

This is not an ADB material. The views expressed in this document are the views of the author/s and/or their organizations and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy and/or completeness of the material's contents, and accepts no responsibility for any direct or indirect consequence of their use or reliance, whether wholly or partially. Please feel free to contact the authors directly should you have queries.

APPLICATION FOR ENVIRONMENTAL CLEARANCE GUIDELINE FOR FORESTRY ACTIVITIES

**National Environment Commission
Royal Government of Bhutan
August 2004**



དཔལ་ལྷན་འབྲུག་གཞུང་།
རྒྱལ་ཡོངས་མཐའ་འཁོར་གནས་སྤངས་ལྷན་ཚོགས་ཡིག་ཚང་།
ROYAL GOVERNMENT OF BHUTAN
NATIONAL ENVIRONMENT COMMISSION SECRETARIAT

FOREWORD

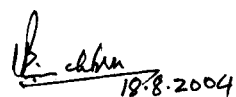
In 1999, the National Environment Commission with technical and financial assistance from the Asian Development Bank (ADB) published six sectoral environmental assessment guidelines for the mining, roads, industries, hydropower, transmission lines and forestry sectors. Several stakeholder consultation workshops and seminars were conducted before the guidelines were published. These guidelines were intended to guide different project proponents through the process of acquiring an environmental clearance for their projects. The Environmental Assessment 2000 (EA Act 2000) was passed by the National Assembly in 2000 and the Regulations under the Act were adopted two years later. Stakeholder feedback and our experiences in implementing the EA Act and the guidelines indicated that there was a need to revise the guidelines in order to make them more practical and relevant to the Bhutanese context and also to streamline them with the provisions of the EA Act 2000. It was also felt that there was a need for two more sectoral guidelines for urban development and tourism as rapid developments in these two sectors was becoming a concern for Bhutan. Therefore, in 2003 the NEC once again revisited these guidelines and revised and updated them to make them more practical and functional documents. Several Environmental Codes of Best Practices (ECOPs) have also been produced to support these environmental assessment guidelines.

The NEC is grateful to the ADB for being so forthcoming with technical and financial assistance to revise and update these guidelines. The revision and updating of these guidelines were accomplished through close consultation with all the various stakeholders. We would also like to express our gratitude and appreciation to all the line ministries and stakeholders for their active participation, support and inputs. We are confident that the revised guidelines will be more useful documents that facilitate and expedite the environmental clearance process as project proponents will now have a better understanding of what information must be provided in order to attain an environmental clearance.

In Bhutan, environmental conservation has been embraced as one of the four pillars of Gross National Happiness - the other three pillars being good governance, socio-economic development and cultural preservation. However, with the expansion of developmental activities in the country, it is becoming very difficult to strike a sustainable balance between environmental conservation and socio-economic development. The number of industries is on the rise every year

while the demand for rural access to market facilities in the form of farm roads and feeder roads is increasing with every Five Year Plan - in the 9th Five Year Plan alone there is a plan to develop 588kms of farm roads. Environmental issues such as waste disposal related to urbanization are also becoming serious concerns for Bhutan. Bhutan is lauded by the international community for its sound environmental policies and the political will to implement these policies. However, environmental problems are becoming more and more visible and instruments like the EA Act 2000 must be implemented effectively to support the government's sound environmental policies and to ensure that Bhutan remains clean and green.

The environmental assessment process endeavors to mitigate and prevent the undesirable impacts of developmental activities. It is in no way intended to hamper socio-economic development in Bhutan but to guide project proponents in making the right investments in land, manpower, technology and mitigation measures to ensure that their projects have the least possible impacts on the environment. With the revision and updating of the old guidelines and the publication of two new guidelines on Urban Development and Tourism and relevant ECOPs, the NEC is hopeful that the private sector, line ministries and competent authorities under the Regulations for Environmental Clearance of Projects find the guidelines more useful, practical, informative and easy to comply with. It is the sincere wish and hope of NEC that all the stakeholders, both public and private will make the best use of these guidelines, which in turn will help in protecting our fragile ecology. Sound implementation of these guidelines will go a long way in minimizing the negative impacts of developmental activities on Bhutan's environment.



