIT RESULTS

- FOUR (4) LOWER RESERVOIR VILLAGES in Hom District, Xaysomboon Special Zone

HOUSEHOLDS & POPULATION, AUGUST 1998

Village (Ban)	Households	Population	Yrs
Houayphanom	21	128	3
Sopphouan	23	148	-
[illegible]	86	681	15-18
[illegible]	67	4[illegible]5	15-18
Total	197	1,272	

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION
Mid-August to Mid-September, 1998

POSSIBLE MITIGATION STRATEGIES

- UPSTREAM MITIGATION:
  - Inundation & Resettlement of 5,500 People by Big Dam, 350m Reservoir
    - ★ Investigation of design change to minimize resettlement, for example, 320 m reservoir to avoid inundation of Upper Reservoir
    - ★ Preparation of draft Preliminary Resettlement Plan

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION
Mid-August to Mid-September, 1998

POSSIBLE MITIGATION STRATEGIES

- DOWNSTREAM MITIGATION:
  - Adverse Impacts on Water Quality
    - ★ Biomass Clearance in Reservoir
    - ★ Compensation for loss of fisheries combined with supporting program for community fish culture
    - ★ Development of alternative water supplies
  - Dangerous Water Discharges from Dam
    - ★ Reregulating Pond

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION
Mid-August to Mid-September, 1998

FIELD VISIT RESULTS

- FOURTEEN (14) UPPER RESERVOIR VILLAGES in Taviang Sub-District, Thathom District, Xaysomboon Special Zone

HOUSEHOLDS & POPULATION, AUGUST 1998

Village (Ban)	Households	Population	Yrs
[illegible]	38	243	>30
[illegible]	40	2[illegible]8	-
[illegible]	27	173	6-10
[illegible]	83	632	>30
[illegible]	61	349	6-10
Dong	82	6[illegible]4	>30
[illegible]	58	326	15-18
[illegible]	26	170	3-5
[illegible]	67	363	>20
[illegible]	70	484	15-18
[illegible]	67	371	6-10
[illegible]	26	134	3-5
[illegible]	14	80	-
[illegible]	20	130	-
Total	659	4,134	

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION

Mid-August to Mid-September, 1998

EXECUTION PLAN FOR SOCIOECONOMIC SURVEY

PREPARATION STAGE

- Review Lao/WB/ADB Policies on Involuntary Resettlement, Indigenous Peoples
- Reconnaissance to Project Area - Determine logistics, explain purpose of Survey.
- Prepare Questionnaires
  - Village - General social, economic, land use situation - Bridges, Tracks, schools, communal forest, etc
  - HH - ethnicity, demography, migration, family structure, income, expenditure, assets, resettlement preferences, etc.

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION

Mid-August to Mid-September, 1998

EXECUTION PLAN FOR SOCIOECONOMIC SURVEY

MAIN OBJECTIVE

- Assess social impacts upstream and downstream of Nam Ndiep-1 Dam

UPSTREAM OBJECTIVES:

- Provide basis for proposing alternative design changes, minimizing as possible resettlement, as per WB/ADB policies
- Provide initial data for draft Preliminary Resettlement Plan

DOWNSTREAM OBJECTIVES:

- Provide basis for mitigation strategies for loss of water, decrease in water quality; to be coordinated with fishery surveys.

NAM NGIEP-1 HYDROELECTRIC POWER PROJECT

FIRST FIELD INVESTIGATION

Mid August to Mid-September, 1998

EXECUTION PLAN FOR SOCIOECONOMIC SURVEY

FIELD SURVEY, ANALYSIS & REPORTING

- Prepare Survey Design - Random sampling 10-20% Upstream: 5-10% Downstream HHs.
- Field Test Questionnaires
- Carry out Survey - December/January, period of reduced agriculture, dry season.
- Analysis & Reporting - January/February. Report presentation during 2nd Workshop in June 1999
  - Baseline Data - Resettlement planning, mitigation strategies
  - Basis for decision to advance next phase feasibility/design studies.

