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THE INSPECTION PANEL

NEPAL: ARUN III

**MANAGEMENT RESPONSE TO
REQUEST FOR INSPECTION**

ACRONYMS

ACRP	Acquisition, Compensation, and Rehabilitation Plan
BP	Bank Procedures
DSM	Demand Side Management
EA	Environmental Assessment
GIS	Geographic Information System
GLOF	Glacier Lake Outburst Floods
HMG/N	His Majesty's Government of Nepal
IDA	International Development Association
IEPS	Initial Executive Project Summary
kWh	Kilowatt hour
LCGEP	Least Cost Generation and Expansion Plan
MIS	Management Information System
MW	Megawatts
NEA	Nepal Electric Authority
NGO	Non-governmental Organization
OD	Operational Directive
OP	Operational Procedures
OPN	Operational Policy Note
PAFs	Project Affected Families
PIC	Public Information Center
PID	Project Information Document
RAP	Regional Action Plan for Arun III Project
SAR	Staff Appraisal Report
SPAFs	Seriously Project Affected Families
UNDP	United Nations Development Programme
WDR	World Development Report

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SOUTH ASIA REGION
November 21, 1994

CHAPTER 1: STRATEGIC CONTEXT AND PROJECT BACKGROUND

I. STRATEGIC CONTEXT

1. Nepal is the seventh poorest country in the world. Annual GDP per capita is under \$200. Its social indicators are on a par with the least developed countries in Africa. Population is increasing rapidly; it is projected to double within 30 years. The absolute poor constitute almost half the population.
2. The ranks of the poor have been increasing in Nepal. GDP has been rising by 3.5 percent per annum. But this is not fast enough to reduce the number of poor people, when population itself is growing at 2.5 percent per annum. Economic growth would need to accelerate for the number of poor people to begin to decline.
3. Nor can significant inroads into poverty be achieved through redistributive policies. Since such a large percentage of the population is poor, there is simply too little to redistribute for such policies to be an important part of the poverty reduction strategy. This suggests that the core 1990 WDR strategy of efficient labor-intensive growth plus investments in human capital is the right approach for Nepal.
4. The Government has been pursuing this approach. It has adopted a number of policy reforms in recent years. Expenditures on basic social services have been increased and are programmed to rise further — by over 5 percent per annum in real per capita terms over the next 10 years.
5. While the results of these efforts have been positive, they have been constrained by two major factors — implementation capacity to convert the higher social sector spending into markedly improved literacy and health outcomes and power to fuel the private sector supply response to the reforms.
6. The proposed Arun III project addresses the second of these constraints. It will help put an end to the load-shedding and power shortages that have kept the labor-intensive micro-enterprise and tourist sectors from expanding and relieve existing pressures on fuelwood and on forest resources. By providing the basis for sustained and efficient growth, it is central to Nepal's — and IDA's — poverty reduction strategy.
7. The economic analysis of the proposed project suggests that the expected rate of return is 13.5 percent. This is adequate by Bank standards, which typically uses a minimum 10 percent benchmark for the opportunity cost of capital as a cutoff. Moreover, for Nepal, the critical constraint is not the availability of donor financing — indeed, Nepal's calculated "norm" IDA allocation is not being fully taken up for lack of good projects, and donor-financed project disbursements are among the slowest in the world. Rather the key constraint is absorptive capacity. Accordingly, the 10 percent opportunity cost benchmark overstates the value that the Arun project funds could earn in alternative uses over the next few years.

8. In the circumstances, Bank strategy is to work with the Nepalese authorities simultaneously on three fronts:

- First, we are helping Nepal to build institutional capacity on a broad front. As noted, implementation capacity is the key development constraint that Nepal faces. We are working with the authorities to relax that constraint and to increase the country's absorptive capacity for donor and other inflows. We are doing it through projects, economic and sector work, and technical assistance. This is a staff-intensive process, but essential for Nepal's development prospects.
- Second, we are continuing to work with the Nepalese authorities on the policy and public expenditure framework for sustained growth and poverty reduction. Critical here is the continuation of the program for revenue increases and expenditure prioritization — including the emphasis on increased spending for basic social services — set forth in the Policy Framework Paper.¹
- Third, within the broader context of support for efficient power sector development in Nepal, we are proposing to finance (with other donors) the Arun project. The primary objective of this project is to meet Nepal's growing power requirements at least cost so that this constraint on growth and poverty reduction can be overcome.

II. PROJECT BACKGROUND

9. Nepal's per capita commercial energy consumption is one of the lowest in the world. Only 9 percent of the population has access to electricity. Fuelwood is the most important energy source for cooking and heating. Indeed, the main energy sources are fuelwood (72 percent), agricultural residues (12 percent), dung (9 percent), and hydropower (1 percent); the remainder is imported (6 percent). Nepal's hydropower potential is estimated at 25,000 megawatts (MW), of which only 241 MW has been developed to date. The least-cost generation expansion plan for the Nepal grid identifies the Arun III hydropower project as one of the core investments in meeting Nepal's medium-term energy needs.

10. The proposed project, given its situation in the Arun Valley, poses a unique and complex set of environmental and socio-economic issues. The Valley is now accessible only by foot. Its 450,000 inhabitants lead a harsh subsistence life, with limited access to education and health services. They have no access to electricity or safe drinking water. Rapid population growth contributes to pressure on food supplies, jobs, and natural resources, in particular forests. Against this background, the proposed project represents a major opportunity — and poses major risks — for the future of the Valley. The access road required for project development and maintenance will greatly reduce transport costs into and out of the Valley and facilitate tourism and labor market development. But these changes, coupled

^{1/} See Nepal: Policy Framework Paper, 1994-96; SecM94-324, March 30, 1994.

with construction activities, could also have major effects on the fragile environment of the area.

