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SCHEME FOR ACCREDITATION OF EIA CONSULTANT ORGANIZATIONS - Version 3

Quality Management System: Explanatory Notes for the Guidelines

NATIONAL ACCREDITATION BOARD FOR EDUCATION AND TRAINING

QUALITY COUNCIL OF INDIA

SCHEME FOR ACCREDITATION OF EIA CONSULTANT ORGANIZATIONS

QUALITY MANAGEMENT SYSTEM

Explanatory Notes for the Guidelines

EIA Consultants are advised to establish and maintain a Quality Management System (QMS) for their organization as the same offers the following benefits;

- Creates a culture of doing things right, the very first time.
- Inculcates the culture of "**say what you do and do what you say**"
- Increases system orientation and reduces person specific dependence.
- Encourages uniform knowledge sharing and develops skilled and competent employees.
- Helps develop team spirit and a disciplined employee group.
- Reduces duplicate work and minimizes wastages.
- Reduces cost, increases profitability thereby improving competitive edge.
- Improves quality of work and brand image.

QMS should be based on ISO 9001 while addressing specific requirements of NABET Scheme. If an organization is already ISO 9001 certified, guidelines B1 to B4 and B10 are normally addressed (which may please be checked). It is then required to develop procedures for the NABET specific items i.e. B5 to B9 and integrate them with the system meaning that those should also come under the ambit of auditing, document control, management review etc.

If an organization has not been initiated into the system oriented approach of working which is documented, audited and reviewed, it needs to acquaint itself with ISO 9001 requirements. Such organizations may initially take the help of a consultant but **MUST NOT OUTSOURCE THE WORK OF ESTABLISHINGTHE QMS** to him to meet the requirements of the NABET Scheme. Such an approach is counterproductive as the system so developed is less likely to be owned by the working team and would remain a standalone document.

THE BEST WAY IS TO GET THE GUIDANCE OF A CONSULTANT BUT LET THE WORKING TEAM ESTABLISH THE SYSTEM.

The QMS is supported by documentation system containing

- The Quality Management System manual
- Procedures
- Work instructions/forms/formats/checklists to implement the procedures

Some organizations also include Reference Materials to their documentation system. Further explanation is given in B 2 below.

In order to assist the consultant organization to align its QMS with the NABET requirements, the NABET Scheme Manual provides Guidelines in **Appendix B.**

Many Consultant organizations still have questions about the NABET requirements of QMS; this document has been prepared to answer quite a few of these questions.

B1.Quality Policy

Guidelines

a. Be appropriate to the organization's business,
b. Show commitment for complying with requirements and continual improvement,
c. Provide a framework for setting objectives and the review mechanism,
d. Be communicated and understood within the organization,
e. Focus on customer satisfaction.

a. How do we ensure that the Policy is appropriate to the business of the organization?

The purpose of the EIA consultancy business is the development of EIA reports that are scientifically rigorous, technically superior, specific to aid decision making and above all ethically and morally blemish less. This purpose should come out well in the policy document. For such organizations which have other activities, a mention of a broad area of work should suffice.

b. "Complying with requirements" – what are the requirements referred to here?

"Requirements" mean (a) legal requirements, (b) customer requirements, (c) requirement of accreditation body (such as NABET), and (d) other requirements mandatory for the business to function.

c. What is the meaning of 'Framework for Setting Objectives and the Review Mechanism'?

The Framework means a system or a set of procedures that help the organization to set objectives and carry out reviews. For example, ISO-9001: Quality Management System provides such a Framework. It helps the organization to identify, analyze and act on various issues that affect the organization and in doing so helps the organization to set objectives for improvement. ISO 9001 also requires the organization to have periodic review of its QMS with clear identification of inputs and outputs of such a review.

d. What is the meaning of 'communicated'?

Communication is a two-way process. It is not enough that the policy document is displayed, shared - through mails/ written documents/ meetings/ training; the organization should also ensure that all employees have understood the policy, i.e. the intent of the organization, in full through a feed-back mechanism.

e. Who are the stakeholders that a policy of an EIA Consultancy organization addresses?

i) employees, ii) regulatory authorities, iii) client, iv) society, v) and other living and non-living organism that may be affected by the project for which an EIA is carried out.

B2. Control of documents including records

Guidelines

a. Uniquely identifying documents and records,
b. Approving documents prior to issue,
c. Reviewing and updating of documents, as required,
d. Ensuring quick availability of relevant revision of the document,
e. Storage, protection and retrieval of documents and handling of outdated/ superseded documents.

a. What are 'documents' and 'records'

Documents help the organization to establish and maintain a QMS. Records are "documents" that present information on the past performance. A special property of Records is that they do not undergo revisions like other documents. On the other hand, the policy, objectives, standards, manuals, procedures etc., can undergo changes depending on the need / the changed context.

b. What are the documents that help to establish a QMS?