3. GENERAL WORKSHOP

3.2 2ND GENERAL WORKSHOP

3.2.1 PROGRAM AND ATTENDANCE LIST

The Nam Ngiep-I Hydroelectric Power Project

ACTUAL PROGRAM

ON

GENERAL WORKSHOP FOR INTERIM REPORT

First Day (June 9, Wednesday, 1999)			
No.	Time	Program	Presented By
1.	8:30 - 9:30	Registration at Vientiane	HPO/MIH staff
2.	9:30 - 11:30	Transportation from Vientiane to Pakxan	-
3.	11:30 - 12:00	Accommodation at Pakxan	HPO/MIH staff
4.	12:00 - 13:00	Lunch Time	-
5.	13:00 - 13:30	Registration at Pakxan, Distribution of Suggestion Sheets	HPO/MIH staff
6.	13:30 - 13:40	Introduction of Time schedule & Participants	Facilitator
7.	13:40 - 13:45	Opening Speech (Ministry of Industry & Handicrafts)	Vice-Minister (Mr.Somboune)
8.	13:45 - 13:50	General Speech (JICA/Tokyo)	Director (Mr.Nagata)
9.	13:50 - 14:00	General Speech (Bolikhamsay Province)	Deputy (Mr.Khamphanh)
10.	14:00 - 14:30	Brief Presentation of (i)Project, (ii)Study, (iii)Basic Approach	JICA S/Team (Mr.I.Araki)
11.	14:30 - 15:00	Afternoon Coffee Break	Drink service
12.	15:00 15:25	Report on Previous Workshops	JICA S/Team (Mr.I.Araki)
13.	15:25 - 16:30	Presentation of Hydropower plan on (i)Alternative study results and (ii)Economic Analysis	JICA S/Team (Mr.H.Ikeda)
14.	16:30 - 17:20	Detailed Discussion (I)	Facilitator

Second Day (June 10, Thursday, 1999)			
No.	Time	Program	Presented By
1.	8:30 - 9:00	Registration	HPO/MIH staff
2.	9:00 - 10:10	Presentation of Natural envir. aspects on EIA interim results	JICA S/Team (Dr.B.Yon)
3.	10:10 - 10:50	Morning Coffee Break	Coffee service
4.	10:50 - 11:00	Detailed Discussion (II)	Facilitator
5.	11:00 - 12:30	Presentation of Social envir. aspects on EIA interim results	JICA S/Team (Dr.Ragsdale)
6.	12:30 - 14:00	Lunch Break	Lunch service
7.	14:00 - 15:30	Detailed Discussion (III)	JICA S/Team
8.	15:30 - 16:00	Afternoon Coffee Break	Coffee service
9.	16:00 - 17:30	Detailed Discussion (IV)	JICA S/Team
10.	17:30 - 18:30	Official Meeting with Provincial and District Officers	HPO, JICA, EAC, S/Team
11.	18:30 - 19:30	Break Time	-
12.	19:30 - 21:30	Dinner Reception of Workshop for Interim Report	All participants

Third Day (June 11, Friday, 1999)			
No.	Time	Program	Presented By
1.	8:30 - 9:00	Registration & Receipt of Suggestions Sheets	HPO/MIH staff
2.	9:00 - 9:10	Report on Discussion Results about Possible Resettlement Area	JICA S/Team (Mr.I.Araki)
3.	9:10 - 10:40	Detailed Discussion (V)	Facilitator
4.	10:40 - 11:10	Morning Coffee Break	Coffee service
5.	11:10 - 11:45	Supplementary Explanation by HPO	HPO (Mr.Somboune)
6.	11:45 - 11:50	Report on EAC Meeting Results	JICA (Mr. Adachi)
7.	11:50 - 11:55	Schedule of Next Workshop	JICA S/Team (Mr.Araki)
8.	11:55 - 12:10	Closing Speech	Vice-Minister of MIH
9.	12:10 - 12:30	Break Time	-
10.	12:30 - 14:00	Lunch Break	-
11.	14:00 - 16:00	Transportation from Pakxan to Vientiane	All participants

Nam Ngiep-I Hydroelectric Power Project
ATTENDANCE LIST (1/3)
GENERAL WORKSHOP FOR INTERIM REPORT
In Pakxan, Lao PDR, On June 9 - 11, 1999

