Attended are one copy each of the Summary of Conclusions and Recommendations for Further Actions, and Note on the Conclusions and Recommendations for Further Actions, reflecting the findings and recommendations of the mission which visited Nepal in April 1995.

The mission consisted of specialists in the following areas: power engineering (Task Manager), environmental impact assessment, anthropology, resettlement and rehabilitation and highway engineering.

The findings of the mission reflect the status of the project as of mid-April 1995, in respect of the three areas for which investigation by the Inspection Panel was authorized by the Board.

We hope that with the adoption of the proposed remedial measures, the Panel will find the project to be in compliance with our relevant policies in the three areas of investigation.

All these remedial measures would have to be satisfactory to IDA. We will communicate to the Government the criteria to be met for these measures to be satisfactory.

Attachments: (2)
cw and cc (with Attachments): Mr. Ahmed (LEGSA)

cc (with Attachments):
Messrs./Mmes. Drysdale, Salop (SASVP); Vergin, Barghouti, Uchimura, Cambridge (SA2DR); Steer, Goodland (ENVDR); Mead (LEGSA); Derbez, Nicholas, Prennushi (SA2CI); Davis, McPhail, Jacobs (ENVSP); Rees, Redwood, Robelus (ENVLW); Koch-Weser (ASTEN); Socknat, Ghani (ASTHR); Mejia, Hoban, Unger (SA2EI).

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NEPAL - PROPOSED ARUN III HYDRO ELECTRIC PROJECT
SUMMARY OF CONCLUSIONS AND
RECOMMENDATIONS FOR FURTHER ACTIONS

Investigation Area 1: Environmental Impact Assessment

- The access road to the Arun III dam and hydro project sites should be built along the valley alignment, provided the recommendations in the areas below are implemented to the satisfaction of IDA.

- The following aspects still need to be taken into account in the Environmental Impact Assessment.

(a) Spoils disposal.

- GON/NEA to identify alternative options for all spoil disposal, estimate costs and impacts of these alternatives, and implement these where economically feasible to avoid river disposal;

- GON/NEA to calculate the likely cost of this change of policy and inform IDA whether it will be implemented through up-front contract modifications, or through the existing contract supervision and unit price framework.

Required as soon as possible, at the latest for Board Presentation.

(b) Impact on the Wildlife and Aquatic Life.

- Impact on wildlife and aquatic life estimated to be modest. Impact on fisheries resources still worth mitigating.

(b.1) Makalu-Barun Conservation Area (MBCA).

- GON/NEA to demonstrate, in a manner satisfactory to IDA, that building this road portion on the western bank is unavoidable;

- GON/NEA and MBCA to agree on mitigatory measures and compensation, satisfactory to IDA and taking into account national legislation.

Required for Board Presentation.

(b.2) Sal Forest Patches.

- GON/NEA to demonstrate, in a manner satisfactory to IDA, that road portions cannot be located on adjacent non-forested ridges;

- Adequate compensation, conservation measures and forest management plans to be included in the RAP, satisfactory to IDA and taking into account national legislation.

Required for Board Presentation.
(b.3) Aquatic Life.

- Establishment of a small fish hatchery to be included in the Regional Action Plan (RAP).

Required for Board Presentation.

(c) Impact of Increased Traffic on the Market Town of Hile.

- GON/NEA to devise, in consultations with town residents, an appropriate solution, including a traffic management plan.

Required for Board Presentation.

Panel of Experts.

- GON/NEA to appoint two Panels of Experts.

Required for Board Presentation.

Investigation Area 2: Involuntary Resettlement - Acquisition, Compensation, and Rehabilitation Issues

Land Acquired along the Hill Route.

- GON/NEA to investigate the situations of the families affected by the Government possession of land in Tumlingtar and in Basantapur (for construction of a road portion from this town).

Required for Board Presentation.

- GON to formulate a time-bound plan indicating the land to be returned to original owners and to be utilized for future road construction, including measures for protecting the standards of living of those whose lands will be possessed and the procedures to enable original owners to regain their lands.

Required for Board Presentation.

