





写真 (1)
コテスウォール交差点。店舗や住居が道路に近接。大気環境も非常に悪い。



写真 (2)
空港照明灯が道路境界に近接している地点。



写真 (3)
ジャリプティ交差点付近北側道路沿いの共同洗濯場。



写真 (4)
橋からマノハラ川下流を見る(ドブ川のように汚染されている)。



写真 (5)
北側(上流)の建材置き場と河川敷に広がるスラム小屋。



写真 (6)
コウサルタール北側道路沿いのヒンズー教の祠。

**【環境分野の現場写真-1】
対象道路における ROW 内の支障物**



写真 (7)
ティミ付近(雨期に雨水が滞留する)。



写真 (8)
道路周辺北側の寺院(ティミ付近)。



写真 (9)
ハヌマティ橋の下流側(ドブ川状態)。



写真 (10)
スルヤビナヤク交差点北側の不法占拠店舗・住居。



写真 (11)
スルヤビナヤク交差点(右側丘陵部からの雨水が滞留)。



写真 (12)
ジャガティ付近の杉に似た並木。

【環境分野の現場写真-2】
対象道路沿線における ROW 内の支障物

D-2 IEE の TOR

INITIAL TOR

TERMS OF REFERENCE FOR CONSULTANCY SERVICES FOR INITIAL ENVIRONMENTAL EXAMINATION OF KATHMANDU – BHAKTAPUR ROAD UPGRADING PROJECT

1. Introduction

HMG Nepal has received grant assistance from the Government of Japan towards the cost of upgrading of Kathmandu- Bhaktapur Road, linking Koteshwor of Kathmandu and Surya Binayak Chowk of Bhaktapur on the Arniko Highway. The implementing agency for the project is Department of Roads of the Ministry of Physical Planning and Works of HMG Nepal. The upgrading work involves widening of the existing two lanes to four lanes with provision of improvement or reconstruction of bridges and culverts, sidewalks and junction improvements. The Proponent – Department of Roads requires to prepare an Initial Environmental Examination Study Report for this project, prior to its implementation, in accordance with the Environment Protection Act, 2053 and its Regulations, 2054 (1st Revision, 2055).

2. Procedure to be adopted for IEE Study

The Consultant should follow all the requirements as required by the EPR, 2054 (1st Revision, 2055) for IEE study.

3. Duration of Study

It is anticipated that time for completion and submission of the Report does not exceed 4 (four) months from the date of agreement of the Consultancy Services Contract. The Consultant needs to present a Work Plan in their Proposal for the study.

4. IEE Report Format

The IEE Report should include the format of IEE report as required by the EPR, 2054 (1st Revision, 2055). In order to avoid duplication of the information in the report it is desirable to provide a compatible report format as in the approved Terms of Reference. The Consultant should come up with his/her format without deviating from the spirit of the EPR.

5. Deliverables

- i) **Seminar/ Presentation of Draft Report:** The idea behind this presentation is the active participation and feedbacks from the DOR officers and other stakeholders. Hence, the Consultant should organize such a presentation on the draft IEE report, in a convenient date and place (to be decided mutually by the GEU and the Consultant upon completion of the Draft IEE Report).
- ii) **Reports:** The consultant shall submit at least 7 (seven) copies of the draft IEE Report to the DOR. Upon approval of the IEE Report, the Consultant should submit 15 (fifteen) copies of the Final Report of the same to the DOR.
- iii) **Electronic Copies:** The Consultant should submit 5 (five) copies in the Compact Disc (CD), which shall include IEE Reports, annexes and photographs.
- iv) **Digital video Recording (DVR):** The Consultant should submit 5 (Five) copies of the DV Recordings (Minimum time of half hour) containing significant sections/ areas of the Road Corridor along with Final Copies of the IEE Report.

TERMS OF REFERENCE – DRAFT

1. NAME OF THE PROPONENT AND ADDRESS

*Kathmandu-Bhaktapur Road Upgrading Project
Department of Roads,
Babarmahal, Kathmandu
Nepal*

2. GENERAL DESCRIPTION OF THE PROJECT

2.1 Project Description

HMG Nepal has received grant assistance from the Government of Japan towards the cost of upgrading of Kathmandu- Bhaktapur Road, linking Koteswor of Kathmandu and Surya Binayak Chowk of Bhaktapur on the Arniko Highway. The implementing agency for the project is Department of Roads of the Ministry of Physical Planning and Works of HMG Nepal. The upgrading work involves widening of the existing two lanes to four lanes with provision of improvement or reconstruction of bridges and culverts, sidewalks and junction improvements. The Proponent – Department of Roads requires to prepare an Initial Environmental Examination Study Report for this project, prior to its implementation, in accordance with the Environment Protection Act, 2053 and its Regulations, 2054 (1st Revision, 2055).