An organization needs to establish and maintain a set of documents to guide its employees to follow pre-defined (preferably written) set of guidelines or steps to perform the activities related to conduct of its business. Such documents are;

Manual

A QMS Manual provides an overall information of how the organization has chosen to address all the requirement of the QMS Standards, viz., ISO-9001 and NABET Scheme. For example, a manual will inform how a particular requirement of ISO-9001 clause or sections of the Appendix 2 of the NABET Scheme are going to be addressed; it is not the intention of the manual to elaborate the "how" of it; the elaboration of the "how" is done through procedures and work instructions depending on the level at which these are carried.

Procedures and Work instructions- These are the documents that define;

- Objective of the activity to be performed (Why?)
- Scope of the procedure (What?)
- Responsibility (Who will do it?)
- How step by step the activity would be performed(Procedure)
- How during the course of activity, one would check whether the actions taken and the results obtained are in conformance with the procedure defined and whether the purpose for which the activity was being performed is being fulfilled (performance monitoring, calibration of instruments and verification)

- During the process of performing an activity, certain records need to be generated that ultimately give evidence that the work has been done as per documented procedure and the defined purpose is fulfilled (records and formats)
- Finally the procedures should also include the names of Reference Documents that were referred for completion of that activity.

In summary, the **procedures** guide the organizational personnel to perform their activities in a manner that is uniform across the organization

Records provide the "data" for the preparation of reports (information) that are required to effectively and efficiently deliver a product (in this case an EIA report);

records are not only for providing evidence; their main purpose is to enable the delivery of the final product/service.

What is meant by 'control of a document' and why should it be done?

Documents are controlled to ensure that they are UNIQUELY identified; documents are controlled to ensure that only those documents that are "current" are available at the place of work where they are needed

Give an example of how to control documents?

In any organization the documents could be controlled using a unique identification number system. For example

Quality Management System Manual:

ABC/QM/Rev- 00 or 01 and so on

Quality Management System procedures/work instructions:

ABC/QSP/xx/Rev -00 or01 and so on

Format for record keeping and data collection etc:

ABC/ QSP/xx/yy Rev-00 or 01 and so on

Reference documents:

ABC/QSP/xx/zz

Where;

ABC is the name of organization; QM- Quality Management System Manual: QSP- Quality Management System Procedure; xx – is the procedure number; yy- is the format number for procedure# xx; and zz is the number of reference document used in the implementation of procedure # xx.

(The above is only an example; an organization may follow its own methods for uniquely identifying documents)

c. What are the pre-requisites for preparing, issuing and revising, reviewing and updating documents?

- All documents are compiled, reviewed and approved and controlled by CEO or his nominee(s) for adequacy.QMS documents can be controlled through intranet also. In quite a few organizations document control is affected through the use of intranet. Documents that are available on the specific file are considered to be controlled; the file is managed and updated by the authorized person (document controller). Access to these documents is given to those who need them; this is normally done selectively and those who have the appropriate password will have access to those documents that are required for their work. Any document that is printed from the file are considered UNCONTROLLED.
- The signatures of the executives preparing, reviewing, approving and issuing the documents are given on the controlled documents.
- In case of changes in the documents, only authorized persons prepare, review and approve the revised documents.
- Formats for record keeping are prepared by concerned experts (procedure specific), approved by nominee of CEO or by CEO as the case may be.
- Filled in records are to be signed by the experts who have entered the data into the format and to be verified and signed by competent domain expert of that procedure.
- Whenever necessary, the documents are updated, reviewed and re-approved. For example, in case of continual improvement, while taking corrective actions of the non-conformances etc., a need could be felt to revise the documented procedure or a format that is not capturing the significant information or data, the document may be revised/ changed.
- To change a document, a document change request is initiated by the key user. These requests are reviewed in regular MRC meetings or in emergency meetings if necessary and actions to be taken are finalized.

- Subsequently, changes are made in the document and such changes are approved and incorporated in all controlled copies and key users are informed for compliance to revisions.
- Sometimes, in case of major changes the organization may initiate an awareness program on such changes in the organization.

d. How do we ensure quick availability of documents?

- The Master Copy (original signed copy) of the document is maintained by an authorized executive. All other controlled copies are maintained by the designated executives in hard or soft copy. The distribution list is to be prepared in order to ensure the quick availability of the relevant version of the documents.
- If the QMS documents are controlled through the intranet of the company, it is possible to make only the current documents available to the employees

e. How are the documents stored, protected and retrieved?