Acquisition, Compensation, and Rehabilitation Plan (ACRP) for the Valley Route.

- Because of unforeseen delay in implementation of the project, the ACRP for the valley route is in need of updating, to take into account changes in baseline data, cost and budget.

- As conceived in the ACRP the above updating would involve clarifications on certain related matters.

Required for Board Presentation.
Investigation Area 3: Actions Involving Local People

(i) Informed Participation Through Public Consultations.

- Field investigations found that communities consulted were fully aware of the Project and were looking forward to its implementation. Therefore, it is concluded that no new consultations would be useful until a decision has been made on project financing.

(ii) Security Over Land Tenure.

- GON/NEA to prepare a map showing the boundaries of forests managed by the forest user groups active or being established along the valley route.

Required as soon as possible, at the latest for Board Presentation.¹

(iii) An Action Program with Socially and Culturally Appropriate Components.

- Addressed through the proposed Regional Action Program (RAP):
  - GON to revise and expand the RAP, including:
    ... an action program including detailed description, budget, time table and institutional arrangements for the implementation of the preemptive measures (in particular continuation of establishment of forest user groups along the valley route alignment),
    ... mechanisms for coordination with Donors and for participation by various local institutions active in the Arun Valley, for annual revisions, updates and extensions,
    ... mechanisms for implementing and supervision of the programs under the RAP, and,
    ... procedures for monitoring.

Required for Board Presentation.

¹ Further recommendations may be made following the review by the Legal Department of the Forestry Bylaws (April 1995) to determine whether user group security of tenure over forest resources is assured (the review by the Legal Department would not take more than a few weeks). We are still awaiting English copy of the Bylaws and annexes.
NEPAL - PROPOSED ARUN III HYDRO ELECTRIC PROJECT  
NOTE ON THE CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER ACTIONS  

General  

Environmental Situation in the Lower and Middle Arun Valleys.  

Conclusion: The lower and middle Arun valleys are far from pristine and ecosystems are in decline. Very little or no pristine forests are left in the Arun valley. With the exception of relatively small areas of "cloud forest" along the hill (ridge) access route alignment, forests are heavily exploited for fodder, fuelwood, shifting cultivation, land clearing for agriculture and grazing.  

Environmental Impact of the Project.  

Conclusion: If properly managed, the environmental impacts of the proposed Arun III Hydro Electric Project (HEP) development can be minimized and/or adequately compensated for, and the project has the potential to bring significant longer-run social and economic benefits to its area of influence, as well as energy benefits to the country as a whole.  

We will inform the Government of Nepal (GON) that IDA would need to be satisfied with GON's actions on all the recommendations given below, before presenting the proposed IDA Credit to the Board.  

Investigation Area 1: Environmental Impact Assessment  

Comparison Between the Valley and Hill (Ridge) Access Road Alignments.  

Findings: The two access road alignments contrast significantly in environmental terms (Annex 1). The valley route would create fewer adverse environmental and social impacts than the hill route. In addition to being considerably shorter, the valley route would adversely affect fewer people in terms of direct dislocation and the taking of agricultural land. It would also pass through Sal forests which contain relatively low bio-diversity and are well represented elsewhere in the country. At the same time, being located close to the Arun River, the valley route would provide improved access to a larger number of people in three districts (Dhankuta, Sanskhuwasaba, and Bhojpur), while the hill route would benefit mainly residents of the first two districts.  

Recommendation 1: The access road to the Arun III dam and hydro project sites should be built along the valley alignment, provided the recommendations in the areas below are implemented to the satisfaction of IDA.  

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1 Actions with respect to recommendations for "spoils disposal" and "map showing forests managed by forest user groups in the valley route" are required as soon as possible, at the latest for Board Presentation.
Recommendation 2: The following aspects still need to be taken into account in the Environmental Impact Assessment.