Nado Rinchen
Deputy Minister for Environment

NECS, PO Box 466, Thimphu, Bhutan

Telephone: (975-2) 323384/325856/324323/326993

Fax: (975-2) 323385

Email addresses:

AED

admec@druknet.net.bt

Technical Division

EIA Section: eanec@druknet.net.bt

RMS Section: rnrnec@druknet.net.bt

ICO section: cunec@druknet.net.bt

Policy Coordination Division

Policy Analysis Section: ppdnec@druknet.net.bt

Legal Section: legalnec@druknet.net.bt

Table of Contents

1	Glossary	1
2	Introduction	5
3	Information for Preparing the Application for Environmental Clearance	6
	3.1 Applicant's Details	7
	3.2 Project Objectives	7
	3.3 Project Details	8
	3.4 Public Consultation	10
	3.5 Project Physical Environmental Details	11
	3.6 Project Site Ecological Description	13
	3.7 Project Social Environment	14
	3.8 Project Impacts and Mitigation Measures	17
	3.9 Monitoring Program	18
	3.10 Checklist for No Objection Certificate	18
4	Environmental Assessment Procedures	19

1 Glossary

Affected people: individuals, groups or communities, or other organisation whose interests may be directly affected by the location, construction and operation of the project

Agency: a ministry, department, municipality established under the Bhutan Municipal Act, 1999 or any autonomous body of the Royal Government of Bhutan

Applicant: a person seeking an Environmental Clearance from a Competent Authority or from the National Environment Commission

Competent Authority. Any agency of the Royal Government that has the power to issue an Environmental Clearance for a project

Cultural Heritage: tradition or culture that should be preserved for future generations

Development Consent: the approval that is issued or renewed by a Competent Authority in the form of a licence, lease or permit for land use or construction. The Development Consent can only be obtained after the Environmental Clearance has been issued

Environmental Assessment: all procedures required under Bhutanese law to identify means to ensure that the activities of a project are managed in an environmentally sound and sustainable way

Environmental Clearance: the decision issued under Chapter III of the Environmental Act, 2000, issued in writing by the National Environment Commission or the Competent Authority, to let a project proceed. The Environmental Clearance includes terms and conditions which the Applicant

or the Holder of the Environmental Clearance must abide by to ensure that the project managed in an environmentally sound and sustainable way

Environmental Management Plan: a plan which addresses the ways of mitigating and monitoring the impacts that have been identified by the environmental assessment. The Environmental Management Plan may comprise part of the conditions of the Environmental Clearance that is issued either by the Competent Authority or by the National Environment Commission

Environmental Parameter: A component of the surrounding environment which may be altered by a project activity. This includes physical interventions or releases to air, water and soil, which may in turn affect vegetation, wildlife, human and aquatic communities

Environmental Terms: the requirements and conditions that a project must comply with, as stated in the Environmental Clearance issued either by the NEC or the CA

Environmental Unit: a management unit that is established within a project structure that is responsible for implementing, monitoring and reporting on the environmental terms attached to the Environmental Clearance

Forest: any land or water body, whether or not under vegetative cover, in which no person has acquired a permanent and transferable right of use and occupancy, whether such land is inside or outside the forest boundary pillars, and includes land registered in a person's name as Tsamdo (grazing land) or

Sokshing (woodlot for collection of leaf litter)

Holder: the recipient of an Environmental Clearance under Chapter III of the EA Act, 2000

Land acquisition: the acquisition of any land, constructions or other property in accordance with the procedures established under the Land Act, 1979 (or successor legislation)

Monitoring: a program of systematic measurements or observation of environmental and social parameters. Monitoring requirements include regular reporting and specify actions to be taken if non-compliance occurs. Monitoring requirements are specified in the Environmental Terms, which is attached to the Environmental Clearance. Monitoring consists of Baseline monitoring which is carried out prior to a project commencing. Baseline monitoring measures the existing environment and this is compared to later monitoring which establishes the effects caused by the project. Compliance monitoring refers to a system of regular measurements, which compares releases from an activity to those that have been specified in the Environmental Terms. The permitted releases are established in environmental standards