Kathmandu-Bhaktapur road is a section of Arniko Highway. Arniko – Highway was constructed during 1963 –1972 A.D. from the grant assistance to Nepal from the government of People's Republic of China. Because of the increased traffic volume existing road between Kathmandu metropolitan and Bhaktapur improvement/upgrading has become utmost necessary.

2.1.1 Relevance to IEE

As per the Rule 3 and Schedule 1 of EPR, 1997 (amended 1999), an Initial Environmental Examination will have to be carried out for the Upgrading of the National Highway. The project Kathmandu – Bhaktapur will be upgraded to four lane black topped standard from present two lane black topped standard. Hence, the proposed IEE study is rational in the context of EPR.

2.2 STUDY RATIONALE AND OBJECTIVES

2.2.1 Rationality for Conducting IEE Study

As per the Rule 3 and Schedule 1 of EPR, 1997 (amended 1999), an Initial Environmental Examination will have to be carried out for the Upgrading of the National Highway. The project area do not fall in any national park, conservation area or wild life reserve areas. Hence, the proposed IEE study is rational in the context of EPR.

2.2.2 Objectives of the IEE Study

The main objective of the study is to carry out an IEE Study of Kathmandu – Bhaktapur Road in accordance with Environment Protection Regulations, 1997 (amended, 1999).

The objectives of the IEE Study are as under:

- Collect baseline data on physical, biological, socio-economic and culture resources of the area
- Identify beneficial and adverse impacts of the project
- Suggest further enhancement measures for beneficial impacts
- Suggest mitigation measures for the adverse impacts
- Develop Environmental Management Action Plan

- Develop a practical Monitoring Plan
- Prepare IEE Report as per EPR and Environment Guidelines

3. IEE STUDY APPROACH AND METHODOLOGY

The IEE study will be carried out in accordance with the EPR, 1997. However, the National Environmental Impact Assessment Guidelines (1993); Environmental Management Guidelines of the DOR, 1997; Policy on Environmental Assessment of Road Sector, A Policy document of DOR, January 2000; Guide to Road Slope Protection Works, 2003; and Reference Manual on Environmental and Social Aspects on Integrated Road Development, 2003 will also be adopted in the study. Following methodologies will be used:

3.1 Desk Study

The reports and documents relevant to the Project shall be reviewed to the extent possible and available. Number of checklist for focus group discussion and data collection of physical, biological and socio-economic environment of the project area shall be developed. Road alignment map will be studied in detail. The geographic boundary of the influence area shall be delineated tentatively on the topographical map. It will serve as the base map to present the information collected during the field survey.

3.2 Field Study

The field study will be carried out to collect the baseline information on physical, biological, socio-economic and cultural environment of the project area.

A walkover survey along the proposed route will be carried out to gather information on the physical, biological and socio-cultural environment. Focus group discussion will be held in the settlement areas to generate the socio-economic characteristics of the area.

In order to cross-check the local information, local officials, particularly, Village Development Committees, District Development Committees, Office of the Forestry, soil conservation and land revenue will be contacted to solicit site specification information. The baseline information data will include but not limited to the following.

3.3 Physical Environment

The meteorological data such as climate, air quality, temperatures, land uses and land use pattern data and other information concerning physical resources of the project area/district. The relevant information would be derived from available topographical map and other maps.

3.4 Biological Environment

Information on the flora, fauna, rare and endangered species, sensitive habitats and species of commercially importance in the project area will be collected.

Documentation on (i) wildlife in the project site including mammals, birds, reptiles and amphibians, and (ii) the habitat for sensitive species of birds and mammals known in the study area will be collected.

Documentation of vegetation status, forested area, distribution of endangered plants, medicinal plants, regionally scare plants and plants with other cultural values will be made.

3.5 Socio-economic and Cultural Environment

Information on socio-economic and cultural features of the project area including population, ethnicity, employment facilities and education, health and sanitation condition will be collected. Similarly, data description of settlement pattern, migration, religion, cultural and religious sites, land holding size, crop production and cropping pattern (agriculture), sources of energy and energy consumption, infrastructure and development

activities in project area will be collected. Documentation of families to be directly affected by the project will be listed out.

3.6 Data Processing

Primary and secondary data will be processed through commonly used method. Available maps will be interpreted. Physical, biological information will be tabulated to the extent possible. Socio-economic and cultural information will be crosschecked and analyzed. Standard conversion tables will be used to convert local units into metric systems. Socio-economic information will be processed using computer-spread sheet, tabulated and presented in the test as appropriate.

