

TRAINING ON

Planning and Design of Smart Infrastructure for Biodiversity Protection



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Rhino Lodge, Sauraha, Nepal



Practices of EIA in Nepal

(with reference to energy sector)



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Outline of Presentation

1. Background-EIA in Nepal
2. Policy and legal Provisions
3. Steps in EIA
4. Critical Habitats
5. Final Remarks

1. Background

- The need for EIA was stressed in the seventh Five-Year Plan (1985 - 1990).
- The Eighth Five-Year Plan reemphasized the need for EIA system.
- National EIA Guidelines prepared in 1993 by National Planning Commission.
- GoN, for the first time, promulgated *Environment Protection Act (EPA) and Environment Protection Rules (EPR) in 1997*.
- These legislations are replaced by ***EPA, 2019 (2076)*** and ***EPR, 2020 (2077)*** under the new federal governance system.

2. Policy and Legal Provisions

Policy

- National Environment Policy, 2019
- Hydropower Development Policy, 2001

Federal Legislations

- Environment Protection Act (EPA), 2019
- Environment Protection Rules (EPR), 2020/Recent Amendment (2078.02.10)
- Forest Act, 2019 and others

Guidelines

- Guidelines for Construction of Wildlife-friendly Infrastructures, 2022
- National EIA Guidelines, 1993
- EIA Guidelines for Forestry Sector, 1995

3. Steps in EA

- **Screening** (as defined by EPR, 2020)
 - Brief Environmental Study (BES) - Schedule 1
 - Initial Environmental Examination (IEE) - Schedule 2
 - Environmental Impact Assessment (EIA) - Schedule 3
- Preparation of **ToR** for BES/IEE and **SD/ToR** for EIA
- **Approval** of SD/ToR from concerned agency
- Preparation of draft BES/IEE/EIA Report
- Public Hearing
- Public Notice/Collecting of Recommendation letter
- Submission of Final BES/IEE/EIA Report
- Review of BES/IEE/EIA report
- Approval of BES/IEE/EIA report
- Monitoring and Evaluation
- Auditing for EIA



नेपाल विद्युत प्राधिकरण

भक्तपुर-ठिमी १३२ के.भी. भूमिगत प्रसारण लाइन आयोजनाको प्रारम्भिक वातावरणीय परीक्षण (IEE) प्रतिवेदन तयारी सम्बन्धी वातावरण संरक्षण नियमावली, २०७७ को नियम ७ उपनियम २ बमोजिम

सार्वजनिक सूचना

(मिति : २०७८-०८-१७ गते)

बागमती प्रदेश, भक्तपुर जिल्लामा नेपाल विद्युत प्राधिकरणद्वारा निम्न बमोजिमको प्रस्ताव कार्यान्वयन गर्न लागिएको छ।

प्रस्तावकको नाम र ठेगाना	नेपाल विद्युत प्राधिकरण, दरबार मार्ग, काठमाडौं
प्रस्तावको विवरण	भक्तपुर जिल्ला भक्तपुर नगरपालिका वडा नं. १, व्यासस्थित विद्युत सबस्टेसनदेखि मध्यपुर थिमी नगरपालिकाको वडा नं. ६, धिमीमा स्तरोन्नति गर्ने सबस्टेसनसम्म १३२ किलोभोल्ट क्षमताको डबल सर्किट भूमिगत विद्युत प्रसारण लाइन निर्माण गर्न प्रस्ताव गरिएको छ। प्रस्तावित प्रसारण लाइनको लम्बाइ ३ दशमलव २७ किलोमिटर रहेको छ। प्रस्तावित प्रसारण लाइन टोको मिया इटायाको जग्गा एकीकरण आयोजना, कार्सीकुसुंगु खोलाको किनारबाट पुग्नो सडक निर्माकार दुवाकोट जाने चोक, निकोसेरा हुँदै थिमी सबस्टेसनसम्म विद्यमान सडकमा ड्रिलिङ वा ओपन कट ट्रेन्च खनेर विद्युतको केबल जमिन मुनिबाट लगिनेछ। प्रस्तावित लाइनमा ७ वटा ज्वाइन्ट्स पिटहरू रहनेछन्। केबल ट्रेन्च २ मिटर चौडा २ मिटर गहिरो हुनेछ। ज्वाइन्ट्स पिट ४ मिटर चौडा, ६ मिटर लामो र २ मिटर गहिरो हुनेछ। सबस्टेसन र भूमिगत विद्युत मार्गका लागि कुनै पनि प्रकारको जग्गा अधिग्रहण गरिनेछैन।
प्रभाव पर्ने सवने जिल्ला/नगर गाउँपालिका/ वडा नं.:	भक्तपुर जिल्लाको भक्तपुर नगरपालिका वडा नं. १ र २, चाँगुनागायण नगरपालिका वडा नं. २ मध्यपुर थिमी नगरपालिका वडा नं. ५, ६ र ९