- All the documents/ records are stored safely in a protected atmosphere so that these are not amenable to pilferage/damage.
- Document numbers as explained above are provided, list of documents with their retention time is displayed on the file folders to ensure that the documents are readily identifiable and retrievable.
- Obsolete documents are identified by the stamp of "OBSOLETE COPY", all controlled copies of obsolete/superseded documents are destroyed and only the Master Copy of the obsolete document is retained.
- In case of document control through intranet, it is advisable to have a "mirror" copy of the documents at a server far away from the location of the organization. This helps to retrieve the documents in case the soft copies are erased due to some reason.

f. For how long the documents should be retained?

- Since we are discussing QMS in environmental consultancy organizations, it is preferred to keep all the records for a period which is longer than the project end-of-life. These may be required if any litigation arises in future. Any other document that may be needed in a future litigation has to be similarly archived and preserved. Other documents may be kept in archives for a short period like, say, 3 years after they became obsolete.

The following Records help to identify procedures and records maintained by the QMS;

a) Master List of Documents

b) Master List of Record Formats

c) Documents change request

B3. Performance Measurement and Review

Guidelines

a. Fixing Key Performance Indicators(KPI) of experts involved in EIA and annual appraisal of the same,
b. Assessing/ensuring the quality of EIA reports prepared,
c. Improving skill / competence level of experts through training,
d. Periodic & systematic audit, both internal and external and follow up action for closure of NC/Observation,
e. Management Review giving periodicity and issues to be taken up including feedback from project proponent/public hearing/ministry on the quality of EIA reports prepared and necessary follow up action.

a. What are KPIs?

KPIs are Key Performance Indicators which are measures of performance of employees at different levels of the organizations. KPIs are normally linked to the overall business goals of the organization. For example, the KPI for a business head may be "Profit for the quarter"; for a FAE, a KPI may be "Actual days for the completion of activity / planned days for the completion of the activity"

b. What are the criteria to assess the quality of EIA reports?

Some of the important aspects of a good quality EIA are accuracy of site description, quality of the base line data, analysis and interpretation of the data, identification of potential impacts, quality of mitigation measures etc. NABET criteria to assess quality of an EIA report are;

i. Site and project description with photographs, layout maps, process flow diagrams of the manufacturing processes, material balance, environmentally sensitive receptors like water bodies,; wetlands and estuaries, forests, wild life sanctuaries,

national parks, biosphere reserves, human habitations, schools and hospitals; archaeological and historic monuments, croplands, industries and the like.

ii. Consideration of alternative of sites, technology and processes.

iii. Methodology for collection of -
   a. Primary baseline data for physical environment (sampling location, preservation, analysis)
   b. Secondary data (reference, relevance, authenticity, period, ground validation).

iv. Interpretation of data for identification of environmental impacts and quantification, where applicable, and mitigation measures for potential significant impacts

v. Interpretation of ecological and social baseline conditions and assessment of potential impact and mitigation measures.

vi. Risks assessment and consequence analysis including emergency plan

vii. Environmental management plan and its monitoring.

viii. Duly signed declaration of experts involvement in EIA preparation

c. What are the ways of improving competence of experts?

Steps involved are:

- Training need assessment of the employee
- Planned training to the employee
- Assessing the effectiveness of the training
- Providing opportunity to utilize their expertise
- Quality Improvement Program for the employee (e.g. higher education, conferences, meetings)

d. Is there a guideline to conduct QMS audit?

YES! ISO – 19011 provides a thorough method for conducting QMS audits. AO/ACOs are advised to refer to ISO-19011(2011).

e. What are the requirements related to Management reviews?

Reviews may be conducted at regular intervals (generally six monthly) for checking the suitability and effectiveness of the QMS. Such reviews are primarily conducted to establish that the QMS was achieving the purpose and objectives consistently meeting and exceeding the targeted goals. Main objectives of the management reviews are:

- To highlight the gaps in the management system,

- To review the effectiveness of previous actions and the adequacy and suitability of the management system for current and future operations of the company.
- To review any complaints and appeals received, identify the cause and recommend corrective action, wherever required.
- To review the findings of internal/ external audits and identify areas of recurring problems and/or potential improvements including the resource requirement for same.
- To finalize the future plans, allocate and approve budgets for resources required for continual improvements etc.
- Other relevant issues for improving QMS performance.

A circular with agenda for the management review meeting should be given to all concerned in advance. All agenda points to be discussed in detail and actions emerged for the improvement of quality system to be recorded mentioning clearly roles and responsibilities of executives, resources required for implementing the same in stipulated time frame.