Areas to be Addressed. Constructing the valley alignment would nevertheless involve some impacts in the following areas that need to be addressed:

(a) **Spoils disposal.** Findings: IDA is concerned with the policy of disposing of road construction spoils in the river as a matter of principle and precedent. It recognizes that the approach, of placing surplus soil and rock materials on selected river flats to be swept away by high river flows, has arisen from the particular site conditions of steep valleys with few environmentally stable alternative disposal sites, a river sediment load 100 times as large as the disposed material, and a lack of road access during construction. Nevertheless this is not common or desirable international practice, and alternatives should be fully considered.

Recommendations: GON/NEA should: (i) identify alternative options for all spoil disposal, estimate costs and impacts of these alternatives, and implement these where economically feasible to avoid river disposal; and, (ii) calculate the likely cost of this change of policy and inform IDA whether it will be implemented through up-front contract modifications, or through the existing contract supervision and unit price framework.

(b) **Impact on the Wildlife and Aquatic Life.** Findings: The impact of the project on the wildlife and aquatic life is expected to be modest.

(b.1) **Impact on Aquatic Life.** Findings: Impact on the fisheries resources would be worth mitigating.

Recommendation: Establishment of a small fish hatchery should be included in the Regional Action Plan (RAP).

(b.2) **Makalu-Barun Conservation Area (MBCA).** Findings: The valley alignment cuts through this area along seven km between the powerhouse and the dam site on the western bank of the Arun River.

Recommendations: (i) GON/NEA should demonstrate, in a manner satisfactory to IDA, that building this road portion on the western bank is unavoidable due to inappropriate geological conditions in the eastern bank; and, (ii) GON/NEA and MBCA should design and agree on adequate mitigatory measures and compensation, satisfactory to IDA and taking into account national legislation.

(b.3) **Sal Forest Patches.** Findings: Between Tumlingtar and the dam site, 5-6 km of the valley route passes through the Satighat-Heluwabesi riverine Sal forests of which the habitat is becoming scarce in eastern Nepal.
**Recommendations:** (i) GON/NEA should demonstrate, in a manner satisfactory to IDA, that the road portions cannot be located on adjacent non-forested ridges (due to inappropriate geological conditions or being too costly); and, (ii) adequate compensation, conservation measures and forest management plans, should be included in the RAP satisfactory to IDA and taking into account national legislation.

(c) **Impact of Increased Traffic on the Market Town of Hile.** **Findings:** The access road begins almost at the middle point of the market street in Hile. The existing road in Hile is only 4 meters wide and the heavy traffic might be difficult.

**Recommendation:** GON/NEA, in consultation with town residents should address the impact and devise an appropriate solution, including at least a traffic management plan.

**Panel of Experts**

**Finding:** In June 1994 negotiations, GON and IDA agreed on one Panel of Experts, whose membership and expertise could be expanded when and if needed.

**Recommendation:** GON and NEA should appoint two Panels of Experts -- one for the review of the engineering (in particular of the hydro power plant component) and the other for the review of the environmental and socio-economic impacts of the project (in particular of the access road).

**Investigation Area 2: Involuntary Resettlement - Acquisition, Compensation, and Rehabilitation Issues**

**Land Acquired along the Hill Route.**

**Finding 1:** Data about acquisition, compensation, and rehabilitation along the hill route is given in Annex 2. As of April 12, 1995, NEA had taken physical and legal possession of only 4.77 ha of land for which it has paid compensation. The total number of land owners affected by these acquisitions were 18. Interviews with 11 families affected by loss of land in Tumlingtar revealed that at least three of these families consider themselves to be Seriously Project Affected Families. Although the families have sought rehabilitation, no assistance has been provided to them. There may be similar claims by families affected by acquisition of land in the Basantapur area as well, where Basantapur Village Development Committee (VDC) has used the land paid for by NEA to construct a road stretching for about 2-3 km from Basantapur.

**Recommendation 1:** GON should have NEA investigate the conditions of the families affected by the possession of the 4.77 hectares of land and following the provisions of its guidelines offer rehabilitation assistance to the entitled families. This work should include the families affected by the land used to build the road portion from Basantapur.