3.7 Public Notice

A 15 days Public Notice seeking the written opinions from the concern people and institution in conducting the IEE study for Upgrading of Kathmandu – Bhaktapur Road will be published in a national daily newspaper. A copy of the Public Notice will be forwarded to all affected VDCs, Kathmandu Mahanagar Palika, Madhyapur Thimi Municipality, Bhaktapur Municipality, District Development Committees, District Forest Offices, District Soil Conservation Offices, District Land Revenue Offices. Feedbacks and comments for the implementation of the Project will be collected from all concerned.

4. Review of Acts, Policies, Rules, Regulation and Guidelines

Within the limit of the scope of the works, following policies, legislation (with amendments) and guidelines and appropriate information shall be incorporated into the final IEE report. They are:

- Constitution of Kingdom of Nepal, 2047 B.S.
- Tenth Plan policies and strategies with emphasis on environment and road sector
- Environment Protection Act, 1996 and its Rules, 1997 (amendment 1999)
- Public Road Act, 1974
- Forest Act, 1992 and its Rules 1995
- Land acquisition Act, 1978
- Local Self Governance Act, 1999
- National EIA Guidelines, 1993
- Environmental Management Guidelines (of the DOR), 1997
- Policy Document of DOR on Environmental Assessment of the roads sector, 2000
- State of Environment of Nepal, 2000
- Water Resources Act, 1992
- Aquatic Animal Protection Act, 1961 and 1st amendment 1992
- Ancient Monument Act
- Mines and Minerals Act
- Reference Manual for Environmental and Social Aspects of Integrated Road Development, 2003.

5. REQUIREMENT OF THE STUDY

5.1 Time Schedule

In general, the time frame for IEE Study is 3-4 months.

5.2 Budget

The budget for the study will be provided by Department of Roads. Approximate cost of Initial Environmental Examination has been estimated Rs.225,000.

5.2.1 Manpower (Expert/Specialist)

A multi-disciplinary team of subject specialists with good orientation on environmental aspects shall be involved in the study. The composition will be as under:

- Environmental Specialist
- Highway Engineer
- Engineering Geologist/Geo-technical Engineer
- Socio- Economist

Field level assistants and other support staffs should be mobilized to collect the field level data, verify secondary information, and data analysis.

6. IDENTIFICATION, PREDICATION AND EVALUATION OF IMPACTS

The Identification and prediction of impacts shall be carried out by considering the proposed project actions/activities in terms of construction and operation stages of the project. The impacts of the activities will be on biophysical, social, economic, and cultural resources in a defined Zone of Influence (ZOI). The impacts will be classified in terms of extent (site specific, local and regional), magnitude (low, medium, and high) and duration (short term, medium term and long term) as well as reversible, irreversible, severe, moderate, and significant. The likely impact will be assessed covering both adverse and beneficial ones. The methodology adopted for impact identification and prediction will be standard checklists and matrix methods. A suggested format for checklist for environmental parameters used in IEE is given in Chapter-3 Environmental Assessment of Part-II Public Works Directives. This format needs to be modified depending on the project activities and included into the IEE Report.

The likely impacts of the proposed road construction and operation are described in the following sections.

Beneficial Impacts

Beneficial impacts due to implementation of the Proposal during construction and operation of the project will be assessed and further enhancement measures need to be suggested. They will be related mainly to raise the livelihoods of the local people. The likely beneficial impact envisaged during construction and operation stages are:

Construction stage

- Generation of employment
- Increase in income
- Enhancement of technical skills

Operation stage

- Modern transportation facility for road users.
- Cheaper and easy supply of goods
- Reduction in transportation cost
- Promotion of trade and business
- Harnessing of potential of local resources and areas
- Increase in income generating activities
- Increase in value of land
- Saving in travel time

Adverse Impacts

The project activities during construction and in subsequent operation and maintenance stages may create a number of adverse impacts on environment due to the interaction between project actions and local environment. The likely adverse impacts during construction and subsequent operation and maintenance stages in terms of physical, biological, social, economic, and cultural and religious aspects due to the project actions as stated in the following sub-sections will be identified predicted and evaluated.

6.1 Socio-economic and Cultural Environment

The following socio-economic and cultural issues shall be assessed during IEE study.

Construction Stage

- Demography of the study area
- Population displacement including resettlement and rehabilitation
- Loss of asset due to maintenance of RoW
- Effect or pressure on social service facilities such as drinking water, school, health post etc.
- Effect on irrigation schemes
- Impact on cultural and religious sites
- Occupational and safety hazard

Operation and Maintenance Stage

With regard to socio-economic and cultural aspects, all possible issues will be assessed during the

6.2 Physical Environment

Considering the likely environmental impacts of the Proposal, the following environmental issues should be assessed under the physical environment.