11. In recognition of the various development-related risks, a very detailed environmental and socio-economic analysis was undertaken during project preparation. The analysis, led to the formulation of an Environmental Action Plan, with three major components: an Environmental Mitigation Plan, a Land Acquisition, Resettlement, and Compensation Plan, and a Regional Action Plan. Taken together the planned mitigation measures cover the full range of environmental and socio-economic risks. They aim to limit negative direct impacts and to maximize the Valley's prospects for sustainable growth and poverty reduction.

CHAPTER 2: REQUEST FOR INSPECTION

1. The Request for Inspection alleges violation of Bank operational policies and procedures in six areas:

- ***economic analysis of projects:*** The allegations are that alternatives have not been properly considered and that the risk analysis is faulty. The latter is ascribed to the failure to treat properly three issues — possible upstream developments in China; possible shortfalls in power exports to India; and the valuation of large-project risks.
- ***energy policy:*** The allegation is the omission of demand side management measures from the program.
- ***disclosure of information:*** The allegations are that the PID lacks required detail; that technical material was released too late to be useful; and that the Environmental Assessment was not available in Nepali in a timely and convenient manner. There is also a request to make public the SAR.
- ***environmental assessment:*** The allegations are that alternatives were not fully considered; that there was insufficient material available before the public meetings; and that the cumulative impacts of Arun Valley development were not adequately analyzed. The lack of an assessment of the transmission line is alleged, along with the lack of mitigation plans for fish, floods, and disposal of construction spoils.
- ***involuntary resettlement:*** The allegations are that there were insufficient compensation and failure to provide electricity to the Valley and permanent employment and land to displaced families; that there was no socio-economic survey; and that resettlement planning was not done in a timely manner.
- ***indigenous peoples:*** The allegations are that there are no local benefits for the Valley's indigenous peoples, who will suffer only adverse impacts and that there is no mitigation or indigenous peoples development plan; that the cadastral survey was late; and that the indigenous peoples were insufficiently consulted.

2. The Request for Inspection also alleges adverse effects on the Requesters' rights and interests, in terms of:

- crowding out of social sector spending;
- too heavy reliance on foreigners for construction;
- crowding out of small power projects;
- undermining democratic processes; and
- adverse effects in the Arun Valley, including income loss, unemployment, food deficit, deforestation, health problems, and loss of livelihood from land.

CHAPTER 3: PROJECT-SPECIFIC ISSUES RAISED IN THE REQUEST FOR INSPECTION¹

I. ECONOMIC EVALUATION OF INVESTMENT OPERATIONS

A. *The studies of possible alternative investments and approaches to meeting Nepal's power needs undertaken during project preparation meet the requirements of OP 10.04: the Economic Evaluation of Investment Operations.*

1. According to OP 10.04, consideration of alternatives is one of the most important features of proper project analysis throughout the project cycle. Bank procedures for the analysis of power projects involve the identification of the least-cost generation expansion plan (LCGEP) for meeting the projected load growth. The resulting least-cost investment program is then subjected to economic rate of return and risk analysis.

2. The analysis of Arun III followed this approach. The SAR summarizes the LCGEP analysis, for which many (some 3,000) alternative generation and expansion plans were initially considered. Underlying the LCGEP are 11 individual hydro investment project candidates of varying sizes, which had been examined to the pre-feasibility level or beyond. Thermal options were also considered, subject to technical feasibility constraints. The SAR includes a detailed description of the economic and risk analysis.²

3. In response to questions, additional alternative strategies were investigated in order to check the robustness of the standard least-cost analysis. This involved the consideration of project candidates that preliminary analysis had previously screened out. With the expanded project candidate set, the LCGEP model was constrained to *not* introduce Arun before 2010. This constraint led to the inclusion of several "Plan B" projects in the 2000-2009 period's LCGEP.³ Using the set of assumptions considered by the Bank's appraisal team to be most likely, the cost of this alternative investment program was higher than the cost of the HMG/N's proposed investment program.⁴

4. The Request for Inspection argues that the Bank violated its operational policies and procedures by not ensuring that the Plan B project proposals were investigated to the pre-feasibility stage. This is an area where there are no hard-and-fast rules; professional judgment — about the likely costs and benefits of further study, and of the associated delay — is the determining factor. The appraisal team's assessment, endorsed by Management, was that the number of hydro candidates explored to the pre-feasibility level represented a very respectable effort for a country such as Nepal — especially in view of the time and expense

^{1/} Document numbers refer to the documents requested by the Panel in Mr. Bröder's November 4 memorandum to Mr. Wood. See Annex B for the list of documents and the corresponding numbering.

^{2/} See Document #1: pp. 54-62; Annexes 5.4 and 5.7.

^{3/} Plan B is described in Document #1: Annex 5.4, para 41.

^{4/} See Document #5. See also Document #1: Annex 5.4, para 42.

incurred by the authorities in investigating them.⁵ Hence the Bank's policy requirement was, in our view, met by the standard least-cost analysis. The reasonableness of this judgement is supported by the supplemental analysis done on the Plan B alternative. There is no evidence that further study of projects in the 30-80 MW range would displace Arun III from Nepal's LCGEP. Meanwhile, analysis and refinement continues. Indeed, the project contains funding for further pre-feasibility and feasibility work for small hydro projects. If attractive projects do emerge, they can be accommodated in the periodically-revised LCGEP.