Actions finalized and recorded in the management review meetings and internal audits to improve the overall performance of the management system should be initiated and implemented by the concerned persons. All executives responsible for execution of such actions are required to complete the job actively in the manner as decided.

Formats for Records

i. Individual appraisal forms
ii. Circular for management review meeting
iii. EIA-EMP planning and time schedule
iv. Cost and expenditure sheets for each project.

B4. Actions taken to address Non-conformances

Guidelines

a. Analyzing the NCs/Observations of internal audits as well as external audits including NABET assessments to identify the causes and the actions (preventive or corrective) to be taken,
b. Identifying resources and other inputs required for such actions,
c. Fixing the time frame and the responsibility for the actions,
d. Ensuring the completion of the actions to be taken,

e. Ensuring amendments in the procedure for prevention of the recurrence of such NCs.

What are Non-conformances and Observations?

Any audit or assessment is carried out with respect to "criteria" that have been identified and agreed on. In a QMS situation, ISO-9001, QMS Manual, QMS Procedures, Customer Specific Procedures, Legal and other requirements etc., can be agreed as "Criteria" for assessment or audit. Criterion means that the requirement as given in these identified documents will be taken as the basis of assessment; the evidence collected during the assessment/audit will be compared with the "criteria" and conformance will be checked (assessed). If the requirement of the criteria is not met, a "NON-CONFORMANCE" is raised to alert that the requirement of the Criterion is not being met.

For example, ISO-9001 (2008), clause 5.3 requires that the QMS Policy should commit the organization to complying with requirements. If the Policy statement issued by the organization does not commit the organization to complying with requirements, it becomes a NON-CONFORMANCE.

NABET Scheme requires that KRAs for experts have to be fixed. If during the assessment, evidence is collected to show that the organization has not fixed the KRAs for its experts, a NON-CONFORMANCE is raised on the organization to conform to the NABET Scheme (By the way this is also a non-conformance with respect to the QMS Policy, as the policy commits the organization to comply with requirements, in this case NABET Scheme requirements, that the organization has to.

How should we manage NCs &Observations?

- Non-conformances (NC) can be detected at any stage during execution of internal or external audits or through customer feedback, public hearing; EAC/ SEAC meetings and NABET assessments etc. All such NCs should be recorded.
- NCs/Observations are discussed with the auditee to assess the root causes, severity of the same to QMS performance and the corrective and preventive actions required to close the NC and to ensure that such NCs do not re-occur.
- Resources required should be identified to close and prevent the NCs/Observations.
- The responsibility and time frame to close the NCs must be defined and concerned officials must accept the responsibility by signing the CAPA (Corrective Action – Preventive Action) format.

How do we ensure the completion of the closure actions?

- Persons responsible for execution of CAPA are required to complete the job in time, as mentioned in CAPA. This may form part of KPIs of each expert.
- Progress of work should be monitored by obtaining interim status of the work execution.
- The actions taken could be verified during check audits or during the internal audit.

Do we need to change any document after closing the NCs?

- After closing the NC, if situation so warrants, relevant procedures, work instructions and formats are to be amended, approved and communicated to all concerned as per the procedure developed for control of document and records.

Records

- Non Conformity Format
- Corrective Action and Preventive Action (CAPA) Format

B5. Identification, Retention & Assessment of performance of empanelled experts

Guidelines

a. Specifying qualifications and experience requirements of the experts,
b. Assessing the work done by the prospective experts prior to their retention,
c. Framing the "terms of reference" for retention of the expert, including preparation of the report for her/his portion of the work,
d. Assessing performance of the expert's work done for the organization,
e. Training and Updating of knowledge of experts.

How do we ensure suitable qualification and experience of Experts?

- The organization needs to identify the areas where it requires experts to be empanelled.
- The qualification and experience requirements for each area should be as per NABET requirements of qualifications and experience of ECs and FAEs given in Appendix A of the scheme

- Assess previous work done by expert (e.g. (a) study of two or three reports by experts in the subject area (sectors or functional areas); (b) direct interaction with the expert through a competent selection panel; (c) Publications; (d) Peer recognitions

What should be the contents of the "Terms of reference" for employing an expert?

- "Terms of Reference" essentially should include performance criteria (KPIs), retention period, commercial terms, training of juniors and a commitment to continual improvement and up grading their knowledge in their area of expertise. TOR should be in the form of an MOU preferably on a stamp paper.

How do we assess the performance of Experts?

