

Public Consultation Record

Consultation on the Terms of Reference for the Appointment of Consultant for the ESIA and CIA of Upper Arun and Ikhuwa Khola Hydroelectric Project

Background

The project site of Upper Arun Hydroelectric Project (UAHEP) is located about 700 km East of Kathmandu in Sankhuwasava District of Mechi Zone in the Far Eastern Development Region of Nepal. This project was identified during the master plan study of Koshi River Water Resources Development in 1985. The site was subsequently the subject of a reconnaissance study conducted by the NEA in summer of 1986. In 1987, feasibility study of this project was carried out by the Joint Venture of Morrison Knudsen Corporation, Lahmeyer International, Tokyo Electric Power Services Co. and NEPECON on behalf of Nepal Electricity Authority. The review study of this project was completed by Nepal Electricity Authority in 2011.

Upper Arun Hydroelectric project is a peaking run of river type project. Intake of the project is located on left bank of Arun River near Chepuwa village. Three numbers of underground desanders are proposed just after the intake. The headrace tunnel is 7840 m long. The optimized diameter of the tunnel is 5.50 m and will be a circular in shape. Location and access for the adits will be reviewed depending on the access road. The surge shaft will be located on the hillside above the powerhouse and will have a finished diameter of 18 m. An underground valve chamber will be located immediately downstream of the surge tank and at the start of the vertical shaft. The 454 m long 2.80 m diameter vertical steel lined shaft and 60 m long 2.80 m diameter horizontal tunnels are constructed above the powerhouse. The underground powerhouse is located at the left bank of Arun River at Sibrung village. The installed capacity of the project is proposed to be 330MW.

Ikhuwa Khola Hydropower Project is located approximately 8 km downstream from the powerhouse site of Upper Arun HEP. This project is conceptualized to develop as an integral part of Upper Arun HEP for the social mitigation purpose. The feasibility study of the project is being carried out by the Department of Electricity Development.

NEA is planning to develop Upper Arun HEP and Ikhuwa Khola HEP (as an integrated part of Upper Arun HEP) at the earliest possible time. Hence, NEA is preparing EOI and RFP document to procure consulting services for engineering as well as environmental and social studies related to the project. Presently, NEA has prepared Terms of Reference (ToR) for the social and environmental study using international consulting firms.

Overview of the Consultation Event

1. A public consultation was organized for all the stake holders by Nepal Electricity Authority on April 30, 2014 at the Radisson Hotel in Kathmandu on the draft Terms of Reference of Environmental and Social Assessment, Planning and Design studies for the proposed Upper Arun and Ikhuwa Khola Hydroelectric Projects. The purpose of the stake holders meeting were:
 - (a) Disseminate project information to the stake holders
 - (b) Share draft Terms of Reference (TOR) prepared for the procurement of international consultant for Environmental and Social Assessment, Planning and Design to be carried out, as per the Government of Nepal and World Bank requirements and standards
2. NEA, the project owner, publicized the event through formal invitation on its web site :www.nea.org, letter/ fax/ e-mail to stakeholders. The list of invitees is attached on Annex 1.
3. The event was attended by Government Agencies, International Agencies & Donors, Academic Institutions, NGO's & INGO's, Local Representatives, Representatives of Tourism Sector & Experts. The full list of stakeholders in attendance is attached on Annex 2.
4. Stake holders meeting was started with the welcome speech by Mr. Upendra Dev Bhatta, Deputy Managing Director, NEA. He highlighted current energy crisis of the nation and role of Upper Arun HEP on mitigating the crisis. He also highlighted the importance of the Environmental Guidelines of Nepal Government as well as the guidelines of World Bank regarding project preparation and implementation. He has also focused on development of the Ikhuwa Khola Hydroelectric Project as the integrated part of the UAHEP for public participation.

The next welcome speech was delivered by Mr. Jie Tang (World Bank). He highlighted that the present energy crisis is due to the under investment in energy sector. He suggested developing reliable, environmentally & socially sustainable & affordable projects in three different categories viz. short, mid & long term. He also focused on the World Bank investment (technical & financial) for both energy related private & public sector.