B. *The analysis of project risks meets the requirements of OP 10.04.*

5. As summarized in OP 10.04, the Bank's approach to risk analysis is to identify the costs and benefits of the various possible outcomes and to assign probabilities to them, as the basis for calculating the project's expected economic rate of return. This approach was carefully followed in the economic analysis of Arun III. The approach described in Annex 5.7 of the SAR goes beyond standard Bank practice — in the transparency and explicitness of the delineation of the assumptions underlying the analysis and the number (72) of possible outcomes considered.⁶

6. The breadth and depth of the risk analysis notwithstanding, it does not consider the risks to project viability of the possible construction of the Changsuo Basin Irrigation Project referred to in the request for inspection. This is because the appraisal team judged these risks to be minimal. As noted in the SAR, the catchment area of the Changsuo Basin is about 230 km², less than 1 percent of the Arun Basin catchment, so any diversion is likely to be almost imperceptible at the project site.⁷ Even if the flow in the tributary were totally cut off, the impact would not be significant. In the wet season, the Arun River flow would still be more than 400 m³/second; in the dry season, the river is fed by aquifers throughout the basin as well as by glacier melt. The Chinese authorities have recently reconfirmed that, because of its small size, the Changsuo Basin Irrigation Project is likely to have no effect on downstream water users.⁸

7. The Request for Inspection suggests that Arun III's viability depends on power sales to India; hence it argues that project approval must await a bilateral agreement. The economic analysis assumes "committed" energy sales to India — but for only up to 50 MW; purchases from India up to the same level are also assumed. This modest assumption is fully

^{5/} At an estimated average cost of \$1-1.3 million per pre-feasibility study and \$2.5 million per feasibility study, and with detailed engineering ranging up to approximately \$7 million for Kali Gandaki and \$15 million for Arun, the volume of engineering work carried out by Nepal represents considerable effort and investment of resources, or an estimated \$50 million since 1983.

^{6/} For a discussion of standard Bank practice, see *Econ Report: Economic Analysis of Projects — Towards a Result-Oriented Approach to Evaluation*: World Bank, 1992.

^{7/} See Document #1: paras 3.15-3.16.

^{8/} See communications (October 24, 1994 and November 14, 1994) between Guangyao Zhu, Advisor to the World Bank Executive Director for China and Donal O'Leary, World Bank Senior Systems Planner/Engineer.

in line with recent levels of power trade between Nepal and India. The absence of a formal agreement has not impeded this volume of sales, even during the 1989-1990 trade and transit dispute which disrupted other trade flows. Recognizing the greater uncertainty associated with "surplus" sales to India (above 50 MW), they are *not* included in the demand forecast which was used in the least-cost analysis, and the economic analysis both values them at half the price of current sales and tests the sensitivity of the project's viability to their realization. The result — if no surplus sales occur — is a one percentage point drop in the project's economic rate of return, which remains above the opportunity cost of capital.

8. The Request for Inspection suggests that the project's large size needs to be factored into the risk analysis. OP 10.04 does not mention the treatment of risks in large projects, and special analytic techniques are not required. Nor does the Bank have an explicit policy with respect to the *valuation* of risks — as distinguished from the analysis and/or management of risks — associated with large projects. That said, the recognition of Arun's magnitude and importance to the Nepalese economy was what led the Bank to undertake such comprehensive risk analysis of this project, which is now considered a best-practice example of such analysis.

II. POWER AND ENERGY POLICY

A. *The design and appraisal of the project are/were consistent with Bank policies on the power sector and energy efficiency.*

9. A central tenet of Bank power and energy policy is the focus on countries with a clear commitment to improving sector performance.⁹ Nepal has demonstrated the requisite commitment through the framework it is introducing under Arun III for the transparent regulation of the sector, the commercialization of the Nepalese Electricity Authority (NEA), and the promotion of private sector provision of power.¹⁰ In addition, building on the IDA-financed FY92 Power Sector Efficiency Project, Arun III provides a vehicle for integrating energy efficiency issues into the policy dialogue — fully in line with Bank policy — for which the use of tariffs as an instrument of demand side management (DSM) is a critical issue. Following large increases in 1991 and 1993, electricity tariffs were raised by 38 percent in March 1994 — bringing them to about 70 percent of long-run marginal costs. Under the project, NEA is committed to further increases in order to meet its financial requirements;¹¹ with base case assumptions, they would average 4 percent per annum in real terms during the 1996-2004 period. By the latter date, tariffs would equal long-run marginal costs.

10. NEA's DSM program also includes non-price measures such as equipment sizing, timing of plant operation, power factor correction, and energy efficient lighting, as well as

⁹/ See World Bank, *The World Bank's Role in the Electric Power Sector and Energy Efficiency and Conservation in the Development World*, 1992.

¹⁰/ See Document #1: paras 1.23-1.27.

¹¹/ See Document #1: paras 1.18, 4.23, and 4.27.

efficiency improvement of non-electrical loads such as industrial steam cycle systems.¹² A central outreach facility to institutionalize these activities with the involvement of the private sector is also planned. Meanwhile, NEA has been carrying out a program to identify and systematically reduce network losses. NEA staff are trained in repairing defective meters, rehabilitating service connections and deteriorated lines, and related tasks. Equipment has been introduced to monitor losses, meter testing facilities have been improved, and exempt consumers (such as temples and NEA's own consumption) have been brought within the billing system. Non-technical losses are being addressed by improved meter reading and billing procedures, as well as by field inspections and correction of irregular connections. The resulting improvements in energy efficiency have been built into the Arun III load forecast and LCGEP.