I. Chairman

No.	Name	Position	Organization	9th	10t	10t	11t
1.	Mr. Somboun Rasasombath	Vice Minister	Ministry of Industry and Handicraft	O	-	-	O
2.	Mr.Khamphanh Sitthidampha	Deputy Governor	Borikhamsay Province	O	O	O	O
3.	Mr. Soukata Vichith	Director	STENO	O	O	O	O
4.	Mr. Douangmisay Likaya	Director	Ministry of Information and Culture	O	O	O	O
5.	Mr. Hayao Adachi	Specialist	JICA/Tokyo	O	O	O	O
6.	Mr. Kuniaki Nagata	Director	JICA/Tokyo	O	O	O	O

II. Central Government

No.	Name	Position	Organization	9th	10t	10t	11t
1.	Mr. Khamla Keophitull	Deputy of Economic	National Assembly	O	O	-	O
2.	Ms Malaysieng Sakonniyom	Deputy Director	Ministry of Foreign Affair	O	O	O	O
3.	Mr. Bounma	Engineer	Ministry of Labor & Social Welfare	O	O	O	O
4.	Mr. Boualith Khounli	Deputyof Division	Ministry of Finance	O	O	O	O
5.	Mr. Inthapunya	Engineer	Ministry of Justice	O	O	O	O
6.	Mr.Phitthanusone	Deputy of Division	Ministry of Public Health	O	O	O	O
7.	Mr. Khamphachan	Engineer	Ministry of Agriculture & Forestry	O	O	O	O
8.	Mr. Viendvongphet	Chief of Division	Department of Forestry	O	O	O	O
9.	Mr. Eravan	Deputy of Division	Department of Geology & Mining	O	O	O	O
10.	Mr. Viengnakhone	Engineer	Commit for planning Cooperation	O	O	O	O
11.	Mr. Khamrangsi	Engineer	Commit for Planning Cooperation	O	O	O	O
12.	Mr. Kongkham	Engineer	Commit for Planning Cooperation	O	O	O	O
13.	Mr. Phonexay Vilaysak	Engineer	Commit for Investment & Cooperation	O	O	O	O
14.	Mr. Bounphakan Sisanonh	Deputy of Division	Prime Minister Office	O	O	O	O
15.	Mr.Thongkhoun Khongphasith	Chief of Division	Lao Trade Union	O	O	O	O
16.	Mr. Thavone Vongphosi	Engineer	STENO	O	O	O	O
17.	Mr. Phouvong Onsisaleurm	Engineer	STENO	O	O	O	O
18.	Mr.Chansanouk Kounavong	Engineer	STENO	O	O	O	O
19.	Mr. Chanthi	Head of Division	National Front	O	O	O	O
20.	Mr.Thongsi Bounthiphanyo	Engineer	National Front	O	O	O	O
21.	Ms. Khamla	Deputy Director	Lao Women Union	O	O	O	O
22.	Mr. Xonghoua	Engineer	Center Development	O	O	O	O
23.	Mr. Phalim Daravong	Chief of Division	EDL	O	O	O	O
24.	Mr. Manasine Vongxay	Engineer	EDL	O	O	O	O
25.	Mr. Hitoshi Koyabu	JICA Expert	EDL (JICA)	O	O	O	O
26.	Mr. Soukhan Phongsavath	Deputy Director	MIH	O	O	O	O
27.	Mr. Phetratsadone	Deputy of Division	MIH	O	O	O	O
28.	Mr. Bouathi Soukkaseum	Deputy Director	MIH	O	O	O	O
29.	Mr. Khamsaone	Deputy of Division	MIH	O	O	O	O
30.	Mr. Thongkhan	Engineer	MIH	O	O	O	O
31.	Mr. Somboun Manolom	Deputy Director	MIH, Department of Electricity, HPO	O	O	O	O
32.	Mr. Hiroshi Murashige	JICA Expert	HPO (JICA)	O	O	O	O
33.	Mr. Sisoukhan	Engineer	HPO	O	O	O	O
34.	Mr. Khammanh	Engineer	HPO	O	O	O	O
35.	Mr. Chansaveng	Engineer	HPO	O	O	O	O
36.	Mr. Seumkham	Engineer	HPO	O	O	O	O
37.	Mr. Sanhya	Engineer	HPO	O	O	O	O
38.	Mr. Voladeth Phonekeo	Engineer	HPO	O	O	O	O
39.	Mr. Vitullabundith	Engineer	HPO	O	O	O	O