Non-listed project: all projects that are not listed in the most recent update of Annex 2 of the Regulation for the Environmental Clearance of Projects, 2002

Project: an activity, which may have significant effects on the environment

Project area: The area that includes the immediate and the proximate area of a project that the project may have an environmental or social impact on

Protected Area: is an area which has been declared to be a national park, conservation area, wildlife sanctuary, wildlife reserve, nature reserve, strict nature reserve, research forest, critical watershed or other Protected Areas for the preservation of areas of natural beauty of national

importance, protection of biological diversity, management of wildlife, conservation of soil and water and related purposes

Screening: the review process carried out by the National Environment Commission or by the Competent Authority of the Application with regard to whether the project may be (i) issued with an EC (ii) rejected or (iii) require further environmental assessment

Sustainability: development that recognises the need to raise the living standards of the present population without compromising the country's resource base, cultural integrity, historical heritage or the quality of life of future generations

Wildlife: includes all mammals, avians, reptiles, amphibians, fishes and invertebrates

2 INTRODUCTION

In 1999 the National Environment Commission (NEC) approved six sectoral environmental guidelines on (i) Forestry, (ii) Highways and Roads, (iii) Hydropower, (iv) New and Existing Industries, (v) Mines and Mineral Processing and (vi) Power Transmission Lines. In 2000, the National Assembly passed the Environmental Assessment Act and in 2002, the government approved the Regulation for the Environmental Clearance of Projects (the Regulation). Under the Regulation, both the National Environment Commission (NEC) and the designated Competent Authorities (CA), which are listed in Annex 2 of the Regulation, are authorized to issue Environmental Clearances for projects.

Applicants, CAs and the NEC found the six sectoral guidelines developed in 1999 cumbersome and difficult to comply with. This often led to delays in issuing environmental clearances and therefore the execution of projects. In order to ensure that this guidelines address the requirements of the *Environmental Assessment Act, 2000* and the *Regulation for the Environmental Clearance of Projects, 2002* while at the same time keeping them simple and easy to follow, the NEC, with financial and technical assistance from the Asian Development Bank (ADB), has revised the six guidelines and also developed two new sectoral guidelines: one for tourism and the other for urban development.

The NEC had the overall responsibility for coordinating the program, which was directed by Mr. Karma C. Nyedrup of the Environmental Assessment Section. The assistance of numerous officers within the NEC and the following consultants; Karma_Jimba, Sonam Tobgay and Charles Adamson is gratefully acknowledged.

This guideline has been developed in close consultation with relevant agencies that are involved in forestry activities and also integrates requirements needed by other agencies who are involved in approving forestry projects.

3 INFORMATION FOR PREPARING THE APPLICATION FOR ENVIRONMENTAL CLEARANCE

The Application for Environmental Clearance (EC) of a project¹ is hereinafter referred to in this Guideline as the “Application.

1. Issuance of an Environmental Clearance is a prerequisite to the issuance of Development Consent. (Ch II, article 8, Environmental Act, 2000)
2. The Competent Authority under the Ministry of Agriculture will issue the Environmental Clearance for projects that are defined in Annex 2 of the Regulation for the Environmental Clearance of Projects, 2002²
3. The purpose of the Application is to assist the CA or the NEC review the project and to determine the level of environmental assessment required. It is therefore important to provide concise and accurate information when completing the Application. When quantifying the environmental impacts, avoid using subjective statements such as “*the project will have minimal environmental impact*”
4. One of the main reasons for delays in making a decision to either issue environmental clearance or reject the Application is lack of adequate information in the Application. If the required information is not provided in detail, the CA or the NEC will have to seek further clarification from the Applicant which extends the review process

¹To establish a project without an Environmental Clearance, or to provide false, misleading or inaccurate information shall be an offence under Article 49 of the EA Act, 2000 and Section 36 and 37 of the Regulation for the Environmental Clearance of Projects, 2002.