III. DISCLOSURE OF INFORMATION

A. *The content and dissemination of the Arun Project Information Document were substantially in line with Bank policy and procedures.*

11. This is an area where Bank policy and procedures have been evolving rapidly alongside project developments. Indeed, BP 17.50: *Disclosure of Operational Information* was issued in September 1993 — at the same time that the project was being appraised. The Arun Project Information Document (PID) was prepared on January 24, 1994, and made available to the Public Information Center (PIC) in March 1994. That the PID was not subsequently revised is fully consistent with BP 17.50. The latter requires revision of the initial PID before appraisal; revision after appraisal is called for only if there are major changes in the project. However, Arun III had been appraised by the time the initial PID was issued, and, in any case, appraisal did not result in major changes.

12. The PID provides the information required by BP 17.50. However, the PID does not discuss some issues required by BP 10.00, Annex A, *Outline for an Investment Project Information Document*. The latter was issued in June 1994; hence it does not apply to the Arun III PID. By that time, the availability of project information to the public in both Nepal and Washington already far exceeded the expanded requirements of the PID.

B. *Bank policies and procedures on the release of factual technical information have been complied with.*

13. Notwithstanding initial delays in implementing the new disclosure policy, the provisions of BP 17.50 on the release of factual technical documents have been adhered to. A number of factual technical documents¹³ were cleared for public release and made available at the PIC during June/July 1994. More recently, sections of the SAR that deal with factual technical matters have been printed separately; they have been available at the PIC since September 1994.

^{12/} Ibid: paras 1.28-1.29.

^{13/} See May 31, 1994 letter from Ms. Garcia-Zamor to Government of Nepal.

- C. *The dissemination of the results of the Environmental Assessment was substantially in line with Bank policies and procedures.*

14. The Environmental Assessment Summary was published in Kathmandu in May 1993; it was made available in the Arun Project Information Center in Kathmandu, which opened in October 1993. The results of the assessment were made available in Nepali in the Arun Valley in June 1993.¹⁴ An oral presentation in the Valley was also arranged; a video tape of this meeting is available for the Panel's review. With respect to the Environmental Assessment for the Valley alignment of the access road, the key questions requiring feedback concern the compensation arrangements and appeal mechanisms for land acquisition. These have been summarized in Nepali and distributed widely along the proposed route.¹⁵

IV. ENVIRONMENTAL ASSESSMENT

- A. *The Environmental Assessment complies with Bank policies and procedures governing the environmental analysis of alternative investment possibilities, as reflected in OD 4.01: Environmental Assessment.*¹⁶

15. The Environmental Assessment Executive Summary¹⁷ meets the requirements of OD 4.01 with respect to the treatment of alternatives. Chapter 6 of the summary addresses alternative technologies, three dam sites in the Arun Valley, and two different access road alignments. It clearly states that identification of Arun III was based on least cost studies undertaken up to 1990; these studies addressed environmental/social issues at the reconnaissance level for all feasible sites.

16. The access road has the most significant environmental impact of all the components of the Arun III development program. Full Environmental Assessments were conducted for both the Hill and Valley alignments — the two alternative access road routes

^{14/} See Document #1: para 3.37. See also November 11, 1994 communication from J.L. Karmacharya, Director-in-Chief to Donal O'Leary.

^{15/} See para 31 below.

^{16/} OD 4.01 is not applicable to this project since the IEPS for the Project was issued on February 5, 1987. Nevertheless, Management proceeded as if it were applicable. OD 4.01 is applicable to all projects for which IEPSs are issued after October 1, 1991. Projects for which IEPSs were issued earlier are subject to OD 4.00, Annex A, issued on October 31, 1989; for these projects, OD 4.01 is to be applied "where appropriate and feasible". OD 4.00, Annex A is, however, applicable to projects which reached the IEPS stage after October 15, 1989. For other projects past the IEPS stage, the requirement was to review "how to achieve the objectives" of OD 4.00, Annex A within the existing time and resources constraints. See also Annex A.

^{17/} See NEA, *Nepal Arun III Hydroelectric Project: Environmental Assessment Summary*; SecM93-460, May 12, 1993.

considered.¹⁸ The impacts are compared in the Environmental Assessment Summary. The selected Valley route is significantly shorter and affects less people, as illustrated in detail in the Environmental Assessment Summary. In addition, the construction period planned for the road (3-4 years) was carefully designed to allow for full implementation of all mitigation measures.¹⁹

- B. *The basin-wide environmental sustainability study meets the Bank's requirements with respect to the analysis of possible cumulative impacts of the development of the Arun Valley's hydropower resources.*

17. OD 4.01 states that a *regional* Environmental Assessment may be used where a number of similar but significant projects are planned with potentially cumulative impacts. With this as one of its objectives, a basin-wide study was prepared by the King Mahendra Trust for Nature Conservation.²⁰ This study, which is described in a 13 volume report entitled *Environmental Management and Sustainable Development in the Arun Basin*, investigated "ways in which management of the resources, economy and environment of the Arun Basin as a region might best respond to the processes of change brought by the hydroelectric development program".²¹ In addition, project-specific Environmental Assessments covered Arun III, the alternative access roads, and the transmission line; they are discussed in the Environmental Assessment Summary. The effects of Upper Arun, which are likely to be environmentally more sensitive than Arun III, were studied separately.²² Lower Arun, essentially a downstream powerhouse, is generally recognized to have less significant impacts.

- C. *The project's environmental studies and mitigation plans in respect of the transmission lines, risks to fish, and disposal of construction spoil are in conformity with Bank policies and procedures.*

18/ See Joint Venture Arun III Consulting Services, *Addendum to the June 1990 Environmental and Social Impact Study Report: Volume 2: Arun Access Road*, January 1992; and *Environmental Impact Assessment for Arun Access Road — Valley Route*, September 1992.