Construction Stage

- Landscape disturbance
- Land stability, landslide, soil erosion and down stream sedimentation
- Change in air quality, water quality and noise pollution
- Solid wastes management
- Operation of the quarries and burrow sites
- Existing drainage and their discharge locations
- Drainage alteration and associated erosion
- Disposal of construction spoils
- Road safety measures
- Stock piling of construction materials
- Sources of construction materials.

Operation and Maintenance Stage

Major issues that should be looked into during the IEE study during the operation and maintenance period should be in the following issues:

- Stability of the road corridor
- Stability of longitudinal and cross-drainage outfalls and gullies;
- Right of Way encroachment;

6.3 Chemical Environment

All possible issues arising during the construction, operation and maintenance period should be looked into during the IEE study.

6.4 Biological Environment

- With regard to biological aspects, the IEE study should focus on all possible effects arising from the upgrading and operation of the road.

7. ALTERNATIVE ANALYSIS

The Proposed Project being upgrading of existing road, the alternative analysis of the project location and shall focus on the following issues:

- No project option,
- Alternative design and construction approach,
- Alternative time schedule and process,
- Alternative resources and
- Any other alternatives

The alternative analysis should also consider the acceptability of risks likely to emerge during the implementation of the proposal, and other issues of topical interest. Likely impacts of each alternative should be assessed and compared in terms of adverse environmental impacts and benefits, and the environmentally sound alternative should be recommended.

8. MITIGATION MEASURES

Two types of mitigation measures will be included in the IEE Report. They are benefit augmentation measures and adverse impacts mitigation measures. The IEE report shall also include corrective, preventive and compensatory measures. The mitigation measures should be included for both construction and operational stages. The Environmental Management Action Plan (EMAP) shall be an integral part of the IEE report. Mitigation measures can also be presented in the interaction matrix. Suggested mitigation measures should be pragmatic. The plan will be developed in the POSDCORB concept, which shall comprise of planning, organization, staffing, directing, coordination, reporting and budgeting.

8.1 ENVIRONMENTAL MANAGEMENT ACTION PLAN (EMAP)

Based on the potential environmental impacts (both beneficial and adverse), and Environmental Management Action Plan (EMAP) covering the pre-construction, construction and post-construction stages of the road project is to be prepared and reported in the IEE Report.

9. ENVIRONMENTAL MONITORING PLAN

The monitoring plan should categorize the type of monitoring, such as, compliance and impact. Monitoring parameters and/or indicators will be identified not only for construction and operational stages but also sub categorized in terms of physical environment, biological environment, socio-economic and cultural/religious environment. They will be well documented in the main IEE report. It will also include schedule of monitoring, methods, location and responsible agency for monitoring. The plan shall include required manpower for the purpose of the monitoring. Responsibility of monitoring including estimated cost for environmental monitoring shall be included in the main report.

10. OTHER INFORMATION

The IEE report shall also include relevant information, references, annexes, maps, photos, tables, charts, graphs and questionnaires, as applicable.

11. THE REPORT FORMAT

The Report Format for IEE Study will follow Schedule 5 of EPR, 1997. All requirements indicated in Schedule 5 of the EPR will be included and addressed in the IEE report.

The conclusions and the recommendations of the study shall be drawn. It shall comprise of the major impacts and the mitigation and enhancement measures proposed in the study and draw the conclusion for the study. The report should clearly recommend that whether Environmental Impact Assessment is required or Initial Environmental Examination is sufficient for the proposed project.

D-3 IEE での Public Notice

Public Notice in Nepali Language published in the Daily Newspaper (Samacharpatra) on January 04, 2006.

काठमाण्डौ-भक्तपुर सडक स्तरोन्नति कार्यको प्रारम्भिक वातावरणीय परीक्षण (IEE) गर्ने बारे

सार्वजनिक सूचना

सूचना प्रकाशित मिति: २०६२/०९/२०

उपरोक्त विषयमा सडक विभाग, भू वातावरण शाखाद्वारा निम्न बमोजिमको प्रस्ताव कार्यान्वयन गर्न लागिआएको वातावरण संरक्षण नियमावली २०५५ (पल्लो संशोधन २०५५) को नियम ७ उपनियम २ अनुसार यो सूचना प्रकाशित गरिएको छ ।