Nam Ngiep-I Hydroelectric Power Project
ATTENDANCE LIST (2/3)
GENERAL WORKSHOP FOR INTERIM REPORT
In Pakxan, Lao PDR, On June 9 - 11, 1999

III. Local Government

No.	Name	Position	Organization	9th	10t	10t	11t
1.	Mr. Boun Tont	Head of Investment	Xiengkhouang Province	O	O	O	O
2.	Mr. Singkham Sivongkham	Head of Division	Saysomboun S/Zone, Industry & Handicraft	O	O	O	O
3.	Mr. Somsi Chanthamixay	Deputy Secretary	Borikhamsay Province	O	O	O	O
4.	Mr. Phiaxong Xiathuyonghua	Official	Borikhamsay Province	O	O	O	O
5.	Mr. Siengdala	Head of Planning	Borikhamsay Province	O	-	O	O
6.	Mr. Vanvilay	Deputy Director	Borikhamsay Province	O	O	O	O
7.	Mr. Khamkhong Kongvongsa	Engineer	Borikhamsay Province	-	O	O	O
8.	Mr. Bouachan Bounvongsay	Head of Division	Borikhamsay, Industry & Handicraft	O	O	-	O
9.	Mr. Khianmani Inthavong	Official	Borikhamsay, Industry & Handicraft	O	O	-	O
10.	Mr. Khamsing Sayphuvong	Engineer	Borikhamsay, Industry & Handicraft	O	O	O	O
11.	Mr. Thongchantha Minavong	Deputy of Division	Borikhamsay, Communication.	O	O	O	O
12.	Mr. Phichith Sayaphone	Engineer	Borikhamsay, Argriculture & Forestry	O	O	O	-
13.	Ms. Phonesay	Chief	Borikhamsay, Lao Women Union	O	O	O	O
14.	Mr. Souvanthon	Head of Division	Borikhamsay, Inform. & Culture	O	O	O	O
15.	Mr. Khamphet	Head of Unit	Borikhamsay, EDL	O	O	O	-
16.	Mr. Douangsi	Head	Borikhamsay, EDL	-	O	O	O
17.	Mr. Ounchanthavong	Deputy Chief	Borikhamsay, Lao Trade Union	O	O	O	O

IV. Local People

No.	Name	Position	Organization	9th	10t	10t	11t
1.	Mr. Bounthand	Assistance of District	Pakxane District	O	O	O	O
2.	Mr. Bouakeo	National Front	B. Thakokkhene	O	O	O	O
3.	Mr. Kecoudon	Head of Village	B. Songkhone	O	O	O	O
4.	Mr. Bounyom	National Front	B. Nam Ngiep	O	O	O	O
5.	Mr. VongPhet Mongkhon	Head of Village	B. Nam Ngiep	O	O	O	O
6.	Mr. Phouvong	National Front	B. Seneoudom	O	O	O	O
7.	Mr. Dao	Head of Village	B. Seneoudom	O	O	O	O
8.	Mr. Khammay Lovanxay	Head of Village	B. NamTek	O	O	O	O
9.	Mr. Mayphanh	Head of Village	B. Phonesi	O	O	O	O
10.	Mr. Bounkham	Head of Village	B. Thakokkhand	O	O	O	O
11.	Mr. Khamxay	Head of District	Borikhan District	O	O	O	O
12.	Mr. Bounkong	Head of Village	B. Somsieune (Muangmai)	O	O	O	O
13.	Mr. Phouvieng Piakeo	Villager	B. Hatheun (Hatkham)	O	O	O	O
14.	Mr. Bounchan	National Front	B. Hatheun (Hatkham)	O	O	O	O
15.	Mr. Bouthdiphaseuth	Assistance of Village	B. Nampa	O	O	O	O
16.	Mr. Bouthdeephaseuth	Assistance of Village	B. Nampa	O	O	O	O
17.	Mr. Dava	National Front	B. Nampa	O	O	-	-
18.	Mr. Bounsou Xayyavong	Head of Village	B. Nampa	O	O	O	O
19.	Mr. Souatho Phialouang	Assistance of District	Hom district	O	O	O	O
20.	Mr. Souavang	Head of Village	B. Sopphouan	O	O	O	O
21.	Mr. Yialongvang	Head of Village	B. Houaypamom	O	O	O	O
22.	Mr. Bouaphanh	Head of Thavieng	Thavieng Sub-District	O	O	O	O
23.	Mr. Bounmad	Assistance of Village	B. Namlong	O	O	O	O
24.	Mr. Tidphomma	Head of Village	B. Naxong	O	O	O	O
25.	Mr. Done	Head of Village	B. Viengthong	O	O	O	O
26.	Mr. Vith	Assistance of Village	B. Nahong	O	O	O	O
27.	Mr. Khammouane	Head of Village	B. Phiangta	O	O	O	O
28.	Mr. Bounsou	Head of Village	B. Phonyeng	O	O	O	O
29.	Mr. Kongsi	Head of Village	B. Pou	O	O	O	O
30.	Mr. Douang	Head of Village	B. Dong	O	O	O	O
31.	Mr. Somlith	Head of Village	B. Xiengkhong	O	O	O	O
32.	Mr. Thoumma	Head of Village	B. Phonehom	O	O	O	O
33.	Mr. Bounnoy	Head of Village	B. Nakang	O	O	O	O
34.	Mr. Bounmy	Head of Village	B. Naxay	O	O	O	O
35.	Mr. Bounchan	Assistance of Village	B. Hatsamkhone	O	O	O	O