**Finding 2:** On April 5, 1995, the Minister of Finance informed IDA that "the land acquired in the hill route will be returned to the original landowners as per Clause 34 of the Land Acquisition Act 2034, if no public construction is carried out on these lands."
**Recommendation 2:** GON should formulate a time-bound plan indicating the amounts of land to be returned to original owners and to be utilized for future road construction. The plan should describe measures for protecting the standards of living of those whose lands will be possessed as well as the procedures to enable original owners to regain their lands.

**Acquisition, Compensation, and Rehabilitation Plan (ACRP) for the Valley Route.**

**Finding 1:** Because of unforeseen delay in the implementation of the project, the ACRP for the valley route is in need of updating.

**Recommendation 1:** GON should update the ACRP taking into account changes in the number of adversely affected persons, cost estimates and budget. As conceived in the ACRP2, this updating should involve clarifications in implementation timetable (linking with construction of road and power project); leasing arrangements; mechanisms for land for land option; arrangements for resettlement of people of Amrang; organizational responsibility; and procedures for compensating forest user groups, the MBCA, and villagers dependent on forest not yet transferred to forest user groups.

**Finding 2:** In addition to 430.4 ha of land which will be acquired for the hydro power sites, access road and transmission lines, about 491 ha of land are to be leased.

**Recommendation 2:** GON should clarify the mechanisms for leasing of land. As part of this process, the mechanisms for executing the leases and setting up lease terms should be defined indicating the rights and obligations of each of the parties to the contract.

**Investigation Area 3: Actions Involving Local People**

The three actions required by OD 4.20 with respect to indigenous people should be extended to all residents of the Arun Valley. These actions are: (i) informed participation through public consultations; (ii) security over land tenure; and, (iii) an action program with socially and culturally appropriate components.

(i) **Informed Participation Through Public Consultations.**

**Findings:** Field investigations found that communities consulted were fully aware of the Project and were looking forward to its implementation. Therefore, it is concluded that no new consultations would be useful until a decision has been made on project financing.

**Recommendation:** When a decision to begin construction is taken, NEA should provide the following information to local people: (a) established road alignment, plans for feeder roads and opportunities for employment on road construction/maintenance; (b) institutional arrangements, including HMG/N,

2 The ACRP dated June 21, 1994, provided, among others, for preparation of full implementation schedule for activities to be carried out in the first two years within three months from the date of the order to commence construction.
donor, implementing agency, VDC and user group roles; and, (c) whether or not, at what cost, where and when electricity will come to the valley. Further, NEA should increase efforts to reach marginal groups, prepare pamphlets in local languages and consider information sharing formats that are less technical and literacy-based.

(ii) Security Over Land Tenure

Findings: The cadastral maps prepared in Dhankuta district 15 years ago and recently completed in Sankhuwasaba district are intended to register settlements and individual agricultural land title. Thus, mechanisms are in place whereby land titles can be adjudicated and established. However, forest land, including forest managed by community forest user groups, as well as national parks (e.g. Makalu-Barun National Park and Conservation Area) are excluded from the cadastral map. The cadastre, therefore does not provide individuals or communities with security of title over forest land. Protection and management of forests is laid out in the 1993 Forest Act. Implementation of the Act has only recently been established through the Community Forest Bylaws, dated April 1995.

Recommendation: GON should ask NEA and its Consultants to prepare a map showing the boundaries of forests managed by the various forest user groups active or being established along the valley route. Further recommendations may be made following the review by the Legal Department of the said Bylaws whether security of tenure over forest resources is assured.

An Action Program with Socially and Culturally Appropriate Components.

The various components of an action program should be socially and culturally appropriate for all the people living in the areas affected by the project. This requirement would be addressed through the proposed Regional Action Program (RAP).

Regional Action Program (RAP):

Findings: Additional effort is required to bring the RAP to an acceptable level of preparation. The RAP is of strategic importance, especially in terms of the preemptive components, the program needs to be clearly defined and operational well before road construction begins.

Recommendations: GON should revise and expand the RAP, in close coordination with the Donors active in the Area and with the participation of the various local institutions existing and active in the Arun Valley. The scope of the revised RAP is given in Annex 3.