19/ *Ibid.*

20/ The King Mahendra Trust, which is a Nepalese environmental NGO, was chosen to carry out the work because of its internationally-recognized work in nature conservation in the Chitwan National Park and in setting up the Annapurna Conservation Area, where it has worked closely with indigenous peoples in income generation schemes and in promoting nature conservation and eco-tourism. See also paras 21, 31 and 35 below.

21/ King Mahendra Trust for Nature Conservation, *Environmental Management and Sustainable Development in the Arun Basin*, Volume 1: Summary and Synthesis, October 1991: p. 1.

22/ Morris and Knudsen Engineers, et al, *Upper Arun Hydroelectric Project — Feasibility Study, Phase II: Final Report*, December, 1991: Chapter 11.

18. The Request for Inspection's allegation notwithstanding, a full Environmental Assessment for the transmission line was conducted.²³

19. Under the project, the risk from floods including glacier like outburst floods (GLOFs) and the effects and method of spoil disposal and appropriate mitigation measures were carefully studied.²⁴ The results were reviewed and approved by the Project's Panel of Experts.²⁵

20. Fisheries studies conducted as part of the Environmental Assessment determined the effects of the project to be not significant. Critical spawning periods are during the monsoon season when adequate discharge is available from the (run-of-the-river) project; nevertheless, further work will be undertaken in the first year of the project to verify that potential impacts are minimal and identify mitigation measures, as necessary.²⁶

D. ***The preparation of the Environmental Assessments took into account the views of affected groups and local NGOs, in line with Bank policies and procedures.***

21. Extensive public consultations took place in Nepal during — and in the wake of — the project's environmental studies. Numerous consultations were held in 1990 and 1991 in the course of the King Mahendra Trust basin-wide study. More recently — in 1993 and 1994 — there have been a series of public consultations on the project in the Arun Valley. These have drawn on various project-related documents — in Nepali — including the above-mentioned environmental summary.²⁷ Reflecting the consultations, changes were made in the project to accommodate the views of affected people — including the provision of priority training and jobs with project contractors, and changes in the placement of the access road. The Government has responded to the disappointment expressed by some communities on the changes in the access road alignment by making a commitment to build spur roads to link these communities with the access road. The Regional Action Plan (RAP) also was designed with the direct participation of those to be affected; recognizing that indigenous people have traditionally managed their forests on a community basis, the RAP includes a program for forestry user groups.²⁸

^{23/} See Joint Venture Arun III Consulting Services, *Addendum to the June 1990 Environmental and Socio-Economic Impact Study Report: Volume 3 — EIA of the Transmission Line System*, January 1992.

^{24/} See Environmental Assessment Summary: pp. 39 and 60.

^{25/} See Document #1: paras 3.23 and 3.44(b) for a discussion of the Panel of Experts. See also *Compendium of Panel Reports*.

^{26/} See Environmental Assessment Summary: p. 78.

^{27/} See para 14 above. See also November 11, 1994 communication from J.L. Karmacharya, Director-in-Chief, NEA to Donal O'Leary.

^{28/} See also paras 33, 35, and 36 below.

V. INVOLUNTARY RESETTLEMENT

A. ***The compensation provided for under the Acquisition, Compensation, and Rehabilitation Plan (ACRP) is fully consistent with the requirements of OD 4.30: Involuntary Resettlement.***

22. Arun III does not involve the resettlement of communities or of very large numbers of people. A total of 1,097 project affected families (PAFs) have been identified in the project area. Of these, 140 have been identified as seriously project-affected families (SPAFs).²⁹ The Acquisition, Compensation, and Rehabilitation Plan (ACRP) developed under the project is consistent with OD 4.30.³⁰ The ACRP addresses the compensation of families affected by land acquisition and provides — in addition to normal compensation under Nepal's Land Acquisition Act — rehabilitation grants to help both PAFs and SPAFs during the period of transition after their land is acquired by the project.³¹ Based on comments provided by the Bank, ACRP implementation arrangements were agreed at negotiations.³²

B. ***While land-based resettlement strategies are preferable according to OD 4.30, they are not required, and may not be appropriate, for projects with the scale of displacement of Arun III. Nonetheless, seriously affected families are being given the option of land compensation, and all PAFs are being offered full cash compensation for their land.***

23. Despite efforts to minimize land acquisition, some families face permanent loss of land. The type of compensation provided — cash versus land — depends on the significance of land in the affected family's income-earning activities. However, the actual value of compensation paid will be same whether it is paid in cash or in kind (land); all valuations are done according to standards laid out in the ACRP. SPAFs facing significant loss of land-based income under the project have been offered the option of receiving land instead of cash as compensation. Because there is no issue of large-scale community resettlement and family land-holdings are often fragmented and widely distributed within the community, SPAFs are being given the flexibility of identifying their preferred replacement holdings. NEA, not the Government, will purchase any replacement land chosen by SPAFs.³³

24. All other affected families are to be provided cash compensation for their land. The ACRP provides for compensation for land, buildings, and immovable assets on acquired

^{29/} A household is classified as an SPAF if it (1) loses its dwelling unit or (2) if its main source of income is from land and at least half of total income will be lost due to project-related land acquisition. See Document #1: Annex 3.3, para 2.

^{30/} Joint Venture Arun III Consulting Services, *Acquisition, Compensation, and Rehabilitation (ACRP): Action Plan*, Initial Report, April 1993; Final Update, June 21, 1994.

^{31/} Ibid: Sections 3.3 and 3.4 and Appendix A.