Technical presentation of both Upper Arun and Ikhuwa Khola HEP was presented by Mr. Bishwo Dhoj Joshi (Chief, PDD, NEA). The presentation mainly focused on Integrated Nepal Power System (INPS), technical aspects of Upper Arun HEP and Ikhuwa Khola HEP and

further steps required for the timely implementation of the Project. Question and Answer session started followed by the presentation.

Presentation on "Social and Environment Assessment and Planning Requirements of GoN, World Bank and Upper Arun and Ikhuwa Khola HEP ESIA: Key elements of Draft ToR (Environmental and Social Assessment, Planning and Design Studies); Scope; Influence Area; key Potential Issues/concerns; VECs in the basin, process and timelines for execution, etc." by Mr. Prakash Gaudel (Environmental, NEA). He highlighted the guidelines (GoN, World Bank, EPR etc.) to be following during study. He also highlighted on the World Bank Safeguard policies, Requirement of Consultation (WB and GoN), Independent Panels of Experts, who conduct the studies and activities, Methodology of study and how it relate to Engineering Design, Scoping of studies & specific Study outputs etc. After the presentation, Q&A and floor discussion session was started.

The whole program was filmed/recorded. Both Nepali & English languages were used to deliver the program. The hardcopy of presentations were distributed to the participants.

The total length of event was approximately 3 hrs.

Issues Highlighted by NEA

- NEA has incorporated benefit sharing at the local level as a guiding principle for hydropower project development. Benefit sharing was successfully integrated as a key component in the development of Upper Tamakoshi, which received wide support from a range of local stakeholders. Means for local development and benefit sharing will be explored extensively through the UAHP – IKHP is being studied in tandem with UAHEP as a mechanism to increase local ownership and share benefits of the project with the local community.
- NEA is keen to partner with the World Bank in developing UAHP as a public project owned by GoN, not with private sector involvement through the IFC.
- Due to the rural setting, social impacts of the project are anticipated to be minimal. The topography of the site also means that the flooded area will be minimal, with high firm power production considering overall environmental impacts. However, it is to be noted that the Makalu Barun Conservation Area is in the vicinity of the project site. Environmental and social impacts will be managed during project implementation in a way that mitigates negative impacts of the project and maximizes positive impacts.
- NEA is responsible for extensive coordination between the engineering and environmental consultants throughout the parallel process of the detailed engineering design and ESIA

studies to ensure one informs the other. NEA will develop a coordination strategy that delineates this process and its role in the process, specifying also how inputs from the ESIA will be considered in the development of the detailed engineering design.

Presentation on Technical Details of Project

- Technical features of UAHP
 - Upper Arun captures Arun 4, 5 and 6 identified in the 1985 feasibility study; similarly Lower Arun captures Arun 1 and 2.
 - The UAHP site is strategic due to its proximity to load centers in the east, high head, and its potential of generating high firm power in relatively low project cost.
 - Major infrastructure development in the two decades since development in Arun Valley was first explored (through preparation of Arun III) – a fair weather access road has been constructed from Khadbari to Num. DoR is currently extending the road from Num to Kimathanka – this road is under construction and initial tracks from Num to Gola should be open in about four months, with further upgrading over the coming year. This road passes close to the UAHP power house site and will facilitate construction of the UAHP project.
 - An access road to the project site, constructed under the UAHP umbrella, will connect the Num-Kimathanka road from Gola to the UAHP power plant and then to the headworks location; it will involve a bridge and a tunnel. The current design of the road follows the alignment delineated in the initial feasibility study. It is necessary to build the access road before the rest of the project to allow project construction to commence. NEA's ESSD is doing IEE. NEA will hire consultant for detailed engineering design of the access road.
 - NEA explored three power evacuation options explored during update of feasibility study in 2011
 - Through the interconnection point at Tumlingtar (proposed Koshi Corridor 220 kV line to be implemented by the Exim bank) – preferred option among three; NEA estimates possible completion by 2021?
 - Through Arun III plant's substation
 - Through the substation at Duhabi (Terai)

- IKHP
 - IHKP is developed under the UAHP umbrella. It will allow locals to invest in a component of the UAHP through a PPP model.
 - Inception report submitted to NEA
 - DoED is conducting IEE and feasibility, expected to be completed by end of fiscal year

- Further steps
 - IEE for project access road has been contracted out to ESSD, NEA and is expected to be completed by 2015. Feasibility study of 1991 fixed the alignment of the road; no major changes in environmental/social conditions in the local area since then, hence current thinking on road alignment is the same Local consultant to be selected for detailed design of access road and construction scheduled to be completed by end of 2017.. Crucial to complete construction of access road before project construction commences.