- Performance of each expert engaged in different projects for the organization is judged on the basis of the KPIs agreed.
- The ACO may also check if any adverse remarks or praise or compliment on his part of work in the EIA from SEAC/EAC, NABET assessors,

- The empanelled experts are required to update their knowledge to the extent necessary to ensure discharge of their responsibilities effectively as a part of their commitment to continual improvement.

Formats

- Performa with Job Description for each Sector and Functional area as per NABET Scheme (separate for each function/sector for EMP experts are hired by the organization).
- KPI Format
- Training needs assessment form, Training Calendar and Training Records.

B6. Collection/measurement of primary data

Primary data are required to establish current base line environmental condition for all twelve (12) environmental functions i.e. air, water, soil etc, in the core as well as in the buffer zones of the proposed project.

It is advised that primary data be collected as far as possible during monitoring season for all components of environment for preparation of a quality EIA report. These data broadly cover the information collected through the field work, including the physical environment, the biotic environment and the socio-economic environment.

Prior to taking up an EIA study, detailed information like DPR of the project should be obtained from the project proponent. DPR should be studied /discussed thoroughly by EIA team and a matrix of potential impacts (both favourable and adverse) on various components of environment should be prepared. It helps to carry out an 'aspect and impact analyses' for understanding the probable environmental impacts of the project. Similarly a 'hazard identification and risk assessment study' would help identify the risk aspects. This exercise would enable better understanding of the scope of EIA study and would optimise the extent of primary and secondary data to be collected at site.

In case DPR/FR for the projects are not available, the ACO must have detailed discussion with the project proponent to understand various aspects of the project.

Guidelines

a. Site visits by the EIA team to familiarize about site conditions to plan for the EIA work,
b. Selecting the number and location of monitoring stations, the type of sampling and parameters to be monitored,
c. Interpretation of data including statistical analysis to arrive at meaningful information,
d. Specifying the type of biotic environment data to be collected suiting the EIA requirements, methodologies to be followed and interpretation of the same,
e. Specifying the type of socio-economic environment data to be collected suiting the EIA requirements, methodologies to be followed and interpretation of the same.

The organizations are required to collect baseline information for establishing ground reality and the status of biological, social and economic environment in core and buffer zones of the proposed project sites. The baseline information normally refers to understanding of project area where environmental impacts of the proposed developmental activities would be experienced during construction, operation and closure (end-of-life) stages of the project. The impacts to be studied in EIA are both favorable and adverse.

Major environmental components to be studied in project affected area (core and buffer) include:

Physical: topography, geology, soil types, crop patterns, land use, surface and ground water condition, watershed, air pollution levels etc.

Biological: terrestrial and aquatic ecosystems, types of flora and fauna, environmentally sensitive zones like, wetlands, prime agricultural land etc.

Socio-economic: demography, development needs, manpower availability, skill levels, opportunities for entrepreneurial development, existing infrastructure facilities economic activities and income levels of people, health and hygiene conditions of the settlements in the areas etc.

Cultural: location and state of archeological, historical, religious sites.

a. Why is the Site visit necessary?

- Site familiarity by the EIA team is a must to understand project specific ground realities which is a prerequisite to preparing a quality EIA report. The organization must have a written down protocol for site visit by the EIA team prior to starting the work. Ideally the EIA coordinator and all FAEs, AFAEs and team members connected with the EIA should visit the site. The initial visit may be by the EC and concerned FAEs to assess the quantum of work involved and framing the TOR. The initial visit is to be followed by subsequent visit by EIA team for collecting/supervising the base line studies including for EB and SE and quality assurance for the same.
- The protocol should define the aspects to be seen and noted by the team

b. How do we conduct sampling and manage the samples and analysis?

- Locations of sampling stations are to be decided jointly by the EC and the concerned FAE based on various considerations viz., meteorological data, topographical features and environmentally and ecologically sensitive targets situated in the proximity of the project site and feedback (formal or informal) received from local community.
- The organization should define and document step by step the instructions for selecting the number of monitoring stations; location of monitoring stations and the type of sampling to be done at site in core and buffer zones. CPCB guidelines and

regulatory requirements as per various rules under EP Act and other Acts should be followed for sampling.

- The samples collected should be preserved, transported and stored as per CPCB guidelines and good international practices. These samples should be analyzed in a valid NABL accredited and/or MoEF CC approved laboratory for the parameters required by regulatory/statutory bodies for preparation of EIA report for specific project.
- Prior to taking up base line data collection exercise, availability of laboratory instruments, equipment and tools required in the field for the intended jobs should be ensured. All the instruments should be examined by the authorized person for appropriateness, calibration and proper functioning before deploying them for field work at site.

c. What are the guidelines for the interpretation of data?