²Each year the NEC requests the various Competent Authorities to review and add projects to Annex 2. Thus while the Regulation was issued in 2002, Annex 2 has and will continue to be revised. The latest issue of the Regulation needs to be referred to for the most recent update of Annex 2.

5. If the Application is subject to further environmental studies, the Applicant will need to submit the Terms of Reference for the subsequent detailed investigations to the NEC for approval (*Article 15, Env Act, 2002*)
6. If any section is not relevant to your project, explain why this is the case then proceed to the next section
7. The numbering of sections for the Application should start from 1. Persons completing the Application are not obliged to maintain the same numbering sequence as used in the Guideline

3.1 Applicant's Details

Information that is provided should include:

- (i) Name of the Applicant
- (ii) Name/type of activity
- (iii) Present mailing address including telephone number, fax, and email (if any)
- (iv) Name of the environmental focal person
- (v) Qualification of the environmental focal person
- (vi) Telephone number of environmental focal person³
- (vii) If the Application is prepared by a consultant, give the name and contacts of the company that prepared the Application

3.2 Project Objectives

List the main objective/s of the project in bullet form.

³Section 23 of the Regulation for the Environmental Clearance of Projects, 2002, may require the Applicant to designate a focal person to ensure compliance with the terms of the Environmental Clearance. While Section 24 of the Regulation, requires that depending on the size of the project, the project establishes an environmental unit responsible for ensuring compliance with the terms of the Environmental Clearance.

3.3 Project Details

3.3.1 Project Location

In an appropriate scale map⁴, mark the project site, district and geog boundaries, rivers and/or streams, nearby towns, roads, footpaths, settlement/s, approach road/s, internal roads, camp sites, cable crane lines etc. Should registered land be involved, show the *Thram* number and the boundary. Provide a clear legend, showing north and the map scale.

3.3.2 Project Area

State the project area in acres/hectares.

On the map required in Section 4.3.1, mark the boundary of the project area where the project activities will take place. This may be the area where clearing and logging is carried out. It does not include the indirect project impact area where social impacts may occur.

3.3.3 Project Cost

Provide the total project cost in Ngultrums

Out of the total project cost, what percentage is budgeted for environmental management?

3.3.4 Extraction Volumes

Mention the average expected quantity of product that will be extracted each year. e.g. m³ of logs harvested / year, or m³ or ft³ of sand extracted from a river bed / year. Name the month/s of the year when the activity will be undertaken.

⁴A sketch map may be provided for smaller projects.

3.3.5 Plantations

Where areas are to be replanted/planted show (i) the size of the area (ii) number of seedlings to be planted (iii) type of species and (iv) source of seedlings.

3.3.6 Agro-chemicals Required (this is applicable only to afforestation/reforestation activities)

List and quantify the agro-chemicals required by the project in the table below. Under item specify the type of fertilizer, agro-chemical, coal tar etc. together with the quantity that will be applied per year.

Table 1: Agro-chemicals and other materials to be used by the project

Item	Quantity required	Unit	Purpose to the project

3.3.7 Labour and Machinery

Provide information on the maximum number of labourers that will be employed by the project. Show the main tasks that the labour will undertake and from where the labour will be recruited.

0

Category of Labour	Task	Number	Labour recruited from
Skilled			
Unskilled			

Show details of equipment that will be used by the project in Table

3: Table 3: Equipment that will be used by the project

Type of machine	Number	Remarks

3.3.8 Methods/Technology

In steps clearly explain the harvesting/extraction/ plantation process.

3.3.9 Sustainability

Show how sustainability issues will be addressed by the project?

3.3.10 Ancillary Facilities

Provide details about ancillary facilities that may be required to support the project. For example roads may be needed to export logs or sand from the project. If roads need to be constructed, the Applicant needs to apply for an environmental clearance to construct the roads/ and follow the guidelines titled *Application for Environmental Clearance: Guideline for Highways and Roads,2004*

3.4 Public Consultation

Provide details of public consultation⁵ held with affected people.