Summary of comments, questions, and feedback received

The table below summarizes the key issues raised (including those not relevant to the proposed two projects) by stakeholders, and responses from NEA.

Stakeholder category #1 (CENTRAL GOVERNMENT AGENCY OFFICIALS)		
Stakeholder comment	NEA response	Remarks/Additional actions / agreed follow-up
1. (WECS)		
<ul style="list-style-type: none"> •Location not clear (Lat, Long) •Economic Analysis? •Given high head and firm water supply, what is the possibility of including reservoir and cascading power plants to maximize power generation? •TOR appears to be a general checklist. It has only grazed Makalu Barun. Not enough details are provided for us to provide feedback. This project is definitely going ahead; but with more detail, we would be able to provide inputs to manage impacts better. 	<ul style="list-style-type: none"> •Suggestion taken •Economic Analysis has been done but the presentation mainly focused on the technical aspect •Due to very steep gradient of river, there are no possibilities of reservoir development. 	Agreed to clear the location of the project (will present on Latitude & Longitude)

2. (DOED)		
<ul style="list-style-type: none"> DoED is conducting the feasibility study and environmental study of IKHP – If NEA is again conducting studies on IKHEP, does this translate to double expenses and duplication of studies? 	<ul style="list-style-type: none"> Clarified that the study of Ikhuwa Khola HEP shall wholly accepted by NEA as studied by DOED 	Agreed that the study of Ikhuwa Khola HEP shall not be unnecessarily repeated thereby saving Govt. money.
3. (Department of Mines & Geology)		
<ul style="list-style-type: none"> Where is the quarry site? Where will construction material be brought from? Current policy allows extraction of sand/gravel only from areas approved by the District Development Community. Since a large volume of material will be required for the project; a separate source might need to be identified Quarry site having IEE or EIA should only be selected. 	<ul style="list-style-type: none"> Suggestion taken. 	Agreed.
4. (Ministry of Forest)		
<ul style="list-style-type: none"> Access road, project site will affect forested areas. Clearance from the Ministry of Forest is a legal requirement: IEE or EIA alone is not enough. Coordination needed between consultants who will conduct project implementation and MoF, local forest governance entities, to ensure compliance and avoid implementation delays 	<ul style="list-style-type: none"> Suggestion taken. 	Agreed.
5. (WECS)		
<ul style="list-style-type: none"> Draft ToR only check list. Detail? Discussion? 		
6. (NEA)		
<ul style="list-style-type: none"> Difference in Annual Generation, why? 2050 GWh in 1991 AD & 2598 GWh in 211 AD. 		
Stakeholder category #2 NGOs and INGO,s		
Stakeholder comment	NEA response	Remarks / Additional actions / agreed follow-up
1. (INHURED)		
<ul style="list-style-type: none"> Why Ikhuwa only? Has other options nearby been properly assessed? What about integrating all possible options Why are all structures underground, isn't this a costly option 	<ul style="list-style-type: none"> From every aspect Ikhuwa is best suited for the assignment of addressing social part of the project. NEA is just another developer, selection of options was DOED's part of the job and must have fairly judged the fact. 	A lesson learned for NEA is to involve the local community in any hydropower development project. By allowing the community to participate in IKHP, we give them a