^{32/} See *Arun III Agreed Minutes of Negotiations*: para 9 and Annex 5, Attachment 2.

^{33/} Ibid: Section 3.8. See also Document #1: Annex 3.3

land at market values, based on detailed cadastral surveys of the entire access road area.³⁴ SPAFs who opt for cash compensation and PAFs will receive sufficient funds to purchase land of similar size and quality. Grievance procedures are included explicitly in the ACRP.³⁵

25. A cadastral survey of all areas expected to be affected by the project was completed prior to land acquisition.³⁶ Compensation arrangements are covered under the ACRP for all land so surveyed, which includes land held under sole proprietorship formal and informal tenancies, and land owned by a group or community. In addition to compensation provided to landholders, the ACRP provides for land compensation and rehabilitation grants for tenants. Where clear ownership of land or property affected by the project by a group of people or a community can be established, then the group or community is to be treated as a PAF for compensation purposes.³⁷

C. ***The objective of the Bank's resettlement policy is to ensure that the population displaced by a project are provided opportunities to share in project benefits. It contains no requirements as to how project benefits should be shared, nor does it require that permanent employment be provided to displaced persons.***

26. The project has been designed to ensure that residents of the Arun Valley receive a range of benefits from the project. From the point of view of valley residents, the main direct benefit derives from the access road, which will reduce transportation costs into and out of the Valley dramatically. In addition, construction of the access road and other infrastructure will create substantial project-related employment in the Valley, and local residents are being given priority in filling these jobs.³⁸ The RAP provides for rural electrification of the Valley through micro-power stations; contract documents contain provisions for turning project power sources over to local communities on completion of construction. This will allow electrification of most of the major villages in the valley downstream of the project site.³⁹ Electric power is another direct benefit of the Arun III project.

27. OD 4.30 does not require SPAFs to be compensated through permanent employment. It does require that displaced persons be no worse off, if not better off, than before displacement. To this end, on top of compensation for loss of land, at least one person in each SPAF household is to be offered employment by NEA under the ACRP. A special

^{34/} See ACRP Action Plan: Appendix A.

^{35/} Ibid: Section 3.9.

^{36/} Ibid: Section 3.1.

^{37/} ACRP Action Plan: Section 11.2.

^{38/} See Document #1: Annex 3.2, para 25.

^{39/} See Document #1: Annex 3.2, paras 12-15.

training program is being set up to impart job skills to those participating in this program,⁴⁰ which is intended to help increase SPAFs' earnings capacity on a permanent basis.

D. *Detailed socioeconomic surveys were carried out during project preparation, as required by OD 4.30.*

28. Full socioeconomic surveys, covering all PAFs, were carried out in 1990 for the Hill (road) alignment, and in 1993 for the Valley itself. Detailed cadastral surveys have also been undertaken.^{41 42} A Management Information System (MIS), integrated a Geographic Information System (GIS), and a project management subsystem have been developed for planning and monitoring the ACRP, and information from the cadastral and socioeconomic surveys are currently being entered into the system. This is the first time that an integrated MIS/GIS has been developed to manage land acquisition programs for a Bank-financed project prior to project implementation. The integrated MIS/GIS will provide a unique opportunity for Bank and ACRP staff to closely monitor the impacts of the project on affected families throughout the implementation phase.⁴³

E. *The timeliness of resettlement planning under the project meets the requirements of OD 4.30.*

29. In line with OD 4.30, the draft ACRP was prepared prior to project appraisal, including all necessary surveys of affected families and properties.⁴⁴ All families to be affected by construction of the access road or the hydropower site have been identified. An initial identification has been made of families potentially affected by construction of the transmission lines and the principles for their compensation arrangements have been agreed. (Definitive identification is pending decisions on the final alignment of the lines, which will be constructed five years after the start of the project.) Permanent displacement of families due to construction of transmission lines will be minimal; at most only eight households are expected to be permanently displaced.⁴⁵ Much of the land affected by the transmission lines will require only way-leave and building height restrictions. Arrangements have been made under the ACRP to compensate affected families for any such restrictions.⁴⁶

30. Thus the vast majority of affected families know already that they will be displaced by the project and what form of compensation they will receive. However, they do

40/ See ACRP Action Plan: Section 3.8.

41/ See Document #1: para 3.32 and Annex 3.3, para 11.

42/ See also paras 25 and 34.

43/ See Document #1: Annex 3.3, para 21.

44/ See footnote 30 above.

45/ See Document #1: Annex 3.3, Table 1.

46/ See Document #1: Annex 3.3.

not know the precise date of displacement. Given the complexity and duration of the project, the timetable of land acquisition, compensation, and rehabilitation activities is to be finalized on a two-year rolling basis. The implementation timetable for ACRP activities in the first two years of the project (primarily construction of the road) will be finalized within three months of the time that a decision is taken to begin construction. The ACRP timetable for successive years will be prepared annually, covering at least the following two years.⁴⁷

31. To make clear the policies and procedures being followed, NEA has prepared a *Due Process Manual* in Nepali.⁴⁸ The Manual describes the ACRP, compensation procedures, land acquisition procedures, payment of compensation and rehabilitation grants, provision for special treatment of SPAFs, compensation of public properties and facilities, consideration of informal tenant rights, grievance procedures, and monitoring and evaluation of the ACRP. Over 3,000 copies of the Nepali version of the *Manual* have been distributed to PAFs and to other concerned persons, and it has been discussed extensively in public meetings in the project area.⁴⁹

VI. INDIGENOUS PEOPLES

A. *Mitigation efforts proposed under the project and included in the Regional Action Plan are consistent with OD 4.20: Indigenous Peoples.*

32. OD 4.20 requires the preparation of a culturally appropriate development plan, based on full consideration of the options preferred by the indigenous people affected by the project. To this end — and at the request of Government, the World Bank, and the UNDP — the basin-wide study prepared by the King Mahendra Trust for Nature Conservation examined how changes induced by the project would impact various social and ethnic groups⁵⁰ in the Valley and designed the RAP accordingly. The study's summary report⁵¹ and Action

^{47/} See Document #1: Annex 3.3, para 18.