⁵As per Article 16 of the EA Act 2000 and Section 31 of the Regulation for the Environmental Clearance of Project 2002, Public Consultation with concerned people is mandatory.

The Applicant must explain to the affected people the expected impacts of the development, where they will occur and how they will be mitigated. Provide a record of the meetings and attach a list of the names of the affected people together with the date of consultation/s, details of their Geog and village, issues raised by the affected people and the agreement/s arrived at between the Applicant and the affected people to resolve these issues. Provide signatures or other proof of the consultation/s. Describe issues that remain unresolved.

3.5 Project Physical Environmental Details

3.5.1 Topography

Topography details are required to determine whether there will be any negative impacts arising from activities on steep terrain such as gravity spill over wastes from quarry sites.

Provide the topography details in percentage or degrees for the following:

Max. slope.....%

Min. slope.....%

Estimate the area of the project in percent that is above 70% slope.

3.5.2 Hydrology

In Table 4 show mean monthly rainfall (mm) recorded at the nearest rain gauge.

Name of location of rain gauge:

Elevation:(m)

Years of record: from (year) to..... (year)

Table 4: Rainfall record

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Rainfall (mm)													

In Table 5, provide details of perennial streams/rivers that are located within or are in close proximity to the project area.

Table 5: Details of perennial streams/rivers within and proximate to the project area

Name of watercourse	Is watercourse inside or outside the project area?	Approximate distance to watercourse from the project area (km)	Identify possible impacts on watercourse

Possible impacts include effects on water quality due to land disturbances caused by logging activities. This effect will be more pronounced if buffer areas are inadequately sized. Sand extraction may cause the river channel to shift.

Identify communities living downstream of the project who may be impacted by the activity. Identify the type of impact (impact on water quality or lowered volume), the name of the community, the number of households who will be affected and the distance from the project area.

3.6 Project Site Ecological Description

3.6.1 Land Use

Provide details of land use based on the following categories; *Kamshing, Chushing, Tseri, Orchard, Tsamdo, Sokshing*, broadleaf forest, conifer forest, scrub forest and others.

Protected Areas include Wildlife Conservation areas and Biological Corridors, which are regulated by the Bhutan Forest and Nature Conservation Act 1995. Information about the location of protected areas, biological corridors and conservation areas can be obtained from the Department of Forest.

Prepare a table similar to Table 6 that shows details of land use and ownership. For Protected Area/s, provide the name of the Protected Area/s.

Table 6: Land use details

Land use	Area	Tenure	Affected Households

2.6.2 Wildlife

The Applicant is required to provide information on the occurrence of wildlife within the project area. Provide the information in tabular format as illustrated below. In the "Remarks" column tick the appropriate column. Show the source of the information e.g. field survey carried out by Mr xxx, Biodiversity Specialist.

Table 7: Flora found in the Project Area

Flora	Remarks			
	Commonly found	Rarely found	Protected	Endangered

Source of information:

Table 8: Wildlife found in the project area

Fauna	Remarks			
	Commonly found	Rarely found	Protected	Endangered

Source of information:

3.7 Project Social Environment

3.7.1 Population

The project may have beneficial or adverse impacts on the local community. Determine the size of the population that could benefit from the project and the size of those that will be adversely impacted. It is important to cite the source of the information e.g. own data collected through site assessment or data from the Gup, etc.

Provide the information in a tabular form as illustrated below in Tables 9 and 10.

Table 9: Project beneficiaries

Dzongkhag	Geog	Village	Town	Type of Benefit	Population (no)	Households (no)
Total beneficiaries						

Source of information:

Table 10: Details of Concerned People

Dzongkhag	Geog	Village	Town	Adverse impact	Population (no)	Households (no)
Total that will be adversely impacted						

Source of information:

3.7.2 Loss of Houses, Infrastructure and Cultural Heritage Sites

This section assesses, whether the project will lead to the loss of existing houses, infrastructure and cultural or heritage sites. The impacts could either be permanent or temporary⁶.