	<ul style="list-style-type: none"> •It's totally technical argument. Geographically, U/G is most suitable in UAHP. 	<p>sense of ownership, provide a means of income. Size and proximity to the UAHEP, IKHP was found to be very suitable to integrate into UAHP. There are many other potential HP sites, which other developers are welcome to develop. For the project's current scope, IKHP is most optimal. Will be incorporated in detailed engineering design.</p> <p>Also suggested by Mr. Jie Tang to will be focused on ESIA & CIA.</p>
2. (ICIMOD)		
<ul style="list-style-type: none"> •Appreciation on Something moving forward to develop the project. •Availability of detail hydrological modeling & GLOFs. •Agree to provide the required related information & data. •Sharing of Knowledge. 	<ul style="list-style-type: none"> •Considering the GLOF Study during the study of the project. •GLOF study also included in ToR. •PMF considered as 4000cumecs. 	<ul style="list-style-type: none"> •Thanks for close incorporation.
3. (INHURED)		
<ul style="list-style-type: none"> •Why so late to process to implement UAHEP (After 23 yrs)? •Public private ownership in Proposed Federalism? Who will own the project –the federal government/the local state government •Due large catchment lies in China, consumptive/ diversion of water may affect UPHEP (riparian rights both U/S & D/S)? 	<ul style="list-style-type: none"> •The question is irrelevant. The answer must given by the political leadership. •The project study will be continued; later on state will decide ownership issue. •We are focusing on progressing the project amidst uncertainties regarding the institutional structure which is out of our hand, and currently being decided by the CA. The project is a national priority and we will not allow this current uncertainty to disrupt project progress. Our detailed study will be complete slightly later than the current timeline of CA for writing new constitution. There are various reasons for this in the past – the political situation being one of them. But NEA is committed to complete the project in time •There is no consumptive use of water at the UA catchment (within China). 	

• (INHURED)		
• There will be multiple activities and mobility of people/ migration (inbound and outbound). There is possibility of increased security risks/ crimes and impacts on local and indigenous people. A component is needed to manage this aspect.	Suggestion taken.	Agreed.
• (ISET Nepal)		
• We are reviewing EIA for several projects. Two observations: (i) EIA documents are not accessible – please make project documents visible and easily accessible; (ii) Solid waste management Act and Local Self Governance acts need to be reviewed in the ESIA. Community upliftment plan is also needed.	<ul style="list-style-type: none"> • Separate web site already launched. • All related acts & regulation shall be reviewed. • The final product will be disseminated in web sites. 	Suggestion taken & Agreed.
4. (ICIMOD)		
<ul style="list-style-type: none"> • Consideration of strategic environment impact assessment before conducting ESIA & CIA. • ICIMOD has done a detailed modeling of the hydrology of the project area, including impacts of GLOF, and impacts of any development in the region on flow regime. We would like to share our findings and contribute to project if given the opportunity particularly for GLOF studies. • Suggest expanding exploration beyond the area of influence (AOI) by using a strategic environmental impact analysis – which is not confined to a project approach, but takes a basin-wide approach. ICIMOD is eager to contribute to any exploration of effects of development in the basin – we have some resources. Lots of work done on EIA and CIA – these need to be reviewed during the study 	<ul style="list-style-type: none"> • Suggestion taken. • A separate WB project is takes a basin-wide approach to assess wider effects of HP 	<ul style="list-style-type: none"> • Suggestion taken. Mr. Jie Tang also added that WB is supporting NEA for two activities of this project - • Detailed preparation and design of bidding documents • ESIA process, which will provide inputs into detailed engineering design. The two processes will be conducted in parallel to allow engineering design to incorporate ways to minimize environmental impact.
5. (Hydro Consult)		
• The VECs should be properly selected so that the deliverable will not be another EIA instead of CIA.		
6. (INHURED)		
• Clash between developers & consumers. Need to be treated	<ul style="list-style-type: none"> • Suggestion taken. 	