Institutional Capability:

Finding 1: The community institutions operating in the valley are diverse and viable. Such groups generally have a good understanding of objectives and are active, illustrating the proactive characteristics of valley residents who are keen to take advantage of any opportunities available. The focus of these groups which have been traditionally operating in the Arun Valley for many years, is also

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3 The review by the Legal Department would not take more than a few weeks. We are still awaiting English copy of the Bylaws and annexes.
appropriate - forest users groups, women-in-development groups, groups active in agricultural production, irrigation associations. Village development activities are now being underpinned by financial resources following the Decentralization Act which at present provides NRs. 300,000 from the central government budget directly to each Village Development Community (VDC), bypassing the district bureaucracies. VDC chairmen are allocating these resources in innovative ways.

Finding 2: The institutional mechanism proposed is the Arun Basin Development Secretariat (ABDS), which does not, as presently constituted, meet the requirements of a participatory planning and service delivery mechanism in the valley to respond to the needs identified by the communities. ABDS, as presently constituted and funded, lacks the capacity to undertake the detailed preparation and more importantly implementation and monitoring of the RAP.

Recommendations: GON should include in the RAP institution-building actions on three fronts: (a) community-based institution-building actions; (b) service-delivery mechanism; and, (c) coordination with donors. The scope of the recommended actions is given in Annex 4.
## Comparison of the two proposed access road alignments

<table>
<thead>
<tr>
<th>Valley Alignment</th>
<th>Hill (Ridge) Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>430 ha to be requisitioned</td>
<td>310 ha. need to be requisitioned</td>
</tr>
<tr>
<td>Transmission line will be 120 kms which is 20 kms shorter (saves Rps.340 million)</td>
<td>Transmission line 140 km or 20 km longer (Rps 340 million more expensive).</td>
</tr>
<tr>
<td>Maintenance costs likely lower; possibly does not need to be an all weather road after construction. Can two months without motorized access be tolerated after construction? Light vehicles (jeeps, hand-steered 2-wheel mini-tractors, possibly max. 1-ton minitrucks) will not damage the road severely.</td>
<td>Maximum gradient of 12%;maximum height 2500 feet</td>
</tr>
<tr>
<td>Serves three districts (Dhankuta, Bhojpur and Sankhuwarsava), as two spur (jeepable) roads (Khandbari and Chainpur) are included in the project under RAP. If ridge alignment is chosen then other district (Bhojpur) southwest of Arun valley will likely build another road on the other side of the Arun along the valley alignment. If valley alignment is chosen, people will partly build the ridge jeep track themselves.</td>
<td>Serves only one district. Communities on the west of the Arun river would have to porter all goods down to the river, then up to the ridge route.</td>
</tr>
<tr>
<td>Benefits of roads will be for three districts: increased opportunities for a more sustainable agricultural development, improved education and health, more effective family planning and ecotourism development.</td>
<td></td>
</tr>
</tbody>
</table>