- The data and information collected during base line study needs to be processed to convert the same into knowledge so as to make use of it in defining base line status. The interpretation of the base line data helps in superimposition of project impacts over the base line and arriving at the overall status of various components of the environment without any mitigation plan.
- In order to limit the impacts on various components of environment from the project within the assimilative capacity of the study area, the EIA needs to come out with distinct recommendations on mitigation measures required to be implemented by the project proponent during the construction, operation and closure phase of the project. This process helps project proponent to internalize the externalities associated with developmental activity in terms of capital and operational costs to ensure environment friendliness of the proposed project.

d. What is the significance of site (project) specific data for EB, LU, SC,HG and SE?

Every geographic location in the world is unique in some way or the other. Places have uniqueness in culture, social customs, climate, topography, geology, drainage pattern, rain fall, history, ecology and biodiversity. Similarly every developmental activity would have some unique feature like scale of operations, technology used, products produced and transported, resources required and quantum of pollutants and wastes discharged/emitted.

Therefore, each developmental activity will have a unique impact on the

environmental components. The site specific data are, therefore necessary for understanding the ground realities/truths and the potential impact of the project activity on environmental components including LU, HG, SC, EB and SE.

Site specific protocols should be developed for base line study of EB and SE. Depending on site requirements, such protocols should also be developed for LU, HG and SC. It is suggested that site specific data be collected, interpreted, impacts analyzed with regard to project impacts and corresponding mitigation plans should be prepared.

Formats

Detailed Formats for primary and secondary data collection for different functional areas at site and for the project specific issues to be prepared.

B7. Collation, synthesis and interpretation of secondary data

Authenticity, credibility, appropriateness and relevance of the secondary data are the cornerstone of a quality EIA. As far as possible minimum data should be used from secondary sources to supplement the primary data and under no circumstances this should be used as a replacement of primary data.

Guidelines

a) When secondary data would be resorted to.
b) Identifying the relevant secondary data to be collected suiting the EIA requirements
c) Identification of sources of secondary data ensuring their reliability and age
d) Validating important secondary data by cross verification at the site or from other sources
e) Ensuring the brevity of the data (eliminating irrelevant information). It is a good practice to give reference of the source from where the secondary data has been collected.

What are 'secondary data'?

Data that are not generated through direct filed work are called secondary data; generally secondary data are the records of the data collected in the past for various purposes by

different agencies (e.g. Forest Department, Dept of Meteorology, Botanical Survey of India etc.) or published by researchers through their reviews and research papers.

When do we need secondary data and how to identify the data to be collected?

- Base line studies for EIA require collection of both primary as well as secondary data.
- Generally, secondary data is collected and used for climatic, biotic, social environment, land use, geological and hydro geological status of the project site. One season studies of the site for primary data may not represent the actual status of the environment due to time and resources limitation for such studies. Hence, the secondary data collection is resorted to. This is followed by a sample check and verification during monitoring season, if possible.
- The secondary data is about the PAST conditions; the primary data is about the PRESENT conditions. Both past and present data are required to understand the issues related to a site. The Secondary data also helps in understanding the potential issues that may arise in the future.

How do we identify and access relevant secondary data?

- Prior to initiating EIA studies, detailed information on the project is obtained from the project proponent and studied/discussed thoroughly. A matrix of potential impacts (both adverse and favorable) of the developmental activities may be prepared by the EIA team.
- In accordance with the potential environmental impacts on various components of the environment, the need for relevant secondary data for EIA study is identified and listed with details like relevance, extent of data quantity, vintage of the data (age) and the sources from where the data to be collected. Respective functional area expert are responsible for secondary data collection and synthesis of relevant information for EIA report.
- Secondary data must be collected from reliable sources only viz., local district administration, Government organizations eg BSI, ZSI, local Forest department, concerned IMDs, NIC data base, published census documents, MOEFCC, CPCB, WII/EIA publications and monograms etc. Efforts are made to collect updated and relevant data.

How do we validate (ensuring accuracy) important secondary data?

Generally, secondary data collected from the reputed sources are taken as fairly authentic. Nevertheless, the validation of the collected data is a must on sample basis

either through monitoring during the field visits or through cross verification with other secondary data collected from other sources.

How do we ensure brevity of the data?

Generally all secondary data collected contain detailed and voluminous information. Only a portion(s) of the available information may be useful for inclusion in the EIA reports. Therefore, by careful scrutiny of the information only relevant portions are extracted to ensure brevity of the secondary data used for EIA studies. In the EIA report, the source and vintage (period) of data should be mentioned to enable the reader to cross verify and have belief in the accuracy of the information furnished.