<p>psychologically.</p> <ul style="list-style-type: none"> •Deficit of Long term mitigation measures such as health, education etc. in affected area. •Political & economical study may be impracticable issues. •ESIA governs the changes in pre-design project configuration. •CIA shall be done by higher level government body rather than project developer. 		
7. Mr. Deepak Thapa (Social Science Baha:)		
<ul style="list-style-type: none"> •The approach needs to go beyond meeting minimum requirements to delineate how to preserve cultural heritages and intangible assets (not only physical/tangible heritage) that will be lost because of project implementation. •The presentation stated that consultations will be conducted at the VDC level. This is a huge project; a lot more consultations at various levels need to be carried out. Flow of information should be continuous and not be limited to consultations. •A political economy analysis is absolutely necessary to understand the dynamic of the project area, inform benefit sharing etc. <ul style="list-style-type: none"> • Stakeholder consultation should be continuous throughout the project. 	<ul style="list-style-type: none"> • Suggestion taken. 	
Stakeholder category #3 (Academic Institutions)		
Stakeholder comment	NEA response	Remarks / Additional actions / agreed follow-up
1. Mini & Micro Hydropower Association		
<ul style="list-style-type: none"> •Why NEA does not study the project itself? •One reason for slow/no progress is NEA does none of the work itself. Why does NEA hire consultants to do the detailed engineering design for which initial feasibility study was conducted two decades ago? For microhydro, a single entity conducts design, construction, implementation etc. 	<ul style="list-style-type: none"> •Today's consultation is focused on environmental and social aspects of Upper Arun, not on how NEA should operate. Urge participants to focus discussion only on ToR of ESIA. 	<ul style="list-style-type: none"> •Suggested to limiting on ESIA and CIA of the project.

2. (Mini & Micro Hydropower Association)		
<ul style="list-style-type: none"> •In the Nepali context, ESIA is more of a formality; it is not actually implemented. We need to focus on relevance and implementability rather than number of plans. Also, there should be coordination between plans: In the case of Bhotekoshi – plastics come in from Kharsa and are collected/incinerated near the powerhouse – this is against Nepal's waste management policy •In the Nepali context again, resettlement is done, but not in an organized, equitable manner. •TOR must ask to come up with a practical, equitable proposal on resettlement 	<ul style="list-style-type: none"> •Suggestion taken. 	<ul style="list-style-type: none"> • This project will require minimal resettlement, but the RAP is expected to be detailed, following international guidelines and implementable in a locally practicable manner.
Stakeholder category #4 (Tourism Sector & Experts)		
Stakeholder comment	NEA response	Remarks / Additional actions / agreed follow-up
1. (NESS)		
<ul style="list-style-type: none"> •Access road appears to be on slope at the edge of the Makalu Barun National Park. The area is rich in bio-diversity with dense vegetation. Access road will be disruptive to the conservation area, especially with the tunnel and large amount of spoils disposal. Can the entire road be constructed above the surface, possibly along the riverbank or make use of planned Koshi Highway on the other side of the Arun River (instead of constructing road on both side of the Arun River)? 	<ul style="list-style-type: none"> •4 adits of total length of 2Km & sufficient for the project development. •The alignment on the other bank of River is long, and geology along the other bank not suitable for access road; tunnel is found to be optimum. There is no protected area in the currently considered access road alignment. ESIA will explore the degree of impact on the national park and propose mitigation measures for the same. 	<ul style="list-style-type: none"> Agreed to spoil destination.
2. (NESS)		
<ul style="list-style-type: none"> •How will coordination between the engineering design and environmental design consultants be ensured? Why are they conducted in parallel? •Clarity needed on the access roads and transmission lines. Are these components separate from the UAHP? •Why International Consultant? 	<ul style="list-style-type: none"> •NEA will ensure coordination. The two designs will be conducted in parallel so that they might provide inputs and influence one another. So far study will tried to be done in parallel. •Koshi Highway (road to China border to Kimathanka) is under construction by the Department of Roads. Project access road from Koshi Highway to project site will be needed.) •International consultant is must for World Bank funded projects. 	
3. (NESS)		