*Annex 1*
<table>
<thead>
<tr>
<th>Valley Alignment</th>
<th>Hill (Ridge) Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road 76 kms shorter to Arun III (Upper Arun would be a common route 47 kms extra). Imports and exports cheaper, less fuel used, faster. Fewer hairpins than the ridge route, much less altitudinal difference, and shorter.</td>
<td>Imports and exports more expensive, transport longer and slower.</td>
</tr>
<tr>
<td>First stretch up to Tumlingtar traverses low biodiversity area: mostly agricultural land. Between Tumlingtar and Num stretches with Sal riverain forest of low biodiversity, but riverain Sal forest habitat threatened in Nepal, needs protection. forest users groups, with strict forest management plan and valley route alignment should follow power transmission line over the hill and not bisect this habitat.</td>
<td>Part of road goes along the edge of proposed Milke Danda area (cloud forests) and passes through three other cloud forest areas. Would this make extension of Milke Danda into a few forest remnants unfeasible? Cloud forests are of high biodiversity.</td>
</tr>
<tr>
<td>First stretch less steep: less erosion.</td>
<td>Steep road: more erosion and land slip risks.</td>
</tr>
<tr>
<td>Landslide spots identified. Landslide will likely cut only one bend.</td>
<td>Landslides caused by cutting road. One landslide might cut various bends (up to 12 bends cut by a single landslide have been observed on other Nepali roads).</td>
</tr>
<tr>
<td>Encroachment on this alignment will be likely less than on ridge alignment: many rich people will buy land. Valley is too hot and dry.</td>
<td>Encroachment likely more extensive: more people like to live on the ridge (because of cooler climate, better visibility).</td>
</tr>
<tr>
<td>No snow; safer; fewer accidents.</td>
<td>In winter during short periods there is snow on the track. [On the Tribhuvan Rajpath people are willing to travel 90 km longer to avoid the altitude difference: safer, more convenient, less wear on vehicles].</td>
</tr>
<tr>
<td>Depreciation of vehicles less: shorter distance, less steep.</td>
<td>Depreciation of vehicles would be greater: wear and tear shorten vehicle life and increase maintenance costs on steep roads and those subject to snow, more than valley alignment.</td>
</tr>
<tr>
<td>Far fewer social impacts as very few affected people. The valley is largely unpopulated along most of the Northern sectors of the road partly because it is too hot in the valley and malaria was restricted to the valley. Note potential risk of malarial recrudescence in valley route especially to the extent Terai workers or foreigners enter for road construction.</td>
<td>Ridge densely populated. Road has to go straight through many villages. Enormous social and cultural impact.</td>
</tr>
<tr>
<td>Valley Alignment</td>
<td>Hill (Ridge) Alignment</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Forest remnants are very widespread non-diverse Sal forest.</td>
<td>At least three patches of much rarer 'cloud' forest are currently bisected by the existing trekking trail and are being actively converted to slash-and-burn, overlopping, goats, fire etc.</td>
</tr>
<tr>
<td>Riverain sal forest habitats should be protected.</td>
<td>When the ridge route trail is upgraded to jeepable standards, it should be diverted around these patches of cloud forest and the old trail deactivated so that the cloud forest can regenerate.</td>
</tr>
<tr>
<td>Riparian sal forest richer than regular sal and habitat is becoming scarce in Nepal.</td>
<td>Cloud forests have higher biodiversity and an important function in capturing water.</td>
</tr>
<tr>
<td>Biodiversity and endemism much lower</td>
<td>Biodiversity and endemism much higher</td>
</tr>
<tr>
<td>Fewer and more disturbed habitat, in general more widespread (Burma to Bangladesh and even Indonesia has variants of Sal forest).</td>
<td>'Cloud' forest rare, not as widespread (alt. 3000 m.) as Sal; Cloud forest is not the depauperate high montane sub-nival habitats which are very widespread with low endemism in the Himalaya.</td>
</tr>
<tr>
<td>Cut and fill less easy: more spoils, which cannot be reused.</td>
<td>Cut and fill easier: less production of unused spoils.</td>
</tr>
</tbody>
</table>
Data about Acquisition, Compensation, and Rehabilitation Along the Hill Route

As of April 12, 1995, the process of notification and payment of compensation for the 310 ha of land required for the hill route had been completed. The above mentioned 310 ha belong or belonged to 1635 landowners. The total number of parcels comprising the 310 ha is 2834. Out of the 2834 plots acquired, 24 belonged to public and 2 to privately established Guthi (Religious Trust) Corporations, and 16 to schools. All the remaining 2794 plots were privately owned. NEA records indicate that only one of the 2834 acquired plots had a tenant. NEA has not been able to award compensation to 283 landowners entitled to receive compensation for 376 plots along the hill route. In these cases, either the ownership of the plots was being disputed in courts or the owners had migrated to other areas and could not be located by NEA, despite its repeated efforts until 1992.

However, the legal process of transfer of ownership of the land to GON, as required by law, was completed for only 15 - 20 percent of the land for which compensation has been paid.

NEA has taken physical and legal possession of only 4.77 ha of land for which it has paid compensation. The total number of land owners affected by these acquisitions were 18. NEA, except for the area already mentioned, has not taken physical possession of any lands for which it has paid compensation. Left free to utilize their land as they deem fit, the absolute majority of the people supposed to be affected by the loss of their land are yet to experience any adverse impacts from the loss of their lands.