Formats/Records

Files and filled in formats containing raw secondary data collected for different sources including sample data collected from the site for cross verification must be maintained in project files.

B8. Work Outsourced

Sometimes it may be necessary to outsource some specific studies for EIA study

Guidelines

a. Defining the conditions when outsourcing would be resorted to,
b. Assessing the capability of the agency to take up the outsourced work,
c. Drawing up the terms of reference for the outsourced work,
d. Identifying steps to be taken to ensure the quality of the outsourced work,
e. Extracting the relevant portions of the outsourced work for inclusion in the EIA report.

a. When should outsourcing be resorted to?

Outsourcing may have to be resorted to by an ACO under the following situations;

i. A specialized study like detailed bio-diversity study, marine ecology/aquatic ecology/ avi fauna study, wild life conservation study, detailed hydrological study, R&R study where large scale displacement is involved, detailed

quantitative risk assessment study, dam break analysis etc, for which in-house expertise is not available with the ACO

ii. unforeseen situations viz., extreme workloads, overstretched absenteeism of the technical/field personnel

NOTE – LABORATORY WORK FOR PHYSICAL ENVIRONMENT BASE LINE DATA COLLECTION IS NOT TO BE INCLUDED UNDER THIS SECTION. THAT IS COVERED IN B9.

The organization should identify the possible situations when outsourcing will be resorted to. Procedure for outsourcing of such activities should be prepared separately for each activity defining the scope, specifications and specific needs related to EIA study.

b. How do we assess the capability of agency for outsourcing?

In order to get quality inputs for EIA study related to the work to be carried out by external agency, the capability and past experience of the agency related to similar study must be assessed prior to hiring it. References from other consultants may be sought and similar study reports of the agency may be studied/ referred to experts before engaging them.

A list of experts to be involved in the study by outsourced agency along with their credentials should be obtained and maintained in the project files.

c. What should be the minimum contents of Work Order on Outsourced agency?

Terms of references must be drawn clearly defining the scope of work, deliverable from the study, responsibilities, timelines and quality control and quality assurance requirements for the study.

How do we ensure the quality of work?

The consultant organizations should define quality requirements for the work to be outsourced and make it a part of Terms of Reference and scope of work with the agency to be engaged. Concerned FAEs and ECs should be made responsible for assuring compliance to the terms of reference and QA/QC of the work done.

d. What information should be extracted from the report from Outsourced agency?

- The reports received from outsourced agencies may contain many details, statements which may not be so relevant for the EIA-EMP reports.

- A summary of the report containing only relevant portions like, base line information, project impacts, mitigation plans, monitoring plan and budget should be prepared for inclusion in the EIA report.
- The EC and the concerned FAE should study the full report as well as the summary before inclusion in the EIA.
- The detailed study report may be appended as an Annexure to the report. This would help keep the EIA report trim and to-the-point.

Formats/ Records

a) Work Order along with Terms of Reference finalized with outsourced agency
b) Report received from agency after completion of the job.

B9. Laboratory work for baseline data

Guidelines

a) Assessing a laboratory for its capability to analyze the parameters required for collection of baseline physical environment data for EIA studies
b) Identifying the scope of work to be assigned to the lab and the tests to be done by the Consultant organization
c) Collection, preservation and transportation of samples from site to the laboratory.
d) Quality assurance by the EIA team of the primary data collection work including supervision at site
e) Type of records to be maintained by the laboratory and the EIA team on the baseline data collection work.

How do we assess the capability of and engage a laboratory for analytical work for EIA Study?

- Analysis and testing work for physical base line collection work is to be carried out by a NABL accredited and/or MoEF approved in house or external laboratory. A copy of valid accreditation / registration certificate should be maintained at all times. A list of competent personnel along with laboratory profile including list of calibrated equipment/instruments, machines should be maintained.

- Prior to engaging an external laboratory the ACO must ensure that the NABL accreditation/ MoEF recognition cover all essential parameters for AAQ, stack emission, water and waste water, soil and noise/vibration, required for carrying out an IA study.
- Also make sure that the laboratory has competent personnel to carry out various analyses. Preferably, the lab personnel approved by NABL/MoEF CC should be available.

How do you decide on scope of work?