<ul style="list-style-type: none"> •Who will decide the scopes of VECs? Proponent, stakeholders, people etc. •What % of water release for dry weather flow as environmental flow? e.g. special species of fishes. •Effect on calculation of energy generation due to environmental release. •Make a range of energy generation. 	<ul style="list-style-type: none"> •Suggestion taken. 	
Stakeholder category #5 (Local Representatives)		
Stakeholder comment	NEA response	Remarks / Additional actions / agreed follow-up
1. Upper Arun Local Representative		
<ul style="list-style-type: none"> •Ikhuwa Khola very suitable for energy generation. •Local inhabitants have a tendency to oppose new development initiatives; I am committed to mediate local objections/discord at the local level and do all I can to facilitate smooth project implementation. 	<ul style="list-style-type: none"> •To conduct Consultation with local stake holders. 	Agreed.
2. (CA Member, Sankhuwasabha)		
<ul style="list-style-type: none"> •Thanks to WB & NEA. •Anticipation to complete the project on 2017/2018 AD. •As a locally elected representative, I want to ensure you that local community and local political parties will not oppose the project in any way. I take the responsibility of resolving any conflicts/opposition at the local level. We have formed a local body, consisting of all local political parties, with the purpose of not allowing private development of areas inherent to UAHP. We will not allow caste etc. to be used as an excuse to oppose the project. Since IKHP is a small component, we urge you to start this component before UAHP. IKHP is close to DoR's road, hence should be easy to construct. 	<ul style="list-style-type: none"> •Thanks for supporting. •We will ask the engineering consultant to provide detailed engineering design of IKHP as soon as possible. And it is likely that IKHP will be completed before UAHP. However, it is likely not feasible to complete both projects by 2021, hence will not promise, but please note this project is a priority. 	<ul style="list-style-type: none"> • Thanks for supporting.
Stakeholder category #6 (Media Representatives)		
Stakeholder comment	NEA response	Remarks / Additional actions / agreed follow-up
• (Environmental Journalist)	•	
•The project should proactively use	•Baseline study for present condition	

<p>the media for stakeholder consultations, and to take the word to the local level. Proactively use the media. Do not see stakeholder consultation as a formality; the project can be made better through stakeholder input. The people have a legal right to information through the Right to Information Act.</p> <ul style="list-style-type: none"> •Rainfall patterns have changed because of climate change. Let us not assume that water availability will not change in the future. The impact of Climate change on hydrology needs to be assessed This project needs robust planning. Dam/power house safety needs to incorporate climate change concerns. •Sedimentation in the Koshi River is very high; sediment concerns need to be incorporated •Who will do the monitoring of the ESIA implementation? Besides the key players mentioned in the ILO 169, local inhabitants should also be involved during the project preparation and implementation 	<p>should be made rather than study of 1991 AD for mitigation activities.</p> <ul style="list-style-type: none"> •Today's consultation meeting is also a part of public consultation •WB has an activity on assessing CC impacts on sedimentation in the Koshi Basin – a proper way of incorporating these findings into the design of the project needs to be determined. 	
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Event Closing

The event closed at 12:40 PM by thanking the stakeholders for their attendance and participation. They were also informed about the future plans for continuing consultation and engagement related to the projects, place where information about the projects' planning and development could be retrieved, and how to get in touch with NEA with any further questions, concerns or suggestions:

The program was wrapped up with closing remarks of Mr. Arjun Kumar Karki, Managing Director, NEA. He thanked all participants for their valuable suggestions and thanked World Bank for their support to develop Upper Arun Hydropower Project . He showed his commitment to execute ESIA & CIA under the relevant guidelines of Nepal Government and World Bank. He promised to address local issues and assured the local participation in Ikhuwa Khola HEP. He also highlighted the importance of UAHEP in INPS and also anticipated that UAHEP will not face the same faith as of Arun III. He urged World Bank to develop UAHEP as public project and clarified that NEA could not and will not develop UAHEP in the company format. The project components will be determined as per geological condition & it will be more or less intact as per previous study. Finally, one more time,

He heartily thanked to all participants & hoped to complete the UAHEP within schedule time of 2021/2022 AD.

Participants were furthermore informed that this summary would be made publicly available (both in English and Nepali) at NEA's website within 45 days of the event.