^{48/} NEA, *Arun III Hydroelectric Project — Due Process Manual*, November 1993. See also Document #1: Annex 3.3, para 18.

^{49/} See November 11, 1994 communication from J.L. Karmacharya, Director-in-Chief, NEA to Donal O'Leary.

^{50/} The basin is culturally and ethnically diverse. Rai, Limbu, Gurung and Magar taken together make up 53 percent of the total population in the Sankhuwasabha District. This is followed by 27 percent Brahmans/Chhetris, 7 percent for occupational caste groups and Tamang, Sherpa and Tibetan, 5 percent for Newar and 1 percent for others. However, the sample population from the potential growth centers close to the proposed road alignment and dam site give a different picture to that of the district in general. They are dominated by Brahmans/Chhetris and Newars, the trading castes, while Rai, Limbu and other castes of Mongol origin account for about one-third of the total. Occupational caste groups and Kumhals, both regarded as underprivileged, are estimated at about 10 percent.

^{51/} King Mahendra Trust for Nature Conservation, *Environmental Management and Sustainable Development in the Arun Basin, Volume 1*, October 1991.

Programs⁵² form the basis for the RAP. The RAP fulfills the objectives of OD 4.20 by including a range of actions to address the diverse development needs of all groups in the Valley, including both the very poor and those who have strong ethnic or cultural affiliations, as well as other Valley residents. Actions proposed under the RAP are designed to be sensitive to the cultural diversity in the Arun Valley and to take full account of the different groups' relationship to land, natural resources, and their cultural heritage.

33. The RAP includes actions in six broad areas, as follows: conservation; income generation; institutional strengthening; extension and training; infrastructure and energy; research, monitoring and information. In terms of scheduling, five sectoral programs are regarded as priorities for implementation. These relate to: strengthening local forest management; helping local communities service construction-related demands; strengthening government institutions to cope with impacts; training and education for local human resource development; and environmental monitoring. The tentative cost of the RAP is estimated at \$14.6 million (excluding contingencies).⁵³

B. *The recommendations of OD 4.20 with respect to the sequencing of (first) establishing legal recognition of indigenous peoples' land rights — through cadastral surveys and other means — and (then) acquiring the land have been followed.*

34. A key objective of OD 4.20 is that indigenous peoples not become worse off through a loss of land rights as a result of project-related activities. As noted earlier, during project preparation a cadastral survey of all land in the area of influence of the access road — including the road right-of-way itself and land within one day's walk of the planned right-of-way — and other components of the project was completed prior to land acquisition; this provided for legal recognition of use rights in the surveyed area.

35. A substantial portion of land required by the project is owned by the Government, particularly forest land. By tradition, local communities use these areas for grazing, collection of fodder, firewood, and so on. Arrangements have been made in the ACRP to compensate any community or users group who is looking after the forest and dependent on it for timber and fodder for the loss of these commodities.⁵⁴ In addition, to mitigate deforestation pressures, the RAP will support the continuation of the ongoing process of forming pasture and forest-user groups; to date, 34 forest user groups have already been formed along the road right-of-way; 27 additional groups are to be formed.

36. Meanwhile, the national cadastral survey that is underway has been completed in Bhojpur and is nearing completion in Sankhuwasabha.⁵⁵ Actions taken under the project to regularize land tenure, to recognize use rights on public lands, and to set up pasture and forest-users groups to manage community resources are all efforts to protect the land-use

^{52/} King Mahendra Trust for Nature Conservation, *Action Program, Volume 2*, October 1991.

^{53/} See Document #1: Annex 3.13, para 7.

^{54/} Ibid: Section 3.6.1.

^{55/} See November 21, 1994 facsimile from Joe Manickavasagam, World Bank Resident Representative in Nepal, to Donal O'Leary.

rights of the people of the Arun Valley. These precautions notwithstanding, a close watch will be necessary throughout project implementation to ensure that the objectives of OD 4.20 are met. To this end, the project supervision plan involves careful monitoring and evaluation of the impact of project-related activities on vulnerable groups in the Valley.

C. *Project preparation has met the requirements of OD 4.20, in terms of the informed participation of the affected indigenous peoples in the design of the RAP.*

37. The preparation of the RAP was highly participatory. The King Mahendra Trust study team was made up largely of Nepalese experts. There was close and continuous interaction among study team members and the people of the Arun Basin. A wide-ranging household survey was undertaken to learn from local residents their expectations as well as to tap their knowledge and experience. Over 70 man-months were devoted to studies in the Arun Basin itself. The study began and ended with two major workshops in the basin at which representatives from local HMG/N offices, local NGOs, village leaders and the public gave their opinions and ideas on how the study should best proceed and, later, feedback on the RAP's proposals for action programs.⁵⁶

^{56/} See King Mahendra Trust for Nature Conservation, *Volumes 1 and 2*.

CHAPTER 4: CONCLUSION

1. We believe that Chapter 3 appropriately addresses the questions raised in the Request for Inspection and clearly demonstrates that the Bank has followed its operational policies and procedures with respect to the design and appraisal of the proposed project. Of critical importance for quality at entry, we have assessed the various technical, economic, financial, environmental, and sociological risks carefully, devoting considerable attention to alternative scenarios. With a view towards managing project risks, we have provided for remedial actions where appropriate. In addition, we have built into our supervision plan mechanisms for periodic monitoring and evaluation — the results of which can be addressed during implementation — in order to safeguard the project's development impact in the face of unanticipated developments.