Nam Ngiep-I Hydroelectric Power Project
ATTENDANCE LIST (3/3)
GENERAL WORKSHOP FOR INTERIM REPORT
In Pakxan, Lao PDR, On June 9 - 11, 1999

V. International Organization

No.	Name	Position	Organization	9th	10t	10t	11t
1.	Mr. Seiji Nagano	Secretary	Embassy of Japan	O	-	-	-
2.	Mr. Shoshiro Horigome	Project Officer	Mekong River Commission Secretariat	O	O	O	O
3.	Mr. Uodomsak Philavong	Engineer	Mekong River Commission Secretariat	O	O	O	O
4.	Mrs. Kilmarx	Environmental Unit	UNDP	-	O	O	-
5.	Dr. D.L.Graybill	Natural Environment	Env. Assess.Committee (EAC)	O	O	O	O
6.	Dr. Daiei Inoue	Director	Env. Assess.Committee (EAC)	O	O	O	O
7.	Mr. Mikio Masaki	Project Formulation Adv.	JICA/Lao Office	O	-	-	-
8.	Mr. Sophonh	Program Officer	JICA/Lao Office	O	O	O	O
9.	Mr. Hiroyuki Kobayashi	Program Officer	JICA/Tokyo	O	O	O	O
10.	Mr. Hiroyuki Tsuchiya	Hydropower Planner	JICA/Tokyo	O	O	O	O

VI. NGOs in Lao PDR

No.	Name	Position	Organization	9th	10t	10t	11t
1.	None	-	-	-	-	-	-

VII. NGOs Overseas in Lao PDR

No.	Name	Position	Organization	9th	10t	10t	11t
1.	None	-	-	-	-	-	-

VIII. Facilitator, Media and

No.	Name	Position	Organization	9th	10t	10t	11t
1.	Mr. Vatthana	Media	Borikhamsay , Inform.& Culture	O	-	-	-
2.	Mr. Khamkhong	Facilitator	Employed by HPO	O	O	O	O
3.	Mr. Soradeth Bannavong	Interpreter	Employed by HPO	O	O	O	O
4.	Mr. Detmahinh Souphanh	Interpreter	Employed by HPO	O	O	O	O

IX. Consultant and Study Team

No.	Name	Position	Organization	9th	10t	10t	11t
1.	Mr. Chung Phounlatsavong	Chairman	STS Consultant	O	-	-	-
2.	Mr. Sisavath Chanthamisay	Engineer	STS Consultant	O	O	O	O
3.	Mr. Sourrisak	Manager	STS Consultant	O	O	O	-
4.	Mr. S.P.Watson	Sub-contract with STS	RMR	O	O	O	O
5.	Mr. Ichiro Araki	Team Leader	JICA Study Team	O	O	O	O
6.	Mr. Hiroshi Ikeda	Hydropower Planner	JICA Study Team	O	O	O	O
7.	Dr. Bernard Yon	Natural Environment Expert	JICA Study Team	O	O	O	O
8.	Dr. Tod Anthony Ragsdale	Social Environment Expert	JICA Study Team	O	O	O	O

Ground Total : 119 Peoples