Conclusions and Recommendations on draft TOR

- **Modifications needed in the draft TOR**
 - Clarify purpose of IKHP in the TOR – change from provision of electricity to UAHP construction to benefit sharing mechanism with local community.
 - Clarify construction power to be supplied by diesel generator – specify capacity, need for fuel management/noise management etc.
 - Update transmission line info with NEA's current thinking – Koshi Corridor transmission line up to Khadbari (financed by Indian EXIM bank), NEA to extend a 220kV line 45km to UAHP site. Koshi Corridor presumed to be a “linked” activity, to be covered in the studies (discuss and clarify with NEA and agree to approach and packaging in the revised TOR).
 - Clarify transmission line approach for IKHP.
 - Clarify that access road for UAHP will be packaged separately from the rest of the project, since access road needs to be completed (hence fast-tracked), before project construction can begin. Access road for IKHP meanwhile would be covered as part of the ESIA for that component.
 - Clarify that currently considered project access road alignment is derived from the initial feasibility study, and that ESIA to be commissioned by NEA will explore environmental implications for this alignment as well as for alternative alignments.
 - Add IKHP Inception Report, available to NEA, to the list of documents to be provided to the consultant.
 - Remove political economy analysis from the TOR and commission separately?
 - Clarify how the coordination between engineering design and E&S consultants will be done by NEA in practice. Key issues in particular requiring coordination are: alternatives analysis, determination of environmental flow, etc.
 - Remove “Phase 1” and “Phase 2” approach given that alternatives analysis needs to also continue during the ESIA process, as the detailed engineering design process unfolds in parallel. Rework this to clarify the iterative nature of the alternatives analysis on the design and construction aspects that are still to be determined.

- **Other agreed next steps**

- NEA to produce a record of the consultation, as per template provided by WB in advance, and share with WB.
- NEA to develop communications strategy related to the project and studies underway ASAP. Include project website among other elements.
- Commission fisheries expert ASAP to review existing information and scope the baseline data collection process, methodology, locations, etc., and to start the baseline data collection immediately rather than waiting for full consultancy to be awarded. WB suggests the expert used for Kabeli HP project; might be commissioned directly by WB as an STC to expedite the process. This person would then become a periodic specialist resource person to the Panel of Experts once they are on board.
- NEA to commission Panel of Experts. WB to help develop TORs for the POE.
- NEA to share TOR for IEE for UAHP access road; WB to review and provide comments.
- NEA to share TOR and inception report for the IKHP detailed design and IEE studies that are currently underway.

Annex 1: Detailed list of consultation invitees:

List of Invitees of the Consultation Meeting	
S.No.	Invitees
Government Offices	
1	Ministry of Science, Technology and Environment
2	Ministry of Forest and Soil Conservation
3	Ministry of Energy
4	Water and Energy Commission Secretariat
5	Department of Electricity Development
6	Department of Forest
7	Department of National Park and Wildlife Conservation
8	Department of Hydrology and Meteorology
9	Department of Mines and Geology
10	Department of Water Induced Disaster Prevention
11	Department of Archeology
12	Nepal Electricity Authority (including ESSD)
International Agencies and Donors	
13	International Centre for Integrated Mountain Development
14	Department for International Development
15	Norwegian Embassy

16	Asian Development Department
17	USAID, US embassy Maharajgunj, Kathmandu
	Academic Institutions
18	Central Department of Environment Science, TU
19	Department of Environmental Science and Engineering , KU
20	Nepal Academy of Science and Technology, NAST
21	Independent Power Producers Association of Nepal(IPPAN)
22	Small Hydropower Developers' Association Nepal(SHDAN)
	NGO's and INGO's
23	National Trust for Nature Conservation
24	World Wildlife Fund of Nepal
25	World Conservation Union (IUCN) Nepal
26	The Mountain Institute
27	Nepal Forum of Environmental Journalists
28	NGO Federation of Nepal
29	Federation of Community Forestry Users Nepal (FECOFUN)
30	Nepal Federation of Indigenous Nationalities (NEFIN)
31	INHURD (International),
	From Project Area (locals)
32	Sankhuwasava-Kathmandu Journalist Association
33	Members of CA from , Sankhuwasava
34	Ex-Members of Parliament /CA from Sankhuwasava
35	Representatives of Main Political Parties, Sankhuwasava
	Tourism Sector and Experts
36	Nepal Association of Rafting Agencies (NARA)
37	National Association of Community Electricity Users Nepal (NACEUN)
38	Institute for Social and Environmental Transition (ISET Nepal), Ajay Dixit
39	Toran Sharma, Nepal Environmental & Scientific Services (NESS)
40	Pranav Acharya,Hydro Consult
41	Hem Sagar Baral(Bird Expert)
42	Ram Prasad Yadav(Fish Expert)
43	Deepak Thapa, Social Science Baha
44	Ram Bahadur Khadka, SCHEMES
45	World Bank Office