प्रस्तावकर्ताको नाम: सडक विभाग, ववरमल्ल, काठमाडौं ।

प्रस्तावको न्वेष्टा: काठमाण्डौ भक्तपुर सडक स्तरोन्नति कार्य ।

काठमाण्डौ र भक्तपुर जिल्लाको काठमाण्डौ महानगरपालिका, मध्यपुर ठिसी नगरपालिका र भक्तपुर नगरपालिकामा पर्ने लालको अरिफो राजमार्गको सडक स्तर उन्नती (सडक चौडा बनाउने) कार्य गर्नु अघि वातावरण संरक्षण नियमावली, २०५५ (पल्लो संशोधन २०५५) बमोजिम सो प्रस्ताववारे प्रारम्भिक वातावरणीय परीक्षण गरी स्वीकृत गराउनु पर्ने भएको छ । प्रारम्भिक वातावरणीय परीक्षण गर्ने क्रममा उक्त नियमावली बमोजिम निम्न क्षेत्रमा के फस्तो प्रभाव पर्दछ भनि यकिन गर्नु परेको छ ।

१. प्राकृतिक पणाली २. सांस्कृतिक पणाली ३. सामाजिक पणाली ४. आर्थिक तथा मानवीय क्रियाकलापहरू र ५. यिनका अवयवहरू तथा ती अवयवहरूको बीचमा अन्तरक्रिया तथा अन्तरसम्बन्ध

यसै सिद्धिसिद्धामा उपरोक्त क्षेत्रमा उक्त प्रस्ताव कार्यान्वयन गर्दा के फस्तो प्रभाव पर्न सक्छ भन्नेबारे सम्बन्धित नगरपालिका तथा त्यस क्षेत्रका विद्यालय, अस्पताल, स्वास्थ्य चौकी तथा सरोकारवाला व्यक्ति वा संस्थाको लिखित राय सुझाव लिनु पर्ने भएकोले यो सार्वजनिक सूचना प्रकाशित गरिएको छ । तसर्थ यो सूचना प्रकाशित भएको मितिले १५ दिन भित्र निम्न ठेगानामा आइपुग्ने गरी राय सुझाव उपलब्ध गराई दिनु हुन अनुरोध गरिन्छ । यस बमोजिमको राय सुझावको प्रतिलिपि सम्बन्धित मन्त्रालयलाई समेत दिन सकिनेछ ।

राय सुझाव पठाउने ठेगाना

सडक विभाग,
भू वातावरण शाखा,
ववरमल्ल, काठमाण्डौ
फोन : ५२६२६९३

फूलबाईट-ईटेको नेपाल जे.सी. ::
मापुस्त : फूलबाईट कन्सलटेन्सी प्रा. लि.
पो.ब.नं. ५९७०, सैतिदेवी, काठमाण्डौ ।
फोन : ५५९९७५० फ्याक्स : ०९-५५९३३३९

(Draft) **English Translation**

Public Notice
for conducting Initial Environmental Examination (IEE)
of
Kathmandu – Bhaktapur Road Upgrading Project

Notice Publication Date : January 04, 2006

In accordance to the provisions under the Environment Protection Act 1996 and its Rules 1997, Rule 7, Schedule 2, the Geo-Environment Division of the Department of Roads has published this notice for the following proposal:

Proponent's Name : Department of Roads, Babarmahal, Kathmandu
Proposal Name : Kathmandu – Bhaktapur Road Upgrading Project

The section of Arniko Highway along Kathmandu Metropolitan city, Madhyapur Thimi Municipality and Bhaktapur Municipality of Kathmandu and Bhaktapur districts, is proposed for upgrading (road widening) and before commencing the job, according to the EPR 1997 the IEE has to be conducted and approved. The IEE study consists of the following parameters:

1. Natural environment
2. Cultural environment
3. Social environment
4. Economic and Human aspects
5. And any other interrelated aspects

To this regards, the proponent seeks written opinions and suggestions from concerned Municipalities, Schools, Hospitals and concerned individuals or institutions of the area with regards to the likely environmental issues due to the project. The suggestions shall be forwarded to the address below or directly to the Ministry.

Address for sending the opinions and suggestions:

Department of Roads
Geo-Environment Division
Babarmahal, Kathmandu
Tel : 4262693

Full Bright – ITECO NEPAL JV
c/o Full Bright Consultancy Pvt. Ltd.
P.O. Box 4970, Maitidevi, Kathmandu
Tel: 4411780, Fax: 01 - 4413331

Notice Copy Distributed

In addition to publishing the above Notice in the Daily Newspaper, the Notice has been delivered to the following Offices for notifying the general public.