ANNEX A

SELECTED BANK OPERATIONAL POLICIES AND PROCEDURES

Policy Guideline	Date of Policy	Point in Project Cycle to Which Policy Applies	Date of Policy Applicability for Arun III	Comments
OD 4.00, Annex A: Environmental Assessment	Oct. 31, 1989	• applicable to projects with IEPS issued after October 15, 1989		• for projects not in advanced stage of preparation, the Task Manager & Regional Environment Division should review status & recommend how to achieve objectives within existing time and resource constraints
OD 4.00, Annex B: Environmental Policy for Dam and Reservoir Projects	April 28, 1989	• not said to be retroactive		
OD 4.01: Environmental Assessment	Oct. 3, 1991	• IEPS issued after October 1, 1991	• not applicable since IEPS was issued on February 5, 1987	• OD 4.01 applicable "where appropriate and feasible" to projects with IEPS before October 1, 1991 and are subject to OD 4.00, Annex A.
OD 4.20: Indigenous Peoples	Sept. 17, 1991	• at IEPS stage • at preparation and appraisal stages	• not applicable at IEPS stage • applicable at appraisal stage	• at IEPS stage, the applicable policy was OMS 2.34: <i>Tribal People in Bank-Financed Projects</i> issued February 1982, which was superseded by OD 4.20
OD 4.30: Involuntary Resettlement	June 29, 1990	• at IEPS stage • during appraisal and negotiation	• not applicable at IEPS stage • applicable at appraisal and negotiation stages	• at the IEPS stage, the applicable policy was OD 2.33: <i>Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects</i> issued in February 1980, which was superseded by OD 4.30
3P 17.50: Disclosure of Operational Information	Sept. 1993	• at IEPS stage for PID • PID to be updated before appraisal • PID to be updated after appraisal if major changes to project made by previous project preparation for Factual Technical Document (FTD)	• not applicable at IEPS stage • applicable on January 1, 1994 (i.e., after appraisal for both PID and FTD)	• pursuant to (para. 15) and (Annex D, para. 1 (a) of BP 17.50, for projects that were past the IEPS stage but not yet presented to the Board, a PID was to be produced by January 1994. • disclosure of FTD on request but only at Country Director's discretion (para. 12 of the Policy on Disclosure of Information)

Policy Guideline	Date of Policy	Point in Project Cycle to Which Policy Applies	Date of Policy Applicability for Arun III	Comments
BP 10.00, Annex A: Outline for an Investment Project Information Document	June 1994	• at identification stage: draft initial PID when project enters 5-year lending program • at preparation and pre-appraisal: discuss PID with borrower/stakeholders. Update PID	• not applicable	• Arun III PID was prepared in January 1994 and made available at the PIC in March 1994
OP 10.04: Economic Evaluation of Investment Operations BP 10.04 (Supplement to OP 10.04)	• OP: April 1994 and Sept. 1994 • BP: April 1994	• at identification stage • at appraisal stage	• not applicable given advanced stage of preparation except where identical to previously applicable instructions	• at IEPS and appraisal stages, the applicable policies were: OMS 2.21 <i>Economic Analysis of Projects</i> issued May 1980, and Central Projects Note (CPN) 2.01 <i>Investment Criteria in Economic Analysis of Projects</i> issued in June 1977, both of which were superseded by OP 10.04

Note: Arun III - IEPS: February 5, 1987
 - Appraisal: May and September 1993

ANNEX B

**DOCUMENTS REQUESTED IN MR. BRÖDER'S
NOVEMBER 4, 1994 MEMORANDUM TO MR. WOOD**

- (1) The Memorandum and Recommendation of the President (MOP), the Staff Appraisal Report (SAR) and the legal documents for the proposed project;
- (2) Environmental Management Plan;
- (3) Regional Action Plan;
- (4) The Least Cost Generation and Expansion Plan (LCGEP) of 1987 and 1990;
- (5) 1993/94 Argonne National Laboratories (ANL) Study: Analyses of Options for the Nepal Electrical Generating System, May 1994;
- (6) Feasibility Studies of alternative project designs;
- (7) Available documents on a proposed Changsuo Basin Irrigation Project in China;
- (8) Arun III HEP: Environmental Impact Assessment for Arun Access Road — Valley Route Report, September 1992; and
- (9) Nepal's Land Acquisition Act, 1979.

ANNEX C

PREVIOUS REQUESTS TO THE BANK

Attachment VIII of the Request for Inspection lists ten previous complaints to the World Bank.

- Four of the items refer to correspondence with the Executive Directors and are not the responsibility of Bank Management.
- One letter from the Requester dated July 7, 1994 requested documentation. The response, dated July 18, 1994, referred the Requester to the Project Information Center in Kathmandu, which houses all the requested documentation. We also enclosed a list of the documentation available at the World Bank's Public Information Center (PIC) in Washington.
- A second letter from the Requester dated October 7, 1994 requested a list of documents relating to the Arun III project. The World Bank Resident Mission in Nepal responded on October 7, 1994, providing a list of documents available at the Resident Mission and a list of documents available at the Project Information Center in Kathmandu. In addition, the Requester was referred to the PIC in Washington.
- We have checked our correspondence files in relation to the other dates cited. All such correspondence came from the Alliance for Energy and was fully responded to by the World Bank. Supporting documentation is available.