⁷Under the Land Act, 1979, sections KA-6(8)municipal areas and KA-6(9) rural areas sets out procedures for the acquisition of land, rates of compensation for land and determining the valuation of houses, while Appendices C, D and E set out compensation rates for agricultural crops and fruit trees.

In tabular form as shown below, provide details on whether any of the following will be affected by the project and describe the nature of the loss for: (i) Services (ii) Houses (iii) Infrastructure (iv) Cultural or heritage sites.

Services include telephone, electricity, water supply etc.

Houses include shops and other buildings.

Infrastructure includes roads, bridges, mule tracks and power and telephone lines.

Cultural or heritage sites include chortens, lhakhangs, monuments, sacred places (ney) etc. Show the distance in metres from the cultural or heritage site to the disturbance caused by the project.

Locate the structures in the map required in section 4.3.1.

Table 11: Loss and disturbance to existing services, houses, infrastructure and cultural and heritage sites

Type of Loss	(no)	Description of disturbance
Services (list)		
Houses		
Infrastructure		
Cultural Sites		distance in m from disturbance
Heritage Sites		distance in m from disturbance

3.7.3 Aesthetics

Will the project site be visible from major settlements or from a national highway? Yes or No. If “yes” elaborate whether the development of the project area will create an adverse visual impact when compared to the original landscape or to the surrounding landscape.

3.8 Project Impacts and Mitigation Measures

From the information provided in the preceding sections, identify the impacts of project activities and list them in a tabular format similar to that shown below. Impacts can occur from: (i) the *Location* of the project (ii) the *Design* of the project (iii) from *Construction* related activities and (iv) from *Operation* of the project. For each negative impact provide mitigation measures and the approximate cost required to implement the mitigation measure.

Table 12: Impacts and Mitigation Measures

Impact	Mitigation measures	Estimated cost of mitigation (Nu.)

The Applicant will be responsible for ensuring that the Environmental Terms that are attached to the Environmental Clearance are implemented. These become the responsibility of the Holder of the Environmental Clearance. Where a Contractor is employed the Holder will be held responsible for ensuring that the Contractor abides by the Environmental Terms. The Environmental Terms are to be attached to the Contract Document so that the Contractor has a clear understanding of the environmental requirements that are to be adhered to during construction. At the time of tendering, the Contractor will be required to prepare a Contractor's Site Environmental Management Plan (CSEMP) that shows how the Contractor will implement the Environmental Terms that are included as part of the Tender Specifications. The CSEMP is to be included as part of the Contract Documents and is to be evaluated as part of the overall tender. The NEC can assist with information in this area.

Applicant will also have to provide the following plans along with the application if they are relevant:

- 1) The Land Compensation and Resettlement Plan
- 2) Worker Health and Safety Plan

3.9 Monitoring Program

Monitoring responsibilities including other provisions that the Applicant/Holder and Contractor will need to address at the time of submitting a tender for the work will be included as part of the Environmental Terms⁷ which will be attached to the Environmental Clearance.

Regular monitoring will be the responsibility of the Holder of the Environmental Clearance and will also be detailed in the Environmental Clearance.

Either the CA or the NEC may conduct unannounced monitoring and checks.

3.10 Checklist for No Objection Certificate

In order to obtain an Environmental Clearance for the project, NOC must be obtained from all relevant parties. Attach these documents to the Application. Below is a checklist of agencies from whom NOCs may be required.