Annex 2: Detailed list of consultation

Participants

CONSULTATION MEETING : ToR of ESIA & CIA of Upper Arun & Ikhuwa Hydroelectric Project,

Organized by: Project Development Department, Engineering Services, NEA

Venue: Hotel Radisson

Date: 30th April, 2014

Time: 9:00 am onwards

Attendance

S. No:	Name	Organization	Designation	Phone number	Email Address	Field of Expertise
1	TARANG GURUNG	ICA member	Lead Specialist	9851043443	tmgmkalu@gmail.com	Hydro
2	JIE TANG	World Bank	Lead Specialist		jtang@worldbank.org	Hydro
3	Roshan Pandey	NAST	Technical Officer	9805481302	roshanpandey2010@gmail.com	Hydro
4	Tara Sharma	NASS	Director			Hydro
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6	RAJAN KISHI KADEK	" "	Deputy Director	9841445923	rajan050@yahoo.com	Hydro
7	Surya Narayan Shrestha	NEA, PDD	Engineer	9750-82501	surya.shrestha@nea.org.np	Civil Engineering
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10	Sameer Pokharel	NEA, Engineering	Dy. Director	9845287210	Sameer.Pokharel@yahoo.com	Finance
11	Rajesh Sapkota	NEA, PDD	Engineer	9851050059	rajeshsapkota@gmail.com	Civil Engineering
12	Durga Kharel	SKAT	Vice-Chairman	9841324588	kharel.yes@gmail.com	Hydro
13	Achut Dasgupta	NEA, ESSD	Dep. Director	9841369911	achutdasgupta2010@gmail.com	Hydro
14	Banta Bhusal Karki	NCA	Engineer	9841065860	banta.bhusal.karki@gmail.com	CIVIL ENGINEERING
15	Jenisha Singh	NEA, PDD	Engineer	9849234819	jenisha_singh@yahoo.com	Civil engineering
16	Kuber Lal Shrestha	" "	Admin. Officer	9841414024	Kuber.stha97@yahoo.com	Admin.
17	Anustha Shrestha	ISST-Nepal	Researcher	9841218256	anusthashrestha@yahoo.com	Natural Resource Mgmt
18	Pradip Man Shrestha	NEA	Engineer	9849624435	prad-mes@yahoo.com	Mechanical Engineering
19	Chandra K. Poudyal	NEA	Acting Manager	9851130421	NEA123@gmail.com	Account
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21	Gopal K. Siwakoti	" "	President	9851035876	ceasefirenepal@yahoo.com	Human Rights
22	Anjali Basnet	World Bank	Env. Engg.		abasnet@worldbank.org	ESIA
23	Hari Prasad Subedi	NEA, PDD	Engineer	9851174623	hpsubedi01@gmail.com	Civil Engineering
24	Gopal K. Shrestha	NEA, PDD	Manager	9857165797	gkshrestha@yahoo.com	Civil Engg.

CONSULTATION MEETING : ToR of ESIA & CIA of Upper Arun & Ikhuwa Hydroelectric Project,

Organized by: Project Development Department, Engineering Services, NEA

Venue: Hotel Radisson

Date: 30th April, 2014

Time: 9:00 am onwards

Attendance

S. No.	Name	Organization	Designation	Phone number	Email Address	Field of Expertise
49	Dinakar Kharel	WECS	SDE	989182919	dinakar.kharel@gmail.com	WRM, EM,
50	Dinesh K. Nepali	Dept. of Mining & Geology	S. Dir. Geol.	984161735	d.khapita@hotmail.com	Geology
51	Pranav Phung	Hydro-Consult	Env. Chief	9851124266	pranav.a.lange@phung.com.np	Environment
52	Dr. J. V. R. S. Jha	SEI (S&T) Pvt. Ltd.	Chief	9851072350	-	Environment
53	Neha Vyas	The World Bank	Env. Spl. Chief	+91-9910936070	nvyas@worldbank.org	Env. Spl. Chief
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56	Amogh Manandhar	NEA P.D.D.	D. Manager	9841217700	-	-
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Annex 3: Photo log of event