- Some laboratories carry out only the testing and analyses of the samples received by them at the laboratory. In such cases, the responsibility of proper collection, preservation and transportation of the samples become the responsibility of the ACO. It should consider such laboratories only if the ACO has the relevant expertise. Or else, it is better to go for laboratories which will cover the entire work i.e. sampling, testing and analyses. The ACO then needs to ensure quality assurance of the sampling activities and compliance by the laboratory of the testing and analysis activities as defined by NABL/MoEF CC.
- The scope of work to be clearly defined like if sampling is included, if so then type of samples, parameters to be tested, preservation and transportation of samples etc should be defined.
- In the event the consultant is getting the job done by two laboratories, the scope of work to be assigned to each lab should be clearly defined.
- Procedure must define details like, the volume of sample to be collected, the nature of container required based on parameters to be analyzed etc. Further details are required like, how to collect, what kind of sample etc. If a reference to the CPCB guideline is given, that will help) preservation, size of the container box and maintaining the temperature of samples during transportation are the issues of concern for maintaining the quality and originality of the sample transported from site to laboratory for analysis.
- Signatures of the samplers, technicians involved in sample collection must be obtained on sample collection formats and that of analysts and laboratory manager on the analytical reports. The formats should have dates for sample collection, sample received at laboratory and date of analysis of the sample in the laboratory.

How do we ensure quality work from external/internal laboratory?

- Quality of sample collection, preservation and transportation from site to the laboratory is ensured by concerned FAEs. Instructions should be prepared regarding type and size of containers to be used for sampling for analysis of various parameters (like BOD bottles for BOD; Glass containers for oil and grease and jars of different sizes for number of parameters to be analyzed). The procedure must specify the precautions to be taken while transporting and storing the samples like temperature to be maintained etc.
- Concerned FAEs should supervise and maintain records of their surprise visits to site for cross checking the quality of data during, collection, transport and storage of raw samples at the analytical laboratory.

What records are to be maintained for Laboratory?

- NABL accredited labs must maintain the records as required under the conditions of accreditation. MoEF& CC recognized labs also should maintain the relevant records e.g. date of receipt and conditions of samples, date of testing, test results signed by the chemist and Lab in-charge, calibration records etc
- The consultant organization should maintain a copy of the lab report signed by the lab in-charge for each of the EIA projects

Formats

1. Sample collection Formats
2. Sample analysis reports
3. Reports on Quality Checks and assurance conducted by FAEs.

B10. Complaints and Appeals

Guidelines

ISO 9001 refers only to communication to customer on “customer complaints” (ISO 9001: 7.2.3). It does not require a DOCUMENTED procedure. However this is a NABET

requirement to develop a procedure for complaints and appeals. The procedure needs to address;

a) Informing the clients about the provision of complaints and appeals,
b) Accepting complaints/appeal,
c) Handling and disposal (including authority and responsibility) of the same within reasonable time,
d) Maintaining records of complaints/appeals,
e) Ensuring implementation of preventive/corrective actions,

What is the meaning of informing clients on complaints and appeals?

- Clients are informed about the existence of the complaint and appeal system in the organization either at the time of making proposals or at the time of accepting work orders.
- The complaints could be through verbal, telephonic, electronic or through other available means of information technology as well as during interactions with the stakeholders at the time of project finalization or during the study period.
- Such complaint/observation (not received in written form) should be recorded by the ACO and address the same. It will only help the ACO improve further and provide better customer satisfaction.
- The organization may also introduce a system of complaining or lodging appeals for itself with client, SEAC, EAC and/or with any other agency client deals with. This helps the organization to prepare itself to lodge complaints with the authorities whom they have to depend on for clearances. Hence a thorough consequence analysis and languages used should be thought of for such complaints. It is better to think about this when one is cool and not when he is agitated and irritated. Such a procedure will help to avoid frictions with the authorities.

How do we manage complaints?

- Whenever any complaint/appeal is received, the same is duly recorded in the prescribed format.
- Such communications should be responded giving dates by which the complaint or appeal will be sorted out.

- Complaints and appeals must be analyzed thoroughly and discussed with the concerned persons to find out the cause for complaints and the solution to resolve such an issue.
- After thorough discussions and deliberations, corrective and preventive actions are to be finalized defining actions to be taken, resources required, roles, and responsibilities of the executives within the committed time frame.
- Complaints received and actions taken must be discussed in the next Management Review meeting. Many complaints are handled at the lowest level in an organization and resolved…they need not go to the MR/CEO.
- Depending on the importance and urgency of the case, the management needs to be kept informed.
- Proper records of all complaints must be maintained in the appropriate formats and files/registers.
- Corrective action report should be submitted to the complainant, if required.
- The preventive/corrective actions to address complaints/appeals should be implemented, discussed in review Meeting and relevant records must be maintained.
- Effectiveness of the corrective action taken should be verified during scheduled audits.

Formats

a) Complaints and Appeal Records

b) Corrective and Preventive action reports for complaints.

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