माथि उल्लेखित प्रस्तावको प्रारम्भिक वातावरणीय परीक्षण प्रतिवेदन तयार गर्ने क्रममा सो क्षेत्रको प्राकृतिक भौतिक प्रणाली, जैविक प्रणाली, सामाजिक प्रणाली, सांस्कृतिक प्रणाली र आर्थिक प्रणालीबीच के-कस्तो प्रभाव पर्नेछ भनी यकिन गर्न सो स्थानको न.पा. तथा त्यस क्षेत्रका विद्यालय, अस्पताल, स्वास्थ्य चौकी तथा सरोकारवाला थर्क या संस्थाको लिखित राय सुभाब लिन आवश्यक भएकोले यो सार्वजनिक सूचना प्रकाशन भएको मितिले सात दिनाभित्र निम्न ठेगानामा आइपुग्ने गरी लिखित राय सुभाब उपलब्ध गराइदिनुहुन अनुरोध गरिन्छ।

राय सुभाबका लागि पत्राचार गर्ने ठेगाना
नेपाल विद्युत प्राधिकरण
 वातावरण तथा सामाजिक अध्ययन विभाग
 साजिम्पाट, काठमाडौं, फोन नं. ०१ ४४३५८०० इमेल : env.social@nea.org.np



3. Steps in EA...



Screening (for energy sector)

BES (Schedule 1)	IEE (Schedule 2)	EIA (Schedule 3)
Utilizing up to 1ha forest area for other purpose (other than TL)	Utilizing 1ha-5ha forest area, FCA, CA, BZ or ECA for other purpose (other than TL)	Utilizing more than 5ha of forest land for other purpose (other than TL)
TL up to 66kV utilizing forest area	-132kV or above capacity TL -Outdoor substation from existing 220kV or above TL	-
Hydro-project < 1MW capacity in BZ, FCA, CA, Environment CA or Ramsar listed wetland.	Hydro-project 1MW-25MW capacity in BZ, FCA, CA, Environment CA or Ramsar listed wetland.	Hydro-project >25MW capacity in BZ, FCA, CA, Environment CA or Ramsar listed wetland.
-	1-50 MW hydro project	> 50MW hydro-project
-	1-5 MW fossil fuel or gas based power plant	- For coal or nuclear based power plant - >5 MW fossil fuel or gas based power plant
-	Water resources development project permanently displacing 25-100 people	Water resources development project permanently displacing >100 person
-	1-10 MW solar plant	>10 MW solar
-	1-10 MW wind power	>10 MW wind power
-	0.5 -2 MW bio energy	>2 MW bio energy
-	-	Any project in NP, WR or HR
-	-	Multipurpose project; interbasin transfer

4. Critical Habitats encountered during EIA

- Critical habitats are areas with high biodiversity value, including
 - (i) habitat of significant importance to Critically Endangered and/or Endangered species;
 - (ii) habitat of significant importance to endemic and/or restricted-range species;
 - (iii) habitat supporting globally significant concentrations of migratory species and/or congregatory species;
 - (iv) highly threatened and/or unique ecosystems; and/or
 - (v) areas associated with key evolutionary processes.

(MoFE, 2018)

- Natural and critical habitats encountered during EIA;
 - National Protected areas (NPs, Reserves, CA, Buffer Zones)
 - International designated protected areas (Ramsar sites)
 - Biological corridors/hotspots
 - Critical habitats

4. Critical habitat ...Assessment Practices....

- Prior approval/consent from designated authority is required for carrying out EIA in areas of critical habitats including National PAs or International designated PAs (Ramsar sites).
- Consent letter is received with terms and conditions.
- Multiple season data for generating baseline information during EIA is required/done in most cases.
- Mitigation measures are proposed accordingly.
- Additional studies (to EIA) carried out in some cases.