1. Kathmandu Metropolitan Office
2. Bhaktapur Municipality Office
3. Madhyapur Thimi Municipality Office
4. Kathmandu Metropolitan, Ward No. 35 Office
5. Kathmandu Metropolitan, Ward No. 9 Office
6. Kathmandu District Development Committee Office
7. Bhaktapur District Development Committee Office
8. Katunje Village Development Committee Office
9. Ward Police Office, Ward no 35
10. National Tuberculosis Hospital, Thimi
11. Mt. Everest School, Bhaktapur
12. Public Places
13. Bus Stands

D-4 IEE での社会環境調査票

Initial Environmental Examination (IEE) Of Kathmnandu – Bhaktapur Road Upgrading Project

(FGD Checklist)

1. Description of project area

District :
VDC/Municipality :
Ward No :

2. Description of population (VDC's)

a. Total No of HH_____

b. Population

Ward No	Female	Male	Total
1			
2			
3			
4			
5			
6			
7			
8			
9			
Total			

3. Settlements pattern of the project area

4. Market centre in the project area

S. No.	Market Centre	No of Industries	No of shops	Remarks

5. Price of land in the project area (Rs/Ropani)

Category	Market Price (Rs)	Govt. Price/ Malpot Price VDC (Rs)
Year round irrigated khet		
monsoon irrigated khet		
Bari (upland)		
Gharedi (homestead land on the road side)		
Gharedi (away form the main road)		

6. Market value of the houses on the existing road side

Category	Total Market Value (Rs)	Unit Value (Rs/Sq.Ft)	Govt. Rate(Rs/Sq.Ft)
Traditional Kacha house			
Modern Pacha house			
Semi modern kacha-pacca house			
Animal Shed (Goth)			

7. Available services in project area (coverage village)

8.1 Education

S.No.	Level of Academic institution	No of Academic institution	No of students			No of Teachers		
			Male	Female	Total	Male	Female	Total

8.2 Sources of drinking water

Sources Percentage of HH

-
-
-

8.3 Health services in the project area

SN	Health Institution	No
1	Sub health post	
2	Health post	
3	Family planning clinic	
4	Private clinic	
5	Aurvedic hospital/clinic	
6	Others	

8.3 Communication service

No of post office -----

No of PCO -----

8.4 Temple, historical/cultural places in the Project area

Name

Location/place

9. Public related offices in the Project Area/VDC/Municipality

SN	Name of Institution	Total No	Place	Ward No
1	Hospital/HP			
2	Post office			
3	Police post			
4	Telephone office			
5	Forest office			
6	Irrigation office			
7	Agri. Cooperative			
8	Veterinary			
9	Drinking water office			
10	Bank			
11	Others			

10. How likely it is that the operation of the road people form outside (the village) will come to this area for permanent settlement expecting better economic opportunities?

- Significant number of people will come
- Only small number of people will come
- Less likely that people will come here for permanent settlement

11. Present status of social services in the locality

- | | | | |
|------------------|----------|--------------|------|
| • School | Adequate | Not adequate | Lack |
| • Drinking water | Adequate | Not adequate | Lack |
| • Health Post | Adequate | Not adequate | Lack |
| • Telephone | Adequate | Not adequate | Lack |

12. Perception about the positive and negative impacts of the new road in their socio-economic life and religious cultural life.

13. How likely it is that the upgrading of the road local people will increasingly use the social service facilities (School, College, Health post/hospital etc)?

14. Impact of road in the project area

- About possibility of availability of local unskilled/ semiskilled/skilled construction works
- Creation of employment/increase in economic activities

- Mobilization of local people/ possibility of cooperation of local people during construction and operation of the road.
15. Possibility of obtaining the cooperation of the local CBOs/NGOs and general public during construction and operation of the road.
16. Likely employment generation to local people (such as increase in agricultural activities, marketing activities, industry, maintenance labor and technicians etc.)
17. If vegetable cultivation increase in the area? Increase by how much?
18. How likely it is that the existing settlement will develop into township? Which are the settlement/ village likely to be developed into township?
19. If you asked for resettlement action where do you prefer to move? How do you response if your land is asked to acquired?
20. List of participants

SN	Name	Address	Occupation/Position

D-5 IEE での世帯調査票

**Initial Environmental Examination (IEE)
Of
Kathmnandu – Bhaktapur Road Upgrading Project**

(Socio-economic HH Survey Questionnaire)

1. Description of Household
 - a. Name of the HH head -----
 - b. Name of Respondents -----
 - c. Name of VDC -----
 - d. Ward No -----
 - e. Place -----
 - f. Caste/ethnicity -----
 - g. Religion -----
2. Are you migrant?
 - a. Yes
 - b. No
3. If yes from Where and when -----
4. Family description (Including HH head)

S.No.	Relation with HH head	Sex	Age	Education	Occupation	Remarks

5. Description of house
- No of floor -----
 - Area occupied (sq mt.) -----
 - Types of roof -----
 - Material -----
6. Land holding