A number of houses were legally acquired but not a single house has been physically possessed by NEA (acquisition of physical structure has been confined to a single hut, used for rest during agricultural activity).

It is worth noting that the Basantapur Village Development Committee (VDC) has used the land paid for by NEA to construct a road stretching for about 2-3 km from Basantapur.

Interviews with 11 families affected by loss of land in Tumingtar revealed that at least three of these families consider themselves to be Seriously Project Affected Families. There may be such claims by families affected by acquisition of land in the Basantapur area as well. Although the families have sought rehabilitation, no assistance has been provided to them.
Annex 3

Scope of the Revised Regional Action Program (RAP)

The revised RAP should:

1. **cover such concerns as** drinking water supply, basic sanitation and primary health care, training for construction-related activity (*), income generation schemes and forest resource management, which were found by the mission to be generalized local priorities throughout the region, family planning, maternity and child care facilities and programs, construction of a fish hatchery, rural electrification schemes to permit at least the largest population centers of the Arun Valley to benefit from the electricity generated by the project, settlement planning, inventory and mitigation actions for cultural heritage (**) , environmental monitoring, continuation of establishment of forest user groups in the valley route alignment and establishment of the Milke-Danda Conservation Area (***) ;

2. **include detailed implementation programs** which should:

   (a) define locality-specific pre-emptive (to be taken prior to road construction), preventive and mitigatory actions, beginning with actions in the areas to be directly affected by the valley access road corridor, and expanded over the years to the three Districts of the Arun Valley;

   (b) include estimation of the associated costs;

   (c) define the institutions which would implement the action programs, assess their institutional capabilities and determine the necessary institutional support requirements;

3. **define the participatory planning approach** to be utilized, on an annual basis, to revise, update, and extend (geographically and sectorally) the actions to be undertaken through the RAP within the said three districts; and,

4. **cover monitoring of the implementation activities** , which should clearly:

   (a) identify: institutional responsibilities; operational procedures; logistical, material, staffing, training and technical assistance needs; and, budgetary requirements;

   (b) define the division of labor between Arun Basin Development Secretariat (ABDS - see below) and NEA's Arun Project Environment Management Unit (APEMU) with respect to regionwide and project-related actions and monitoring activities; and,

   (c) indicate how local communities and forest user groups and other groups -- especially those situated along or near the valley road alignment -- will be involved and how ABDS will liaise with them.
(*) GON should ensure that NEA directs its own and its contractor's efforts in training for road construction skills, benefiting from IDA's pilot project in Butwal. The said efforts should be well-focused, and involving the contractor will bring benefits because he will have the best idea as to where there is marginal scope for bringing local skills up to required levels, and the number of likely jobs affected.

(**) This part of the RAP should include a thorough survey and study of cultural heritage along the valley alignment (the survey/study should be conducted with participation of local people by involving them in the cataloguing and monitoring of such traditions and places; and, should define measures which would not only mitigate damages to cultural property and cultural heritage, but would proactively raise awareness of the local people).

(***) This conservation area should be managed by local NGOs in cooperation with international NGOs (as in MBCA).
Institutional Capacity Issues for the Revised Regional Action Program (RAP)

In terms of institutional responsibilities, GON should include in the RAP institution-building actions on the following three fronts:

(a) **Community-Based Institution-Building Actions.** The actions should:

(i) include training for the institutions operating in the Arun Valley, notably in participatory planning of annual mitigation plans, participatory implementation and conflict resolution given the large number of boundary disputes in particular for common property resources; and,

(ii) enhance women's role in these community institutions with further skills training.

(b) **Service-delivery Mechanism.** GON should propose to IDA alternative institutional arrangements which would meet the requirements of a participatory planning and service delivery mechanism in the valley to respond to the needs identified by the communities.

(c) **Coordination with donors.** GON should give immediate priority to coordination with the Donors and to securing flexible funding to permit the institutional process to be put in place.