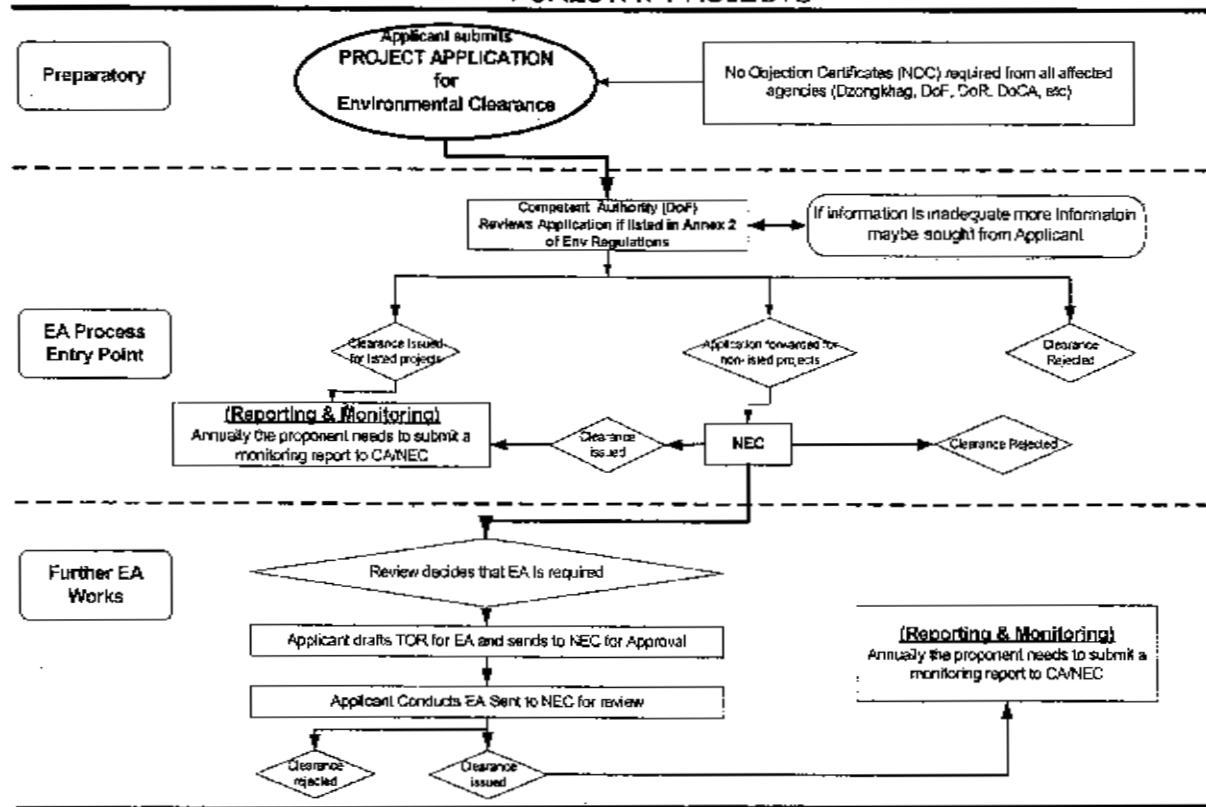
⁷Article 39 of the Environmental Act, 2000, establishes the need to attach environmental terms to the Environmental Clearance.

Agency/concerned people to issue NOC	Why/when
Dzongkhag	Administrative approval from Dzongkhag
<i>Tsamdo</i> from Cabinet routed through DoF	Should the project damage or acquire <i>Tsamdo</i>
<i>Sokshing</i> from Cabinet, routed through DoF	Should the project damage or acquire <i>Sokshing</i>
Department of Culture	Should the project be located within 50-m of a cultural or religious site
Department of Forest	Protected Area/government land
Municipal Authority	Within a municipality
Private owner	Within a private boundary
Department of Health Services	Within 50-m of hospital
Department of Education	Within 50-m of school
Bhutan Power Corporation	Should the project require the relocation of a power transmission line
Department of Roads	Should the project require access from highways and feeder roads
Bhutan Telecom Corporation	Should telephone structures need relocation

4 ENVIRONMENTAL ASSESSMENT PROCEDURES

A flowchart is attached showing how the Application for Environmental Clearance will be processed.

ENVIRONMENTAL ASSESSMENT PROCEDURE FOR FORESTRY PROJECTS



Note: For environmental assessment timeline refer Annex 1 of the EA Regulation 2002