S.No.	Types of Land		Own (Ropani)	Rented-in (Ropani)	Rented-out (Ropani)	Total (Ropani)	Remarks
1.	Lowland	Irrigated					
		Rainfed					
2.	Upland						
3.	Fallow						
4.	Forest						
5.	Others						

7. Cropping pattern and productivity

S.No.	Crops/Vegetable	Area (in ropani)	Productivity (Ropani/Kg./Muri)	Average Market Price (Rs)
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				

8. No of Livestock

<u>Livestock</u>	<u>No</u>
Buffalo	-----
Cow/ox	-----
Goat/sheep	-----
Pigs	-----
Poultry	-----
Others	-----

9. What is food sufficiency situation of your household?
- More than 12 months
 - 9 to 12 months
 - 6 to 9 months
 - 3 to 6 months
 - Below 3 months

10. Sources of energy in daily use

Purpose of use	Types of fuel (%)						Total
	Solar	Kerosene	Firewood	Electricity	Bio gas	Diesel	
Lighting							
Cooking							
Others							

11. Sources of drinking water

- a. Well/ spring
- b. Stream
- c. Pipe tap
- d. Others

12. Location and time to bring drinking water -----

13. Sources of household income (Annual)

S.No.	Sources	Income (Rs)
1.	Agriculture	
2.	Livestock	
3.	Vegetables	
4.	Services	
5.	Business	
6.	Pension	
7.	Rent	
8.	Labor	
9.	Industry	
10.	Others	

14. Expenditure (Annual)

S.No.	Items	Expenditure (Rs)
1.	Food	
2.	Clothing	
3.	Education	
4.	Health	
5.	Festivals	
6.	Agriculture	
7.	Livestock	
8.	Fuel	
9.	Meat	
10.	Others	

15. Are you member of any cultural groups?

- a. Yes
- b. No

16. If yes what they are?

- a.
- b.
- c.
- d.

17. Are there other cultural groups in project area?

- c. Yes
- d. No

18. If yes what they are?

- a.
- b.
- c.

19. Are there temple/historical/cultural places in the project area?

- a. Yes
- b. No

If yes

<u>Name</u>	<u>Location/place</u>
-----	-----
-----	-----
-----	-----
-----	-----

20. Are you member of any users group

- a. Drinking water
- b. Irrigation
- c. Forest/Community forest
- d. Others ()

21. Do you have road access in your area?

- a. Yes
- b. No

If yes

22. For what purpose do you use the existing road?

- a. -----
- b. -----
- c. -----
- d. -----

23. How is the condition of existing road?

- a. Reliable
- b. not reliable
- c. others

24. Will you do any activities for environmental preservation?

- a. Yes
- b. No

If yes what -----

25. What community infrastructures or services will you need?

- a.
- b.
- c.

26. Do you know about the project?

- a. Yes
- b. No

27. If yes how did you know it?

- a. Neighbours
- b. Radio/TV
- c. Newspapers

- d. Others
28. Degree of acceptance of project
- a. Full acceptable
 - b. Acceptable
 - c. Not acceptable
 - d. No idea

Reason -----

29. How do you response if you are asked to be resettled?
- a. Agree some conditions (conditions -----)
 - b. Disagree
 - c. No idea

30. If you take resettlement action where do you prefer to move
- a. Neighbouring village
 - b. Near existing house
 - c. Near by relative house
 - d. Others
 - e. No idea

31. How do you response if your land is asked to be acquired?
- a. Agree under some conditions (conditions -----)
 - c. Disagree in any condition
 - d. No idea

32. Preference for compensation, if your land is asked to be acquired
- a. Land
 - b. Cash
 - c. Land and cash
 - d. Others
 - e. No idea

33. What you will received if the new road is constructed?
- a. Positive -----
 - b. Negative -----

c. No idea

34. Constraints of the project

35. Constraints for the resettlement and land acquisition

36. Any other comments about project

資料リスト（収集資料/専門家作成資料）

		プロジェクトID		調査団番号	
地域	南西アジア	調査団名又は 専門家氏名	カトマンズ-バクタプール道 路拡幅計画予備調査	調査の種類又は指導 科目	予備 調査
国名	ネパール	配属機関名		現地調査期間又は 派遣期間	平成17年12月6日