4. Critical habitat ...Assessment Practices....

STUDY OF THE IMPACT OF ASIATIC WILD ELEPHANT (ELEPHAS MAXIMUS) IN HETAUDA- DHALKEBAR- DUHABI 400 KV TL PROJECT

FINAL REPORT



Submitted to:
Hetauda- Dhalkebar- Duhabi 400 kV Transmission Line Project
Darbar Marga, Kathmandu
Submitted by:
ENVIRONMENT AND SOCIAL STUDIES DEPARTMENT,
Kharipati, Bhaktapur, Nepal

1

FINAL REPORT (MAY 2012 – APRIL 2013) STUDY OF BIRDS IN HETAUDA-DHALKEBAR-DUHABI 400 kV TRANSMISSION LINE PROJECT



Submitted to:
Hetauda- Dhalkebar- Duhabi 400 kV Transmission Line Project
Darbar Marga, Kathmandu

Submitted by:
ENVIRONMENT AND SOCIAL STUDIES DEPARTMENT,
Kharipati, Bhaktapur, Nepal

MAY 2013

Final Report
Study of Large Mammals in Hetauda-Dhalkebar-Duhabi 400 kV TL Project

FINAL REPORT (MAY 2012 – APRIL 2013) STUDY OF LARGE MAMMALS (LEOPARD, ROYAL BENGAL TIGER AND JUNGLE CAT) IN HETAUDA-DHALKEBAR-DUHABI 400 kV TRANSMISSION LINE PROJECT



Submitted to:
Hetauda- Dhalkebar- Duhabi 400 kV Transmission Line Project
Darbar Marga, Kathmandu

Submitted by:
ENVIRONMENT AND SOCIAL STUDIES DEPARTMENT
Kharipati, Bhaktapur, Nepal

MAY 2013

1

Nepal Electricity Authority
Engineering Services

Study of Monkey in Hetauda – Dhalkebar – Duhabi 400 kV Transmission Line Project Area



Submitted to:

Hetauda- Dhalkebar- Duhabi 400 kV
Transmission Line Project

Submitted by:
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June, 2013

- https://www.nea.org.np/admin/assets/uploads/supportive_docs/60289944.pdf
- https://www.nea.org.np/admin/assets/uploads/supportive_docs/76502940.pdf
- https://www.nea.org.np/admin/assets/uploads/supportive_docs/79247435.pdf
- https://www.nea.org.np/admin/assets/uploads/supportive_docs/73362692.pdf

4. Critical habitat...What EIA does?.....

- finds ways of reducing/compensating for the damage, by the use of mitigation measures



4. Critical Habitat...Issues

a. Site Clearance

- Creates habitat fragmentation (common in TL Projects) and habitat loss (more common in HPP)
- Impact of wildlife (biodiversity) and critical habitat are inevitable.



4. Critical Habitat...Issues

b. Environment Flow

For Nepal there exist two main challenges

- i) **quantification of environmental flow**. whether the quantifications (specified by Policies) are just **the minimal flow or e-flow??**
 - ii) **implementation** of such provision of water release as guided by policies or referred by EA of hydropower projects.
- What is constantly being neglected is the **implementation of the riparian release** in dewatered stretch of the river.



4. Critical Habitat... Issues...

- Enforcement of EIA and post-construction monitoring needs are not made stringent.
- Limited information on habit/habitat of Wildlife
 - Migration of fish and suitability of fish ladder or other structures.
 - Bird flight/migration zone and collision with TL
- Cumulative Impacts of Hydro and TL Projects
- Need of SEA (acknowledged by EPA, 2019)



Non-functional fish ladder



Cumulative impacts of linear projects



रजवाम

Order: Anguilliformes
Suborder: Eel
Class: Actinopterygii
Family: Anguillidae
Local name: Rajwam
Total weight: 6.00 kg
Total length: 130 cm
Total girth: 30 cm

वैज्ञानिक नाम: माहुसा
स्थानीय नाम: राजवाम

4. Final Remarks.....

- Nepal has legally adopted the practice of EIA.
- EIA is of no use unless implemented.
- Data on critical habitats/wildlife needs to be enriched.
- There are new/emerging challenges in EIA demanding for more holistic and integrated approach.
(EIA >> CIA >> SEA)

Draft Report

Cumulative Impact Assessment (CIA)
of
Marsyangdi Corridor (Manang-Udipur and Udipur-New
Bharatpur) 220kV Transmission Line Project

Submitted to:
Marsyangdi Corridor 220kV Transmission Line Project
Project Management Directorate
Nepal Electricity Authority
Matafritra, Kathmandu

Prepared and Submitted by:
Nepal Electricity Authority
Environment and Social Studies Department
Lazimpat, Kathmandu, Nepal
Phone No.: 01-4435500
Email: env.social@nea.org.np

April, 2022

Draft Report

Biodiversity Impact Assessment (BIA)
of
Marsyangdi Corridor 220kV Transmission Line Project
in Annapurna Conservation Area

Prepared and Submitted by:
Nepal Electricity Authority
Environment and Social Studies Department
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April, 2022

THANK YOU



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