番号	資料の名称	形態(図書、ビデオ、 地図、写真等)	収集 資料	専門家作 成資料	JICA作 成資料	テキスト	発行機関	Jf
D-1	Department of Road, Nepal Road Statistics, NRS-2002	図書	*				Department of Road	Jf
D-2	Statistical Year Book 2003	図書	*				Central Bureau of Statistics, 2004	Jf
D-3	Standard Specifications for Road and Bridge Works	コピー	*				Department of Road	Jf
D-4	Nepal Road Standard (First Revision 2045)	コピー	*				Department of Road	Jf
D-5	Nepal Road Standard (Revision 2061)	コピー	*				Department of Road	Jf
D-6	Exsisting Water Supply Distribution Pipelines (Drawing No. 08-1-18, 09-1-20, 09-1-21, 092-21, 10-1-22)	コピー	*				Nepal Water Supply Corporation	Jf
E-1	National Population Census 2001 Nepal	CD	*				Central Bureau of Statistics, 2004	Jf
E-2	Statistical Pocket Book 2004	図書	*				Central Bureau of Statistics, 2004	Jf
E-3	Nepal Living Standards Survey 2003/04, Statistical Report	CD	*				Central Bureau of Statistics, 2004	Jf

番号	資料の名称	形態(図書、ビデオ、地図、写真等)	収集資料	専門家作成資料	JICA作成資料	テキスト	発行機関	Jf
E-4	District Development Profile of Nepal 2004 (A Development Data Base of Nepal)	図書	*				Information Sector Research & Study Centre, 2004.8	Jf
E-5	Environment Statistics of Nepal 2004	図書	*				National Planning Commission Secretariat, Central Bureau of Statistics, 2004	Jf
E-6	Reference Manual for Environmental and Social Aspects of Integrated Road Development	図書	*				Department of Roads, Ministry of Physical Planning and Works, 2003	Jf
E-7	Policy Document, Environmental Assessment in the road Sector of Nepal	図書	*				Geo-Environmental Unit, Department of Roads, 2000.1	Jf
E-8	Environment Protection Act, 1997 and Environment Protection Rules, 1997 (Third Edition)	コピー	*				Law Books Management Board, Ministry of Law, Justice and Parliamentary Affairs	Jf
E-9	Environmental Management Guidelines	図書	*				Geo-Environmental Unit, Department of Roads, 1997	Jf
E-10	Bio-Engineering Information, rate Analysis Forms (Interim), Standard Specifications (Interim), Lists of Species and Supporting Information	図書	*				Geo-Environmental Unit, Department of Roads, 1999	Jf
E-11	Roadside Bio-engineering, Site Handbook	図書	*				Department of Roads, Ministry of Physical Planning and Works, 1999	Jf
E-12	Guide to Road Slope Protection Works	図書	*				Department of Roads, Ministry of Physical Planning and Works, 2003	Jf
E-13	Roadside Bio-engineering, Reference Manual	図書	*				Department of Roads, Ministry of Physical Planning and Works, 1999	Jf
E-14	Final Report Initial Environmental Examination of Upgrading Works in Gorusinge - Sandhikhara Road	コピー	*				Full Bright Consultancy (Pvt.) Ltd. And SILT Consultants (P) Ltd., 2004.6	Jf
E-15	Road Maintenance and Development Project, Initial Environmental Examination Study Report on Upgrading of Mirchaiya-Katari-Sunkoshi Road Upgrading Project	コピー	*				GEOCE Consultants (P) Ltd, ITECO-Nepal (P) Ltd.t Consultancy and Full Bright Consultancy (P) Ltd., 2005.1	Jf

番号	資料の名称	形態(図書、ビデオ、地図、写真等)	収集資料	専門家作成資料	JICA作成資料	テキスト	発行機関	
E-16	ENPHO Magazine, World Water & Earth Day Issue	冊子	*				Environmental and Public Health Organization, 2005.5	Jf
E-17	Ambient Air Quality of Kathmandu Valley 2003-2004	冊子	*				Ministry of Environment, Science and Technology, 2005	Jf
E-18	Land Pooling (What, Why, Where and How) (ネパール語)	冊子	*				Department of Urban Development and Building Construction, Ministry of Physical Planning and Works, 2003	Jf
E-19	NGOs in Livelihood Improvement - Nepalese Experience	書籍	*				Tek Nath Dhakal, Adroit Publishers, 2006	Jf
E-20	Around Kathmandu Valley (1:50,000)	地図	*				Himalayan Maphouse (P) Ltd.	Jf
E-21	Nepal Political Map (1: 1,000,000)	地図	*				Himalayan Maphouse (P) Ltd., 2004	Jf
E-22	City Map Kathmandu and Patan (1: 20,000)	地図	*				Shangri-La Design Pvt. Ltd.	Jf
E-23	Engineering and Environmental Geological Map of Kathmandu Valley, Scale 1:50,000	地図	*				O.M. Shrestha et al., 1998	Jf